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## Introduction

The Republic of Indonesia is a country with many uniqueness. It is the largest country in Southeast Asia and the fourth most populous country in the world, consisting of different races, ethnicities, and religions. The infinite complexity of threats is inherited from being the largest archipelagic nation and located between two oceans and two continents at the world's crossroads, having about 17,508 islands. Hence, threats are coming domestically, also from the evolving regional and global security situation. The vulnerabilities generated need to be compensated by a sufficient national defense force and a robust military posture.

Indonesia has a long history of contribution on the international stage, from being one of the founding fathers of the Association of Southeast Asian Nations (ASEAN), one of the champions of the Non-Aligned Movement, and being vocal on the anti-colonialism movement since World War II was over. Moreover, Indonesia has also been actively sending its resources for the United Nations peacekeeping operations. Economically, Indonesia climbed up its way to be a part of the G-20 with the third-highest growth rate after China and India and the largest economy in Southeast Asia. Just like the neighbouring Southeast Asian countries, Indonesia keeps on increasing its national military budget and procurement. The Ministry of Defense has the biggest spending among Indonesia's ministries, and it keeps on increasing in the last decade, even despite the global pandemics<sup>1</sup>.

In the discourse of military-technical cooperation, Indonesia deserves special attention for many reasons. First, the nation holds free and active policy, with no security alliances nor military bases, the nation claims that Indonesia will not lean to any sides. It explains why Indonesia actively pursues international defense cooperation with many partners to strengthen its own military power. Second, Indonesia is a precedent case for offset in the region, and the first country outside of the socialist nation to adopt a countertrade policy and legally codify it. In fact, since the 1970s, the government has been using offset as a way to transfer technology from abroad to enter the global market<sup>2</sup>. Third, with the increased purchasing power, Indonesia is one of the biggest arms importers both in the region and the world. In tandem with the

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<sup>1</sup> Informasi APBN 2021 (State Budget Information 2021) // Ministry of Finance of Indonesia. URL: <https://www.kemenkeu.go.id/media/13730/informasi-apbn-2020.pdf> (Access date: 31.05.2021); and Melihat Anggaran Alutsista di Kemenhan 10 Tahun Terakhir (Looking at the Weapon and Defense Equipment Budget at the Ministry of Defense for the Last 10 Years) // CNN Indonesia. 26.04.2021. URL: <https://www.cnnindonesia.com/ekonomi/20210426210908-532-635070/melihat-anggaran-alutsista-di-kemenhan-10-tahun-terakhir> (Access date: 31.05.2021).

<sup>2</sup> Parsons J.E. A Theory of Countertrade Financing of International Business // Working Paper. Alfred P. Sloan School of Management. Massachusetts Institute of Technology, 1985, P. 1-2.

reasons, Indonesia has ambitious national goals to strengthen its national military forces (TNI - *Tentara Nasional Indonesia*), modernize its defense and security equipment tools (Alpalhankam - *Alat Peralatan Pertahanan dan Keamanan*), and bolster the development of the domestic companies in the national defense industry to fulfil the Minimum Essential Forces (MEF).

**The goal** of this master thesis is to find out about the reasons and factors that influenced the Indonesian government's policy in the foreign military-technical cooperation, also to forecast the main direction of the policy. The term "foreign" is emphasized to clarify that the notion is for cooperation with foreign partners. Hence, this master thesis will mostly be practical instead of theoretical. The practicability of this research that can be derived is for foreign arms vendors to assess the possibilities of entering Indonesia's market. Southeast Asia, including Indonesia, is a very attractive market for arms sales. To achieve the goal, this research has the following formulated **sub-tasks** to complement the main goal:

1. Identify the main trends and development in the regulation and policy
2. Rationalize the reasons about why the policy was created
3. Understand the decision-making process in foreign military procurement
4. Analyze the major problems and achievements related to the policy implementation

Since this research is about the contemporary situation, the timeframe is flexible, but the study's starting point is 2010. The year is the start of Minimum Essential Forces (MEF), a manifestation of effort to achieve a minimum level for the national armed forces to face threats. 2010 is also the year of establishment for the Defense Industry Policy Committee (KKIP - *Komite Kebijakan Industri Pertahanan*) as a significant step and turning point in strengthening the national defense industry. The time of writing this research is challenging due to many reasons. The MEF is still ongoing until 2024, the current Presidential period has just started in 2019, and 2020 is the year where the pandemic heavily impacts the national defense industry. However, by conducting this research, the trends and developments in Indonesia's foreign military-technical cooperation can still be illustrated by highlighting main events, achievements, and shortcomings. The recent Indonesia's sub sunk submarine is one of the major incidents globally, which gained international attention and internal demand to fasten the Alpalhankam modernization process.

There are diverse sources this research relies on to achieve the goal and fulfill the sub-tasks. The **primary sources** include the official Indonesian government documents and

websites, statistical information from open sources, also news resources on event reports. The **secondary sources** include existing literature from Indonesian and international scholars, also news resources when they contain analysis and opinions. Those sources will illustrate the development as indicators in the procurement dynamics and give insights into Indonesia's national discourse and discussions as a democratic nation.

The author has taken all of the available **legislative documents** in the contemporary situation related to military-technical cooperation. It can give sufficient information to trace the development and rationalization of the policy and achieve the goal of this research. The 2012 National Defense Law<sup>3</sup> is created to regulate Alpalhankam procurements from abroad and ensure that all activities will include the domestic companies in the national defense industry. Government Decree Number 76 adopted in 2014<sup>4</sup> regulates the trade return mechanisms as a condition for Alpalhakam imports, which defines trade return as reciprocal trading activities between Indonesia and foreign partners depending on the contract value. Furthermore, Ministry of Defense Decree Number 30 of 2015<sup>5</sup>, to a greater extent, elaborates on the regulation of Local Content and Offset (KLO - *Kandungan Lokal dan Offset*) and mentions the examples about the scheme of military-technical cooperation activities. Defense White Paper 2015<sup>6</sup>, as the latest Indonesia's white paper, also mentions industry participation as a return and compensation of the procurement contract back to Indonesia. **Official websites of the government** also include statements, event reports, and press releases in the sphere of procurement and military technical cooperation. The reliance on these primary sources will give insights into the official government's views and chronological developments on the national policies.

Moreover, the secrecy nature of military procurement may limit public transparency of the government's obscurity, so that this research also relies on **open source data for statistics**, which are Stockholm International Peace Research Institute (SIPRI) and the United Nations

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<sup>3</sup> Republic of Indonesia. Undang-Undang Republik Indonesia Nomor 16 Tahun 2012 Tentang Industri Pertahanan (National Law of the Republic of Indonesia Number 16 of 2012 Concerning Defense Industry, 2012.

<sup>4</sup> Government of the Republic of Indonesia. Peraturan Pemerintah Republik Indonesia Nomor 76 Tahun 2014 tentang Mekanisme Imbal Dagang dalam Pengadaan Alat Pertahanan dan Keamanan dari Luar Negeri (Decree of the Government of Indonesia Number 76 of 2014 concerning Trade Return Mechanisms in Defense and Security Equipment Tools Procurement), 2014.

<sup>5</sup> Defence Ministry of the Republic of Indonesia. Peraturan Menteri Pertahanan Republik Indonesia Nomor 30 Tahun 2015 tentang Imbal Dagang, Kandungan Lokal, dan Offset dalam Pengadaan Alat Peralatan Pertahanan dan Keamanan Dari Luar Negeri (Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015 Concerning Trade Returns, Local Content, and Offsets in the Procurement of Defense and Security Equipment From Abroad), 2015.

<sup>6</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper, 2015.

Register of Conventional Arms (UNROCA). There are, however, limitations from open-source data as such. SIPRI data can only extract the import percentage from the total arms provider, not the comparison with domestic Providers. SIPRI also only provides Indonesia's arms transfer about the aircraft's export and not shipbuilding nor land systems due to the different modes of production. In the case of UNROCA, there are differences between the reports submitted by Indonesia and the partners since it uses a voluntary principle. Indonesia also stopped reporting since 2008, so there is no contemporary data to be analyzed. However, open-source data may provide insights and illustrate the chronological trends, weapon types, and foreign partners, such as the fact that Indonesia imports Alpalhankam from Israel despite having no diplomatic relations, which will be elaborated in Chapter 3.

**News platforms** are treated as the primary source when they only provide reports and information on certain events without any analysis. This is because military procurement is a long process that takes a lot of time, from the negotiations to the time of delivery. Often, there are discussions without official statements about final decisions in the long process of secretive military procurement. Hence, relying on news platforms as a primary source can give indicators and illustrate the development of certain military procurement and arms deals Indonesia has.

In the national discourse, there are existing works of literature about Indonesia's national defense industry. However, it is not done under the framework of academic research but the government's consultant's capacity so that it is not open to the public<sup>7</sup>. However, there are also public **academic papers and literature** about the national defense industry and MEF fulfillment, especially since the 2012 National Defense Law was released. Savitri, in her PhD dissertation, provided the most extensive knowledge and context on the understanding and practice of offset for Indonesia's national journey to be an autarky in production. As a scholar and practitioner in Indonesia's defense offset, she interviewed the domestic companies about the impacts of offset programs. Savitri also provided policy recommendations for the government in the absence of clear guidelines to do pre-offset planning and to formulate strategic objectives in offset. She also pointed out that at the beginning of an offset relationship, the political motives may be more significant than the economic ones when both buyers and sellers share the same objectives. Yet, her thesis specifically addresses the impacts on the national economy and defense industrialization, not the political considerations. Also, she mentions that the lack of clarity in Indonesia's offset guidelines may make foreign vendors

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<sup>7</sup> Industri Pertahanan Modern (Modern Defense Industry) // Online Seminar of Curie Maharani Savitri. 20.06.2020. URL: <https://www.youtube.com/watch?v=TgjV7BwDbwE> (Access date: 22.04.2021).

hesitant to propose long-term investment and not aware of the importance of Indonesia's expected returns<sup>8</sup>.

Other scholars such as Susdarwono et. al.<sup>9</sup>, Sulistyio<sup>10</sup>, Gindarsah and Priamarizki<sup>11</sup>, and Chairil<sup>12</sup> have studied the policy development of the national defense industry and security. Susdarwono et. al. have traced the legal development of Indonesia's policies to strengthen the national domestic companies, yet the research stopped in 2018, when there are new regulations and decrees in the following years. Sulistyio examined security policy development and the practice of technology transfer. His conclusion shows that Indonesia prefers variety and distribution of technology over quantity and that the modernization effort has too limited deterrent effects to be considered assertive. However, his research approach leans heavily on the security dynamics in the region and that Indonesia's efforts are a response towards those dynamics. Gindarsah and Priamarizki, in their book chapter, emphasized Indonesia's policies to be self-sufficient in rebuilding its national defense industrial base by pursuing technology transfer. Chairil tries to reveal the political and military rationalization behind Indonesia's military procurement and concludes that the strategy of arms supplier diversification is helpful to prevent domination of a single source. Nevertheless, the politico-security factors are mostly about Indonesia's internal organizations, which are the relations between TNI and the defense companies. A number of books also provided the historical context of the rise and fall of the national defense industry. It provided measures to strengthen it, supported by the government's policies in their confidence<sup>13</sup>. Numerous academic papers provide cases of defense cooperation

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<sup>8</sup> Savitri. C.M. Contribution of Offset to Defence Industrialization in Indonesia. PhD Thesis. Cranfield Defence and Security, 2016.

<sup>9</sup> Susdarwono E.T. Ekonomi Politik Pengadaan Alutsista Kapal Selam Changbogo dalam Rangka Menuju Proses Kemandirian Industri Pertahanan Indonesia (Political Economy of Procurement of the Changbogo Submarine's Alutsista Towards the Independence of the Indonesian Defense Industry) // Jurnal Ilmu Ekonomi Terapan, 2019. Vol. 4, No. 2. P. 115-181.

<sup>10</sup> Sulistyio I. Kebijakan Pertahanan Indonesia 1998-2010 dalam Merespon Dinamika Lingkungan Strategis di Asia Tenggara (Indonesian Defense Policy in 1998-2010 in Responding to the Dynamics of Strategic Environment in Southeast Asia) // Andalas Journal of International Studies, 2012. Vol. 3, No. 2. P. 165-191.

<sup>11</sup> Gindarsah. I. and Priamarizki A. Politics, Security and Defense in Indonesia: The Pursuit of Strategic Autonomy // Indonesia's Ascent: Power, Leadership, and the Regional Order. Roberts C., Habir A, and Sebastian L. (eds.), 2015. P. 130-154.

<sup>12</sup> Chairil T. The Politics Behind Alpalhankam: Military and Politico-Security Factors in Indonesia's Arms Procurements, 2005–2015. // Competition and Cooperation in Social and Political Sciences. Adi, I.R and Achwan, R. (eds.), 2020. P. 281-290.

<sup>13</sup> Karim S. Membangun Kemandirian Industri Pertahanan Indonesia (Building the Independence of the Indonesian Defense Industry). Jakarta. Kepustakaan Populer Gramedia, 2021.; Suryopratomo. Kebangkitan Industri Pertahanan Indonesia (The Rise of the Indonesian Defense Industry). Jakarta. Indonesia. Departemen Pertahanan. Pusat Komunikasi Publik, 2014.; Widjajanto A. et.al. Dinamika Persenjataan dan Revitalisasi Industri Pertahanan (The Dynamics of Weapons and Defense Industry Revitalization). Jakarta. Penerbitan Universitas Indonesia, 2012.

of Indonesia with specific partners around the globe within the framework of their bilateral relations.

The author is aware that military-technical cooperation is an extensive field of study. It is interrelated with other spheres, such as the economy, security, technology, and others, just as how the national discourse covers the comprehensive features of the national defense industry. Military-technical cooperation also contributes to strategic cooperation, often acting as an element of a broader cooperation network. Its usefulness is to tackle national shortcomings, such as constraints in the budget, technological capability, and human resources quality in weapons production. Hence, it is often closely related to offset, which means compensation asked by the buying country to purchase goods from the seller. However, political and security considerations may play a more prominent role in military procurement than financial reasons. It creates the academic novelty of this study because the scope and limitations of this research are mostly the political aspects of Indonesia's foreign military-technical cooperation under the framework of the foreign policy principle of free and active. This research will be a puzzle piece to complete the lack of clarity in the official guidelines and provide a new perspective about Indonesia's military-technical cooperation with foreign partners from the political aspects.

On the other hand, international scholars try to give insights into Indonesia's position in the defense industry from an external perspective. Bitzinger<sup>14</sup> concluded that Indonesia belongs in the second-tier of arms-producing states, meaning that the nation is a developing industrialized country with relatively new attempts at defense industrialization. He concluded that the Indonesian objectives in offset practices are primarily to gain economic benefit, explaining the ambition to indigenize the national defense industry, especially in aerospace. Evans<sup>15</sup> also classified Indonesia in the second group of a bimodal system of the third-world nations. The first group has the most advanced and diversified defense industries, while the second is still emerging. Huxley and Willet<sup>16</sup> also mention that the origin of Indonesia's defense industry was to utilize indigenous arms prosecutions for national development and industrialization. The three works of international scholars share the same timeframe, which dated 2004 as the latest. As a source of historical analysis, those works may give empirical

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<sup>14</sup> Bitzinger R.A. Offsets and Defense Industrialization in Indonesia and Singapore in *Arms Trade and Economic Development // Arms Trade and Economic Development*. Brauer J. and Dunne P. (eds.) Routledge. New York, 2004. P. 249-263.

<sup>15</sup> Evans C. Reappraising Third-World Arms Production // *Survival*. Vol. 28, No. 2, 1986. P. 99-118.

<sup>16</sup> Huxley T. and Willett S. *Arming East Asia*. New York. Oxford University Press Inc., 1999.



context and knowledge about the development of Indonesia's defense industry to the contemporary situation. However, there have been rapid changes in Indonesia's national security and defense industry in the last decade, as the characteristics are evolving depending on the influencing variables. Moreover, changes also happen in the balance of power, technology, and the nature of threats Indonesia faces. Although international scholars may study Indonesia's contemporary situation of military-technical cooperation, this research still provides clarity and insights from an insider view of an Indonesian since this research traces the development and explains the rationalization of governmental policy from the primary sources as the author's mother language.

The term "military-technical cooperation" itself is rare to be found in Indonesian discourse since the term originated from Russia. It explains why the only agreement titled "*kerjasama teknik militer*," which literally translates into military-technical cooperation, only exists bilaterally with Russia. Other agreements with various partners are titled "agreements on the field of defense" or generally "defense industry cooperation." Indonesia's Ministry of Defense addresses it as "*kerjasama bersifat teknis*" - meaning cooperation with technical nature. Hence, the variety of terms creates the absence of a national definition. Nevertheless, existing national regulations for offset implementation in arms procurement from abroad use various terms, such as joint-production, countertrade, buyback, yield trade, offset, domestic participation, and local content. By drawing a line among the existing cases and activities described in the regulations and literature, the activities of military-technical cooperation in Indonesia have actually been practiced over the years.

The all-inclusiveness and comprehensiveness of military-technical cooperation as a concept are why the author uses a specific term as an umbrella to make this research more convenient in illustrating the complexity of activities in the cooperation. Also, with the absence of Indonesia's national definition, it is pretty challenging to distinguish import, export, and joint projects; Indonesia does with the foreign partners since it is all too interrelated. However, the term of military-technical cooperation will be used as this research focuses on cooperation related to the end-to-end activities of Alpalhankam, from pre to post procurement activities with flexible formats. Such as joint production, joint development, joint marketing, transfer of technology, and all other activities and mechanisms related to the cooperation in producing weapons and equipment.

To reach the goal and fulfill the sub-tasks, this research consists of three chapters. The first chapter is aimed to analyze and trace the development of Indonesia's policies in military

procurement and threat conceptualization, as the regulations are evolving, and each country is unique with its basic principles. The second chapter identifies the various partners in the cooperation from the elaborated regulation and principles based on its level of significance and complexity. Chapter three identifies the achievements and shortcomings of the national defense industry, elaborates about the Alpalhankam export and import activities, and provides one case study to illustrate the decision-making process's implementation.

## **Chapter 1. Indonesia's Security Context and the Development of National Policies in the Military and Procurement**

The government of Indonesia has undoubtedly been giving Indonesia's arms procurement special attention. Increased military expenditures, enhanced national defense industry, growing overseas cooperation, and foreign partners' diversification are some of the indicators. Before digging deeper into the contemporary development of military-technical cooperation in Indonesia, it is necessary to understand the general situation in the national threat perception and security context; also the rules, regulations, and decision-makers in military procurement; as everything is interrelated.

The logics for the research of this chapter is as follows: The national security context about how the government perceives threats and the strategic environment will provide a rationalization about why Alpalhankam is necessary for the national defense posture. Consequently, the government develops relevant policies about military procurement and the national military forces. It is a way to deal with security threats, challenges, and problems originating from the national formulation. It also results in the making of specific regulations and decision-making systems about procurement, in which military-technical cooperation plays a part. The end of this chapter will draw a complete illustration of the importance of military-technical cooperation in the contemporary situation, in which there are certain conditions for the mechanisms scattered along in Indonesia's official regulations.

### **1.1. Indonesia's Threat Conceptualization and the National Security Vision**

Like any other country in the present strategic landscape, Indonesia possesses internal and external threats that demand the national military forces to have sufficient capabilities and adequate operational readiness. In the contemporary situation, Indonesia conceptualizes threats in three official documents: Defense White Paper 2015, Decree of the Minister of Defense Concerning State Defense Policy 2020, and Presidential Decree No. 8/2021 Concerning State Defense Policy 2020-2024. The three documents use different terms for the threats conceptualization and categorization. The white paper classifies threats as **factual** and **non-**

**factual**<sup>17</sup>, while the decrees categorize threats as **actual** and **potential**<sup>18</sup>. Despite different terms used, all legislative documents have the same essence and notion in their conceptualization, which derive from the degree of possibility of the threats to happen. For this research, the author will unite the threat classifications into two categories: Factual/actual threat and non-factual/potential threat.

Factual/actual threats can occur at any time, whether it comes from domestic, international, caused by state or non-state actors, in the present or the upcoming years; that will expose and risk Indonesia in terms of national sovereignty, territorial integrity, and safety. These threats may have the nature of military, non-military, or hybrid. The forms of threat mentioned in the white paper are terrorism, radicalism, separatism and armed uprisings, natural disaster, border trespassing, piracy and natural resources theft, epidemics, cyber attacks and espionage, also trafficking and drug abuse<sup>19</sup>. The decree and the Presidential Decrees then complement it by adding foreign intervention, hostage of Indonesian citizens, psychological warfare threat, biological attacks, natural and environmental disasters, and the impacts of 4.0 industrial revolution and society 5.0 as the forms of the threat.<sup>20</sup>

Non-factual/potential threats are defined as imminent threats that are less likely to happen in the present or the near future. Yet, the nation still needs to be alert as it can still become actual under certain circumstances. The white paper only mentions the example form as inter-state open conflicts with opposing armed forces deployment<sup>21</sup>. However, it further elaborates the threats into known and not yet known threats, with priority given to the first one. Nevertheless, the decree and the Presidential Decree supplement the example of threats with conventional conflicts, foreign intervention, nuclear threat, economic crisis, pandemics, and illegal immigrants<sup>22</sup>.

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<sup>17</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 24-25.

<sup>18</sup> Defense Ministry of the Republic of Indonesia. Kebijakan Pertahanan Negara Tahun 2020 (Decree of the Minister of Defense Concerning State Defense Policy 2020), 2020. P. 2.; President of the Republic of Indonesia. Peraturan Presiden Republik Indonesia Nomor 8 Tahun 2021 tentang Kebijakan Umum Pertahanan Negara tahun 2020-2024 (Decree of the President of Republic of Indonesia Number 8 of 2021 Concerning the General National Defense Policy 2020-2024), 2021. P. 4-5.

<sup>19</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. P. 24.

<sup>20</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Concerning State Defense Policy 2020. P. 2.; President of the Republic of Indonesia. Decree of the President of Republic of Indonesia Number 8 of 2021. P. 4.

<sup>21</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. P. 25.

<sup>22</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Concerning State Defense Policy 2020. P. 2.

The official documents illustrate that the threats are holistic yet are complex in their spectrum. They also analyze the development of the strategic environment dynamics at the global, regional, and national levels as both threats and potentials at the same time. On the global level, examples taken are the primary power economic competition and the politics and security development in other regions such as the Middle East that will directly or indirectly impact Asia and Indonesia. Indonesia is concerned about the traditional and non-traditional security issues at the regional level, such as inter-state border issues and transnational crimes<sup>23</sup>. Indonesia was involved in the Sipadan and Ligitan islands and Ambalat crisis territorial disputes, also the violation of the Chinese coast guard in the North Natuna sea<sup>24</sup>. Regional patterns of interactions are also mentioned, such as the increased quadrilateral security dialogue to balance the Belt and Road Initiative, potentially bringing instability to the region and eventually to Indonesia.

On the national level, the documents believe that generally, the domestic security condition is relatively stable, yet the archipelagic nation's geographical location is near the core of Asia's instability. Also, there are still internal threats to Indonesia's unity, taking examples from past experiences, such as the 1999 East Timor conflict, armed separatism in Aceh and Papua, and the Communist Party of Indonesia. In 1945–2004, internal threats dominated Indonesia's threat perception, where a proportion of military operations were launched against it. 67% was launched against internal threats, and the external threat only took 33% of the whole operation. The same trend continues to the following decades in 2005-2015<sup>25</sup>. However, all official documents still take the domestic and national security dynamics into account in the threat conceptualization.

One thing to be noted is that the official documents are concerned with the modernization of the military power of countries in the Asia Pacific fueled by the developments of economic and rapid defense technology<sup>26</sup>. However, it does not explicitly mention it as a threat, but a development of the strategic environment that the government needs to consider in developing the national armed forces. They pay attention to the diffusion of technology to new innovative weapon systems; such as artificial intelligence, big data, machine learning, autonomous

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<sup>23</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. P. 6-7.

<sup>24</sup> President of the Republic of Indonesia. Decree of the President of Republic of Indonesia Number 8 of 2021. P. 3.

<sup>25</sup> Chairil T. The Politics Behind Alpalhankam: Military and Politico-Security Factors in Indonesia's Arms Procurements, 2005–2015 // Competition and Cooperation in Social and Political Sciences. Adi, I.R and Achwan, R. (eds.), 2020. P. 284.

<sup>26</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. P. 6-9.

systems, robotics technology, small yet destructive unmanned aerial vehicles, railgun, directed-energy weapons, high-speed projectiles, hypersonic missiles, also other not-yet-known threats and secret technology used in wars<sup>27</sup>. Science and technology development have affected future wars' shapes and patterns. The contemporary conflict tendencies have a high cost yet reduced casualties, where the personnel and armaments deployments are also reduced<sup>28</sup>. In the future, Indonesia sees modern wars as asymmetric and unlimited, where information and communication technology plays a crucial role in the existence of network-centric and cyber warfare<sup>29</sup> with information superiority.

The above threat conceptualization and elaboration on the strategic environment actively demonstrate that Indonesia takes military technology development seriously. The documents also note that the general central defense policy until 2024 will have an advanced, modern, and integrated defense system and military posture, supporting Indonesia's diplomacy and economic activities. At the same time, Indonesia's national interest is to secure and protect the national territory's integrity, economic resources, and the citizens' safety<sup>30</sup>.

Indonesia wants to continue re-developing it to be self-sufficient, advanced, and competitive in providing defense and security equipment tools in terms of the national defense industry. The Indonesian Armed Forces (TNI - *Tentara Nasional Indonesia*<sup>31</sup>), as the main component of the national defense, will be strengthened by the main weaponry system modernization, the increase of maintenance, and the support of relevant facilities and infrastructures sustained by the national defense industry<sup>32</sup>. Furthermore, the defense budget and arms procurement will be altered into defense investment. Technology adoption and innovation of the main weapon systems and equipment will be done, along with the revitalization of the indigenous national defense industry<sup>33</sup>.

Eventually, Indonesia wants to achieve an Integrated Triad (*Trimatra Terpadu*) concept; which integrates land, sea, and air dimensions in realizing national defense. On land, the defense area development will be through the defense of large islands. At the sea, the

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<sup>27</sup> President of the Republic of Indonesia. Decree of the President of Republic of Indonesia Number 8 of 2021. P. 3

<sup>28</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 16.

<sup>29</sup> President of the Republic of Indonesia. Decree of the President of Republic of Indonesia Number 8 of 2021. P. 4.

<sup>30</sup> Ibid. P. 8.

<sup>31</sup> The Indonesian Armed Forces, in Indonesian: *Tentara Nasional Indonesia* (TNI) consists of the Army, the Navy, and the Air Force.

<sup>32</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 108.

<sup>33</sup> President of the Republic of Indonesia. Decree of the President of Republic of Indonesia Number 8 of 2021. P. 8.

government wishes to increase the strength of warships and missile placements. The air's focus will be on protecting the national airspace, including the Air Defence Identification System and Air Defence Identification Zone (ADIZ)<sup>34</sup>.

The national defense technology development will be directed towards the technology mastery programs of combat aircraft, submarines, propellants, rockets, guided missiles, radar, military satellites, medium-sized tanks, unmanned aerial vehicles, and underwater sensing as a priority. The supporting technology will also be geared towards resistance, mobility, sensing, and electronic and cyber warfare. Moreover, information and technology will also focus on supporting Network Centric Warfare, satellite-based communication, navigation, remote sensing, and intelligence systems. Other areas include utilizing artificial intelligence, big data, machine learning, automatic systems, and robot technology to benefit the national defense. The official documents also mention international cooperation policies to build trusts, increase capacity, and revitalize the national defense industry. The forms of cooperation are the increase of defense industry cooperation, education and training for human resources cooperation, defense cooperation with the bordering countries, ASEAN and South Pacific, and Indonesia's existing defense cooperation with other countries<sup>35</sup>.

Defense Minister Prabowo stated that the focus of Indonesia's defense system for his period until 2024 would be bringing back the total people's defense and security system (*Sishankamrata - Sistem Pertahanan Rakyat Semesta*)<sup>36</sup>. This concept was originated from the total people's war<sup>37</sup>, where both military and civilians were united as a primary and supporting component in the struggle for independence. The State Defense Law then elaborates on *Sishankamrata*, stating that the meaning of "total" includes all citizens, national resources, and all country territory.<sup>38</sup> With the spirit of independence in the national narratives, in *Sishankamrata*, the national resources are also allocated to support the national defense.

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<sup>34</sup> Ibid. P. 11.

<sup>35</sup> Ibid. P. 12-13.

<sup>36</sup> Demi Kelangsungan NKRI, Menhan Ajak Semua Komponen Bangsa Bangun Pertahanan Semesta yang Kuat (For the Sake of NKRI, the Minister of Defense Invites All Components of the Nation to Build a Strong Total Defense) // Official Website of the Defense Minister of the Republic of Indonesia. 22.1.2020. URL: <https://www.kemhan.go.id/2020/01/23/demi-kelangsungan-nkri-menhan-ajak-semua-komponen-bangsa-bangun-pertahanan-semesta-yang-kuat.html> (Access date: 5.11.2020)

<sup>37</sup> Nasution A.H. *Fundamentals of Guerilla Warfare*. Seruling Masa, 1970. P. 13.

<sup>38</sup> Reza B.I. *The Total People's Defense and Security System: Problems of State-Sponsored Militia in Indonesia* // *Indonesia Law Review*, 2017. Vol. 7. No. 2. P. 156-177.

## 1.2. The Development of Indonesia's National Military Forces and Procurement Policies

The threat conceptualization and Sishankamrata concept described above have justified the undoubted need to have sufficient Alpalhankam in building readiness to face the threats and provide the needed resources. Alpalhankam is defined as the comprehensive defense and security equipment tools to support national defense and security. Alpalhankam is categorized into four:

1. The primary tool of the weapon system (special vehicles, weapons, ammunition, radars)
2. Primary and/or supporting components (base facilities equipment, communication, and navigation systems, survey and mapping tools)
3. Components and/or support (spare parts; supplies; test, types of machinery, and maintenance facilities), and
4. Raw materials (metal, rubber, and fabric materials)<sup>39</sup>

Although Alpalhankam has gone through developments and modernization in the last decades, most of TNI's weapon systems are generally outdated<sup>40</sup>. With only 25-40 years of service life, the condition of Alpalhankam directly affects the level of operational readiness. It also requires high operational and maintenance costs<sup>41</sup>. Moreover, although there has been a rapid development of the national defense companies, the national defense industry at times still cannot fulfill all the demands of TNI's Alpalhankam, especially in its technical specifications. Therefore, Indonesia developed and formalized a strength-building strategy, Minimum Essential Force (MEF), starting in 2007<sup>42</sup>.

MEF is a manifestation of the entire efforts to modernize the Indonesian national defense system. The elements consist of "...human resources, Alpalhankam, base facilities and training

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<sup>39</sup> Defense Ministry of the Republic of Indonesia. Peraturan Menteri Pertahanan Republik Indonesia Nomor 16 Tahun 2019 tentang Pelaksanaan Pengadaan Alat Peralatan Pertahanan dan Keamanan di Lingkungan Kementerian Pertahanan dan Tentara Nasional Indonesia (Decree of the Minister of Defense Number 16 of 2019 Concerning the Implementation of Defense and Security Equipment in the Ministry of Defense and Indonesian National Forces). 2019. P. 11.

<sup>40</sup> Gindarsah, I. and Priamarizki A. Politics, Security and Defense in Indonesia: The Pursuit of Strategic Autonomy // Indonesia's Ascent: Power, Leadership, and the Regional Order. Roberts C., Habir A, and Sebastian L. (eds.), 2015. P. 141.

<sup>41</sup> Lie, S. Modernisasi Alutsista TNI AD dalam Tinjauan Tantangan Tugas Kedepan (Modernization of Weapons of the Indonesian Armed Forces in the Review of Future Task) // Seskoad Strategic Review. URL: <https://seskoad.mil.id/admin/file/kajian/34%20Kajian%20Modernisasi.pdf> (Access date: 7.12.2020).

<sup>42</sup> Republic of Indonesia. Undang-Undang Republik Indonesia Nomor 17 Tahun 2007 tentang Rencana Pembangunan Jangka Panjang Nasional (Bill of the Republic of Indonesia Number 17 of 2007 concerning the Long Term National Development Plan), 2007.



areas, defense industry, organization, and budget<sup>43</sup>.” Hence, it is an umbrella strategy to achieve and reflect the whole national defense's ideal posture. With MEF coming into existence, the government allows the increased defense budget to prioritize arms procurement, replace the outdated Alpalhankam, and revitalize the national defense industry. Achieving MEF expects to tackle the factual/actual and non-factual/potential threats and support TNI in military and non-military operations.

The Indonesian government sees the “minimum” as a level of number and strength needed for TNI and Alpalhankam to guarantee national security and strategic interests. It indicates that Indonesia acknowledges the shortcomings and limitations of their national capabilities development because Indonesia wants to achieve their national military forces' minimum level. The criteria for the minimality of the forces are related to the national defense forces' elements mentioned above, aimed to create a respectable deterrent effect and support Indonesia's diplomatic position<sup>44</sup>.

However, there is an emphasis that MEF is not directed to any arms race nor power development strategy to win a large-scale or total war<sup>45</sup>. Nonetheless, building the main force that meets specific standards for a deterrent effect for security purposes is a form of building the main force. The 2015 White Paper also declared that the Alpalhankam modernization is not expansive and aggressive, but instead, it acts to achieve the professional standard of armed forces<sup>46</sup>. In the years of 2003, 2007, and 2008, there were times when Indonesia was seen to be strengthening its national armed forces. However, it was the time of the Southeast Asian crisis and Indonesia's domestic reformation. A conclusion can be derived that it was not a response to the strategic environment's development conditions, but rather to create an effort in the long-term system and institutional foundations so that TNI becomes accountable and transparent in procurement<sup>47</sup>.

The development of MEF was based on capability-based and threat-based plannings. Generally, these two approaches are alternatives to each other. However, in the case of

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<sup>43</sup> Defense Ministry of the Republic of Indonesia. Peraturan Menteri Pertahanan Republik Indonesia Nomor 19 Tahun 2012 tentang Kebijakan Penyelarasan Minimum Essential Force Komponen Utama (Decree of the Minister of Defense Concerning Number 19 of 2012 Concerning Minimum Essential Force Alignment Policy Main Components), 2012. P. 4.

<sup>44</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 3.

<sup>45</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Concerning Number 19 of 2012. P. 5.

<sup>46</sup> Ibid. P. 14.

<sup>47</sup> Sulistyio I. Kebijakan Pertahanan Indonesia 1998-2010 dalam Merespon Dinamika Lingkungan Strategis di Asia Tenggara (Indonesian Defense Policy in 1998-2010 in Responding to the Dynamics of Strategic Environment in Southeast Asia) // *Andalas Journal of International Studies*, 2012. Vol. 3, No. 2. P. 165-191.

Indonesia, the Decree of the Minister of Defense mentions both approaches at the same as a mixture<sup>48</sup>. It explains that capability-based planning is the principle of development by considering the national budget capacity and state assets<sup>49</sup>. Meaning that indeed there are constraints in the defense budget and state's capability in developing the national defense so that MEF is the answer for the development of national defense while having those limitations. The capability-based defense approach ensures that the capability to build is not based on comparison but solely based on one's national capability to determine what kind of forces and weapons to have. Eventually, Indonesia will have the capability of the national defense force to be independent. Capability-based planning is suitable for the national formulation of non-factual/potential and not-yet-known threats, as the situation is unpredictable and the situation may evolve very quickly, so that the appearance of the threats are not predictable. Threat-based planning means that the forces' development is based on a predictive approach to the threat conceptualization described earlier, considering the threats and the strengths of the national armed forces<sup>50</sup>. This mixture of approaches are suitable because there are some predictable and unpredictable threats, so that the national defense posture can be applied at any situation in dealing with factual/actual threats without setting aside the non-factual/potential threats.

MEF has a timetable divided into three phases of Strategic Planning (*Renstra - Rencana Strategis*): Renstra I (2010-2014), Renstra II (2015-2019), and Renstra III (2020-2024) (See Annex 2, Figure 1). By the time this master thesis is being written, Indonesia is still on track to fulfill MEF's given timetable. Defense Minister Prabowo is now focusing on strengthening all elements of TNI by procuring Alpalhankam, such as warships, fighter planes, radars, and rifle bullets<sup>51</sup>. There are three strategies to implement in executing MEF. First, **rematerialization**, means compensating deficiencies and shortcomings to achieve 100% fulfillment of personnel and materials for TNI. Second, **revitalization**, which is to improve quality in the units and materials adjusted to threats development. Third, **procurement**, defined as the construction of new units with its personnel and Alpalhankam<sup>52</sup>.

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<sup>48</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Concerning Number 19 of 2012. P. 8.

<sup>49</sup> Ibid. P. 5.

<sup>50</sup> Ibid. P. 5-7.

<sup>51</sup> Pribadi. R. MEF Tahap III, Prabowo Fokus Perkuat Semua Matra TNI (MEF Phase III, Prabowo Focuses on Strengthening All Elements of the TNI) // territorial.com. 2.8.2020. URL: <https://teritorial.com/hankam/mef-tahap-iii-prabowo-fokus-perkuat-semua-matra-tni/> (Access date: 10.12.2020).

<sup>52</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Concerning Number 19 of 2012. P. 9.

Furthermore, the government also expects and supports the national defense industry to nurture technological advances. Indonesia acknowledges that "there is no future without technology<sup>53</sup>," and the national defense industry needs to allocate at least 5% of the net profit for research, development, and engineering to respond to technology development in security and defense<sup>54</sup>. MEF also supports the idea by encouraging arms procurement from abroad under certain conditions following the national regulations to compensate for the national defense industry's shortcomings. In achieving MEF, procurement of Alpalhankam is crucial while holding on to the principle of "free and active" that Indonesia has been practicing since its independence to this very day.

Free means that Indonesia will not lean or side with any states<sup>55</sup>. With an independence spirit, Indonesia has been practicing this principle as one of the founding fathers of the Non-Alignment Movement. Indonesia refused to be the object of international politics and will go beyond competing blocks in the Cold War by not siding with any blocs<sup>56</sup>. Active refers to the refusal of being passive-reactive on the international stage. The principle adapts to the national, regional, and international dynamics to the present day. Surviving colonialism and foreign intervention, Indonesia developed a post-trauma of exploitation by foreign powers. Hence, Indonesia developed a strong nationalism and protectionism in its international affairs<sup>57</sup>, and arms procurement is not an exception. In the contemporary situation, this principle's application in the security and defense sphere includes not being any state's alliance, not having foreign military bases in the national territory, and not leaning to any state in any form to create dependency.

Generally, Indonesia's arms procurement can be illustrated by four stages of development. First, Indonesia witnessed leniency towards major powers, respectively, during the early independence era. In the Old Order era (1945-1965), the first president, Soekarno, was more inclined to the Soviet Union for munitions supply, which damaged the bilateral relations with the United States of America (the US)<sup>58</sup>. In the New Order era (1966-1998),

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<sup>53</sup> Ibid. P. 18.

<sup>54</sup> National Law of the Republic of Indonesia Number 16 of 2012 Concerning Defense Industry. 2012. P. 7.

<sup>55</sup> Sukma R. The Evolution of Indonesia's Foreign Policy: An Indonesian View // Asian Survey, 1995. Vol. 35, No. 3. P. 304-315.

<sup>56</sup> Membangun Dunia Kembali (To Build the World A New). Speech of the President of the Republic of Indonesia at the 16th UN General Assembly on 30 September 1960 // National Library of the Republic of Indonesia. 30.9.1960. URL: [https://kepuustakaan-presiden.perpusnas.go.id/uploaded\\_files/pdf/speech/normal/soekarno12.pdf](https://kepuustakaan-presiden.perpusnas.go.id/uploaded_files/pdf/speech/normal/soekarno12.pdf) (Access date: 25/11/2020).

<sup>57</sup> Anwar D.F. Regional Security Outlook: More Continuity Than Change in Indonesia's Security Posture // CSCAP Regional Security Outlook 2020, 2019. P. 37-40.

<sup>58</sup> Gindarsah. I. and Priamarizki A. Politics, Security and Defense in Indonesia. P. 134.

Indonesia was ruled by an authoritarian power. Unlike the previous administration, former President Soeharto was more leaning toward the US and its allies. However, the changing geopolitical landscape created threats for Indonesia in counterinsurgency and separatism movements, including in East Timor. Indonesia's policy choices were considered repressive, so that the US formally imposed an arms embargo in 1991<sup>59</sup> for an indefinite period of time<sup>60</sup>. The European Union also imposed the embargo in 1999 for the same reason<sup>61</sup>.

During that time, almost 70% of the national arms spare parts came from the US<sup>62</sup>. In the embargo, all US-produced spare parts, ammunition, maintenance, and training were also suspended. Moreover, the embargo applies to the arms directly coming from the US and all US-licensed suppliers. As a result, Indonesia's enormous amounts of Alpalhankam were grounded with the inability to do its own maintenance, such as the owned F-16 that could not operate during the embargo. The operational capability of TNI decreased to 50%<sup>63</sup>, and the whole national defense became stagnant and was paralyzed. The worst aftermath was when the 2004 tsunami happened, and TNI had problems mobilizing their personnel and logistics due to the unreadiness of their transport aircrafts caused by the embargo. Although the embargo was lifted in 2005, the sanctions did not fully recover directly. Indonesia's Special Forces Command (*Kopassus - Komando Pasukan Khusus*) was rarely invited to do joint training by the US military. Several high-ranking officers were temporarily prohibited from entering the US, including the current Defense Minister, Prabowo. Moreover, the Modernisation of Avionics Capabilities for Armament and Navigation (MACAN) program for the F-5E fighter jet was also interrupted. This experience demonstrated the endangerment of over-dependence on foreign sources for Alpalhankam.

Second, in the 2000s, with the lessons learned from the embargo, Indonesia attempted to diversify its foreign partners in supplying Alpalhankam<sup>64</sup>. In 2003, Indonesia started formal military-technical cooperation with Russia while the embargo was still applied and purchased four Sukhoi and two fighter helicopters from Russia. The indefinite period of embargo forced

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<sup>59</sup> Morrissey S. U.S. Lifts Indonesia Arms Embargo // *Arms Control Today*, 2006. Vol. 36. No. 1. P. 35.

<sup>60</sup> Nurak A.P.N., Dharmiasih D.A.W, and Nugraha A.A.B.S.W. Pengaruh Embargo Senjata AS Terhadap Kerjasama Teknik Militer RI-Rusia Tahun 2003 (The Influence of US Arms Embargo on the RI-Russian Military-Technical Cooperation in 2003) // *Jurnal Hubungan Internasional*, 2015. Vol. 1. No. 3. P. 8.

<sup>61</sup> Morrissey S. U.S. Lifts Indonesia Arms Embargo. P. 35.

<sup>62</sup> Nurak A.P.N., Dharmiasih D.A.W, and Nugraha A.A.B.S.W. The Influence of US Arms Embargo on the RI-Russian Military-Technical Cooperation. P. 1.

<sup>63</sup> *Ibid.* P. 9.

<sup>64</sup> Novana R.F. Kerjasama Indonesia Dalam Militer Pemerintahan Susilo Bambang Yudhoyono Periode 2004-2009 (Indonesian Military Cooperation in the Period of Susilo Bambang Yudhoyono 2004-2009) // *Jurnal Transnasional Universitas Riau*, 2012. Vol. 3. No. 2. P. 2.

Indonesia to rationally seek more foreign partners in fulfilling the needs of Alpalhankam. Aside from Russia, the former Defense Minister, Mahfud M.D., stated that there had been initiatives to cooperate with other countries, such as China, South Korea, Western European countries, and others<sup>65</sup>. That being said, military-technical cooperation practices are already seen in this stage, though they have not been formally codified into formal regulations. The former president, Susilo Bambang Yudhoyono, obliged all arms procurement to be accompanied by transfer of technology as a condition. A declaration for cooperation and partnership framework with Russia was signed, with military-technical cooperation as an activity. The procurement of ten Su-27 and two Su-30 from Russia in 2004 had the countertrade mechanism in the contract, with a trade on palm oil and rubber with the value of \$175 million. As a continuation of the fighter jet procurement, Russia sent twelve military technicians to Indonesia to assemble the platforms as a form of commitment<sup>66</sup>. Moreover, in 2010, Indonesia signed a joint-production agreement of jet fighters with South Korea to produce Korean Fighter Experimental/Indonesian Fighter Experimental (KFX/IFX). The MACAN program was also continued and finished by referring to the aircraft completed by Belgium<sup>67</sup>.

Third, since the early 2010s, there has been a strengthening of the national defense industry by modernization and arms procurement with long term contracts<sup>68</sup>. Local defense companies had actually been existing since the Dutch colonialism period to support their weapon needs. Most of the companies were then nationalized and developed under the Indonesian government after independence to the present day. After surviving the global monetary crisis in the past, the government has been trying to revive and nurture the national defense industry by releasing official regulations and legislative changes. One of the efforts is to include the national defense industry revitalization in the master plan of 2010-2014 National Medium-Term Development Planning<sup>69</sup> as one of the priorities for the next five years<sup>70</sup>. The

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<sup>65</sup> Nurak A.P.N., Dharmiasih D.A.W, and Nugraha A.A.B.S.W. The Influence of US Arms Embargo on the RI-Russian Military-Technical Cooperation in 2003. P. 11.

<sup>66</sup> Yustiningrum R.R.E. Enam Dekade Dinamika Persahabatan Indonesia-Rusia (Six Decades of the Dynamics of Indonesia-Russia Friendship) // The Political Research Center of the Indonesian Institute of Sciences. URL: <http://www.politik.lipi.go.id/in/kolom/eropa/392-enam-dekade-dinamikapersahabatan-indonesia-rusia-.html>. (Access date: 8.12.2020).

<sup>67</sup> Santosa I. Pemersatu Bangsa, Penggentar Lawan (Unifying the Nation, Deterring Opponents) // Kompas. URL: <https://interaktif.kompas.id/baca/hari-bakti-tni/>. (Access date: 12.03.2021)

<sup>68</sup> Sulistyono I. Indonesian Defense Policy in 1998-2010. P. 174.

<sup>69</sup> Indonesia releases National Medium-Term Development Planning every five years as the document is prepared to elaborate on the vision, mission, and programs of the elected president.

<sup>70</sup> President of the Republic of Indonesia. Peraturan Presiden Republik Indonesia Nomor 5 Tahun 2010 tentang Rencana Pembangunan Jangka Menengah Nasional Tahun 2010-2014 (Decree of the President of Republic of Indonesia Number 5 of 2010 Concerning National Medium Term Development Plan 2010-2014), 2010. P. 22.

master plan also mentioned the arms embargo's experience that rationalized the need to be independent in Alpalhankam production as a crucial element for the national defense industry in supporting the national defense and security. Subsequently, there is growing confidence in the national defense industry, such as expansion by hiring new workers and increasing sales. The national defense industry has also been actively exporting arms abroad. By the year 2019, Indonesia increased its arms export by 500,26% compared to the last year<sup>71</sup>. Indonesia has now entered the development of unmanned aircraft, propellant production, fighter jets, submarines, and tanks<sup>72</sup>. Eventually, Indonesia visions self-reliance and indigenosity of its Alpalhankam needs solely by the national defense industry's capacity. Fourth, in the contemporary setting, Indonesia genuinely seeks to reduce import reliance for Alpalhankam by prioritizing domestic arms procurement and rebuilding its defense industrial base. There is a shift of trajectory from foreign orientation for arms procurement to substantial dependence on domestic providers.

The spirit comes from the embargo and foreign intervention experiences. In fact, Indonesia is one of the countries that abstained from the Arms Trade Treaty (ATT). Indonesia is actually active in many arms control international regimes, such as the Ottawa Treaty and Convention on Cluster Munitions. The nation also initially supported the idea of creating ATT in 2006, even becoming a member of the Group of Governmental Experts (GGE). Moreover, there are still separatism movements where the groups mostly obtain weapons from black market. However, Indonesia refused to sign the treaty during the 2013 United Nations General Assembly. The main reason is the contradictory values about the treaty with Indonesia's domestic principles and regulations.

Indonesia believes that the treaty does not adequately reflect a fair balance in the importing countries' interests, which are a majority of the forum. The treaty also does not represent the countries' internal conflicts, where the states should have a full right of protecting their nations. This is because ATT does not clearly distinguish the purpose of whether the arms will be used to violate Human Rights or to protect a state's sovereign territory<sup>73</sup>. ATT also has

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<sup>71</sup> Editorial Team. Diam-Diam Ekspor Senjata Indonesia Meningkat 500% (Indonesia's Arms Exports Secretly Increased by 500%) // kanal24.co.id. 28.12.2019. URL: <https://kanal24.co.id/read/diam-diam-ekspor-senjata-indonesia-meningkat-500> (Access date: 10.12.2020).

<sup>72</sup> Sekarang RI Bisa Ekspor Senjata dan Kapal Perang (Now Indonesia Can Export Arms and Warships) // Detik Finance. 10.10.2014. URL: <https://finance.detik.com/industri/d-2715723/sekarang-ri-bisa-ekspor-senjata-dan-kapal-perang>. (Access date: 10.12.2020).

<sup>73</sup> Inu. Alasan Indonesia Tak Tandatangani Traktat Perdagangan Senjata (Reasons for Indonesia Not Signing the Arms Trade Treaty) // Hukumonline.com. 20.05.2013. URL: <https://www.hukumonline.com/berita/baca/lt51c2d990e5e3c/alasan-indonesia-tak-tandatangani-traktat-perdagangan-senjata?page=2> (Access date: 13.05.2021).

a very wide scope that also includes ammunition and components. Indonesia is uneasy about the possibility of hindrance in arming themselves for the sake of its own security purposes, because it will limit the rights to produce and transfer conventional arms. Whereas in the treaty, it implies that the exporting countries have the rights to determine whether the arms transfer will facilitate Human Rights violation and international humanitarian law<sup>74</sup>.

It creates conditionalities for importing states to do before exporting states can allow the procurement, is considered subjective, and has double standards. Moreover, ATT forbids conventional arms sales to states under embargo, while the National Defense Law forbids all Alpalhankam procurement where the Providers can impose limitations about what the objectives are and how the imported weapons are deployed. Indonesia still needs foreign Providers who can fulfill its national needs. At the same time, Indonesia does not want any state to unilaterally assess its national profiles. Indonesia would only support ATT if it was balanced, transparent, and non-discriminatory. Indonesia wishes for ATT to consider the state's rights to develop its national defense industries, and that ATT should apply to illicit trade prevention, not State arms transfers<sup>75</sup>.

Therefore, in the contemporary situations, Indonesia seeks to diversify their Alpalhankam foreign Providers and take possible constraints in procuring, using, and maintaining the Alpalhankam seriously. However, despite the protectionism values, the official documents still acknowledge the national defense industry's shortcomings in meeting the technical and specification demand of TNI. Therefore, arms imports and international cooperation may be pursued under certain conditions, strictly regulated by the government that obliges the purchase to return to the nation. These conditionalities are where military-technical cooperation comes to the spotlight.

### **1.3. The System of Regulation and the Decision Making Process in the Military Procurement and Military-Technical Cooperation**

Along with the stages of development in Indonesia's arms procurement, the government has been taking numerous policy initiatives, including the introduction of codified regulations for military-technical cooperation and the establishment of relevant governmental bodies. With

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<sup>74</sup> Arms Trade Treaty Text // The Arms Trade Treaty, 2013, P. 5-6.

<sup>75</sup> Towards an Arms Trade Treaty: Establishing Common International Standards for the Import, Export and Transfer of Conventional Arms // United Nations General Assembly, Report of the Secretary General, 2006. P. 100-102.

the absence of the national formalized definition, the specific and implicit regulation about the cooperation is not available. However, we can connect the dots among the available official regulations to illustrate the circumstances and conditions in military procurement, as the activities are interconnected. This subchapter is devoted to examining military procurement regulations and military-technical cooperation. This section will also explain the decision-making actors involved in military procurement activities. As the national defense industry is classified as a part of the strategic industry, there is a centrality of governmental actors in Indonesia's procurement decision-making process. The national military procurement system is much more complicated in reality than what will be described in this research. However, this subchapter will illustrate the basics of the system as it is necessary to understand the context of regulations before talking about arms export and import in the military-technical cooperation.

Indonesia requires Alpalhankam, supported by the national defense industry's improvement, which is done by military procurement. Those are inseparable instruments from the efforts of developing the whole national forces<sup>76</sup>. Military procurement can be done at home and abroad or through activities within the framework of military-technical cooperation. All of the procurements are determined by several fundamental principles and regulations, which generally have strong nationalistic and protectionism values in favor of the national domestic industry. It needs to consider its functionality and goes in line with the general procurement plans according to the needs of TNI<sup>77</sup>. However, due to the limitation and confidential considerations, the general plan is not publicly announced, but the procurement implementation will invite prospective Providers<sup>78</sup> based on the planning and qualification assessment<sup>79</sup>.

One crucial fundamental of military procurement in all official documents and statements is applying the free and active principle. Meaning that the procurement needs to be free of political conditionalities and ties, whether it is to the Users<sup>80</sup> or Providers. It shall be immune

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<sup>76</sup> Republic of Indonesia. National Law of the Republic of Indonesia Number 16 of 2012. P. 1.

<sup>77</sup> Defence Ministry of the Republic of Indonesia. Peraturan Menteri Pertahanan Republik Indonesia Nomor 30 Tahun 2015 tentang Imbal Dagang, Kandungan Lokal, dan Ofset dalam Pengadaan Alat Peralatan Pertahanan dan Keamanan Dari Luar Negeri (Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015 Concerning Trade Returns, Local Content, and Offsets in the Procurement of Defense and Security Equipment From Abroad), 2015. P. 11.

<sup>78</sup> Indonesian government uses the term Provider to address the manufacturers of Alpalhankam, which includes companies in the national and foreign defense industries.

<sup>79</sup> Defense Ministry of the Republic of Indonesia. National Law of the Republic of Indonesia Number 16 of 2012. P. 26.

<sup>80</sup> In the official documents, the Users of Alpalhankam is defined as those who use Alpalhankam in the nation, consisting of the Indonesian Armed Forces, Indonesian National Police, Ministries and/or non-ministerial



to potential embargoes, and it shall have no barriers to deploy the purchased Alpalhankam in defending the state's sovereignty and integrity<sup>81</sup>. Moreover, all military procurements shall not violate relevant international conventions Indonesia is committed to<sup>82</sup>.

All military procurements need to come from qualified Providers responsible for the end-to-end process; from the contract execution, quality of the products, and the timeline of submission and delivery. There are three procurement methods in choosing Providers: Direct appointment, special selection, and direct procurement. A direct appointment is done when only a single supplier is available, based on commonality needs, and in urgent situations. Special selection is when Users invite, evaluate, and select the potential domestic or foreign Providers. Direct procurement can only happen during emergencies, which means Indonesia gets direct threat and needs Alpalhankam immediately to tackle the threats, and when the relevant Alpalhankam is already available to be procured<sup>83</sup>. They are subjected to several requirements, which are, but not limited to:

1. Have expertise, experience, technical and managerial capabilities
2. Have obtained at least one job within the last four years, including the experience of subcontracting, unless they have only been established for less than three years
3. Have human resources, capital, equipment, and other facilities required
4. Have the legal capacity to bind to a contract
5. Sign an Integrity Pact<sup>84</sup>
6. Not on a blacklist<sup>85</sup>

Military procurements at home need to be from the companies that belong in the national defense industry, which are defined as public and private companies approved by the government to produce and provide maintenance services of Alpalhankam to fulfill strategic interests in Indonesia's territory<sup>86</sup>. There are some guiding principles for the government to

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government agencies, and the party that is granted a license in accordance with the provisions of the laws and regulations.

<sup>81</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 66.

<sup>82</sup> Defence Ministry of the Republic of Indonesia. Peraturan Menteri Pertahanan Republik Indonesia Nomor 6 Tahun 2017 tentang Penetapan Industri Pertahanan, Perizinan Produksi, Ekspor, dan Impor Alat Pertahanan Keamanan (Decree of the Minister of Defense of the Republic of Indonesia Number 6 of 2017 concerning Determination of the Defense Industry, Production, Export and Import Licensing of Defense and Security Equipment), 2017. P. 26.

<sup>83</sup> Ibid. P. 29-30.

<sup>84</sup> Integrity pact is defined as a statement letter that contains a pledge not to commit collusion, corruption, and nepotism in the implementation of Alpalhankam procurement.

<sup>85</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 23-24.

<sup>86</sup> Ibid. P. 2-3.; Decree of the Government of Indonesia Number 76 of 2014. P. 2

determine the national defense industry. They need to be transparent to the public and be accountable for achieving the national defense industry and the Users' goals and benefits while being effective and efficient in using the resources. They also need to be prudent to sovereignty, territorial integrity, and national safety. Moreover, they need to have the moral integrity to be free of political conditionalities and binding provisions to avoid certain parties' influence that could undermine Indonesia's security and integrity<sup>87</sup>.

For domestic companies to be qualified as the national defense industry, they are subjected to legal incorporation laws, such as company registrations, business license, tax identification number, and proof of the facilities, raw materials, and relevant technical requirements<sup>88</sup>. Once they obtain the national defense industry determination, only then can they apply for the licenses to produce, import, export, and provide Alpalhankam to customers. Domestic procurement also needs to be in a minimum five years contract with periodic evaluation<sup>89</sup>.

Nevertheless, Indonesia realized that they had been relying on foreign Alpalhankam Providers too much, to the point that they became dependent on foreign products. For that reason, in 2012, the Defense Industry Law was released as the first effort to revitalize the national defense industry and support the development of domestic human resources, which had been absent previously. The Law acts as a declaration of Indonesia's legal and political commitment to developing its national defense industrial capability<sup>90</sup>. In consequence, all following official regulations about military procurement contain nationalistic and protectionistic tones. In implementing military procurement, the Users need to maximize and procure domestically produced Alpalhankam products, components, and raw material, including design and engineering processes<sup>91</sup>. There is also an evaluation of the procurement already done to really ensure that the Alpalhankam was really produced domestically<sup>92</sup>.

However, the Law also realized that the national defense industry still lacks capability and is insufficient to meet the Users' demand for Alpalhankam. Thus, the national military procurement still gives room for arms imports from abroad. Both Users and the national

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<sup>87</sup> Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 6 of 2017. P. 5-6.

<sup>88</sup> Ibid. P. 21-22.

<sup>89</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 49.

<sup>90</sup> RSIS Indonesia Programme. Indonesia's Emerging Defence Economy: The Defence Industry Law and Its Implications // S. Rajaratnam School of International Studies, 2013. P. 2.

<sup>91</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 201. P. 63.

<sup>92</sup> Ibid. P. 64.

defense industry can propose to procure foreign arms products through direct inter-governmental, government-to-providers, or national defense industry-to-provider processes<sup>93</sup>. Due to residual fear of arms embargo and foreign intervention in former times, there is an overemphasis on self-reliance and independence from the regulations. Defense Minister Prabowo stated that he shares the same principles with the President, which is to prioritize the national defense industry. However, the fact that the Defense Industry Law regulates local content means that not all components in the assembly line come domestically. Some parts still need to be purchased from abroad, and not all Alpalhankam can be fulfilled domestically. Even so, he still shares the same core principle of free and active<sup>94</sup>. For the reasons stated above, there are underlying conditions and strict regulations for arms imports.

The procurement from abroad is defined as those from foreign Providers, including purchasing, repairing, and maintaining Alpalhankam<sup>95</sup>. It shall only be pursued when Alpalhankam has not or cannot be produced domestically. In the import proposal, there are two parts to be distinguished. The parts that can still be made domestically, and those that cannot be made domestically so that it needs to be imported<sup>96</sup>. Generally, the most critical conditions for every foreign procurement are the national defense industry's participation (offset or local content), the inclusion of trade return mechanisms (countertrade or yields trade), and the obligation of technology transfer.

Since there is no codified national definition of military-technical cooperation, it is difficult to clearly distinguish different definitions, mechanisms, and requirements of the activities in the abroad military procurement. The terms in the official regulations throughout the years are different and sometimes overlapping (See Annex 2, Table 1). However, there are still elaborations about the underlying conditions in the types of different mechanisms. Offset is defined as an arrangement of reciprocal trading activities between the Indonesian government and foreign partners to return parts of Indonesia's contract value. The national defense industry's participation can be formed as joint production, joint development, joint venture, investment, license production, knowledge, competency, and technology transfer, product marketing, subcontract. It can also form as other activities, such as maintenance and

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<sup>93</sup> Government of the Republic of Indonesia. Decree of the Government of Indonesia Number 76 of 2014. P. 2.

<sup>94</sup> Astutik Y. Ini Alasan Prabowo Masih Harus Impor Senjata dari Luar Negeri (This Is the Reason Why Prabowo Still Has to Import Weapons From Abroad) // CNBC Indonesia. URL: <https://www.cnbcindonesia.com/news/20200128203446-4-133475/ini-alasan-prabowo-masih-harus-impor-senjata-dari-luar-negeri> (Access date: 22.11.2020).

<sup>95</sup> Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015. P. 3.

<sup>96</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 66.

service, overhaul, retrofit and upgrade, refurbishment and modification, research and development. Offset can be given by direct or indirect activities, the former is the activities related to Alpalhankam, and the latter is the activities not related to Alpalhankam<sup>97</sup>. Local content is defined as all domestically produced Alpalhankam owned by Indonesian individuals or legal entities that will be accepted by foreign Providers to be a part of the final product. It can form as hardware and software components or elements, intellectual property rights, design, engineering, man hour, customer support, raw materials, cost of facilities and infrastructure, education and training, and after sales services.

The Decree of the Government of Indonesia No. 76 of 2014 and the Decree of the Ministry of Defense No. 30 of 2015 define trade returns the same as offset. The latter document uses the term Local Content and Offset (KLO - *Kandungan Lokal dan Offset*), which is defined as products or activities that are a requirement in the contract of Alpalhankam procurement, in which the Providers are from foreign industry<sup>98</sup>. The Defense White Paper 2015 and the Ministry of Defense Regulation No. 16 of 2019 also elaborated that the mechanisms can form as a barter or buy-back. Which means the foreign partners need to purchase products from Indonesia, measured by the value of the contract of Alpalhankam procurement. Barter is defined as a direct exchange of the products of the same or comparable value without the use of hard currency, and buy-back is defined as the purchase of Indonesia's products with the agreed value in the contract.

The value of KLO needs to be at least 35% of the total contract, with an increase of 10% every five years<sup>99</sup>. While the trade return mechanisms' value needs to be at least 85% percent of the contract's worth<sup>100</sup>. The defense white paper also mentions that the yields trade need to be 50% of the contract value<sup>101</sup>. The features can be related or unrelated to Alpalhankam, as long as it benefits the national economy<sup>102</sup>, although priority is given to the former. However, it cannot be replaced with hard currency. All procurements from abroad also need to support

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<sup>97</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 23.; Decree of the Government of Indonesia Number 76 of 2014. P. 2-7.; Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 73-74.; Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015. P. 3.

<sup>98</sup> Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015. P. 3.

<sup>99</sup> Ibid. P. 11; Government of the Republic of Indonesia. Decree of the Government of Indonesia Number 76 of 2014. P. 4.

<sup>100</sup> Ibid. P. 4. Ibid. P. 3; Republic of Indonesia. National Law of the Republic of Indonesia Number 16 of 2012. P. 10 and P. 66.

<sup>101</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 74.

<sup>102</sup> Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015. P. 11.

the possibility of domestically-held installation, fabrication, testing, and maintenance whenever possible.

Transfer of technology is indeed crucial for defense offset mechanisms, as this can increase Indonesia's capability in making true of the self-independent national defense industry in the future. The offset mechanism shall also improve the initial steps of arms production until the very last stage; such as designing, developing, manufacturing, and maintaining. There are two different kinds of offset: Direct and Indirect. Direct offset is closely related to the Alpalhankam procured, which also directly involves the importer country. The activities can range from licensed production, co-production, and co-development. An indirect offset refers to commercial ones, such as barter, counter-purchase, counter-investment, and buyback. Although there are criticisms in indirect offset, as it will not directly contribute to technological advancement nor modernization, it will still ease the burden of financial constraints in procuring foreign Alpalhankam.

The Defense White Paper 2015 also supports the transfer of technology to close the gap and lead to the independence of the national defense industry through "... license buying, joint production, modernization of engineering and production tools, joint section, joint development, also additional research facility, e.g., laboratory, and prototype center<sup>103</sup>." In foreign expert employment, the hiring needs to be based on practical needs and with a transfer of expertise<sup>104</sup>. The Minister of Finance Regulation 2019 also exempts arms import from import duties and taxes as fiscal incentives. "...Weapons, ammunition, military, and police equipment, including spare parts, as well as goods and materials used to produce goods used for national defense and security purposes...<sup>105</sup>" is applied to duty exemption. Transfer of technology is crucial for defense offset mechanisms, as this can increase Indonesia's capability to make true of the self-independent national defense industry in the future.

Therefore, the general condition is that the national military procurement policies are overprotective to the national defense industry. Nevertheless, at the same time, they still lack

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<sup>103</sup> Defense Ministry of the Republic of Indonesia. Indonesian Defence White Paper. 2015. P. 72.

<sup>104</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 64

<sup>105</sup> Ministry of Finance of the Republic of Indonesia. Peraturan Menteri Keuangan Republik Indonesia Nomor 164/PMK.04/2019 Tentang Perubahan atas Peraturan Menteri Keuangan Nomor 191/PMK.04/2016 Tentang Pembebasan Bea Masuk atas Impor Persenjataan, Amunisi, Perlengkapan Militer dan Kepolisian, Termasuk Suku Cadang, Serta Barang dan Bahan yang Dipergunakan untuk Menghasilkan Barang yang Dipergunakan Bagi Keperluan Pertahanan dan Keamanan Negara (Decree of the Ministry of Finance of the Republic of Indonesia Number 164/PMK.04/2019 Concerning Amendments to the Decree of the Ministry of Finance Number 191/PMK.04/2016 Concerning Exemption of Import Duty on the Import of Weapons, Ammunition, Military and Police Equipment, Including Spare Parts, as Well as Goods and Materials Which Is Used to Produce Goods That Are Used for the Purposes of National Defense and Security), 2019.

capability in providing domestically produced Alpalhankam for the defense forces' needs. In consequence, foreign Alpalhankam is still allowed under certain conditions. It illustrates the importance of the role of military-technical cooperation, which is also strictly regulated in Indonesia. The national defense industry had actually benefited from defense offset programs in imports since the third stage of arms procurement development. However, only in the 2010s did the Defense Ministry start releasing formal defense offset policies and regulations for the precise and codified mechanism.

Alpalhankam imports automatically include military-technical cooperation. It involves the determination of products, components, and priority settings. The determinations are done based on the factors that will benefit the national defense industry as a whole, such as the direction of independence and competitiveness, availability of facilities and infrastructure, and marketing development. It is given that it considers Alpalhankam needs, but the national economy's impact is also a factor of determination. Moreover, an emphasis on transfers of technology and expertise becomes a significant factor in accelerating the mastery of defense and security technology, design, engineering, and human resources in training and education; while at the same time reducing the cost of financing<sup>106</sup>.

In the case where there is an integrated work of domestic and foreign Providers in the products and components, what is chosen is the one that has the most domestic parts, in which it is clearly reflected. The list of imported goods needs to be attached to the bidding document's technical specifications, quantities, and prices. The Providers also need to agree to state the percentage of their partnership in the contract<sup>107</sup>. Also, domestic Providers should act as the primary Provider as much as possible, while foreign Providers can act as sub-Providers as needed<sup>108</sup>. To exercise export activities, companies in the national defense industry need to apply for a specific export license with relevant document submissions. The documents are End User Certificate or Statement<sup>109</sup> endorsed by the exporting partner's defense attaché, the

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<sup>106</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 10; Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 30 of 2015. P. 5.

<sup>107</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 64-67.

<sup>108</sup> Defence Ministry of the Republic of Indonesia. Decree of the Minister of Defense of the Republic of Indonesia Number 6 of 2017. P. 64.; Ibid. P. 10.

<sup>109</sup> End User Certificate or Statement is defined as a statement that the contract materials purchased and/or sold from the country of origin will not be sold or transferred to other parties and are only used for their own interests.

partner's country name, documentations, certificates, invoice, and Security Clearance<sup>110</sup>. The exported materials are also subjected to physical examination and supervision, primarily for firearms, ammunition, explosives, and chemical substances.

In decision-making, all of the cycles are controlled and regulated solely by governmental institutions. Indonesia established the Defense Industry Policy Committee (KKIP - *Komite Kebijakan Industri Pertahanan*) in 2010 as a significant step and turning point in strengthening the national defense industry. KKIP is tasked to coordinate the comprehensive national policies in the national defense industry. The activities include planning, formulating, implementing, controlling, synchronizing, and evaluating to support the national defense industry's revitalization<sup>111</sup>. KKIP is also responsible as a policy-making organ to coordinate foreign cooperation and formulate the procurement, import, and export of Alpalhankam mechanisms.

With its comprehensive function and duties, KKIP is a cross-governmental institution, led directly by the President of the Republic of Indonesia, Jokowi. The president is assisted by the Minister of Defense as the so-called Daily Chairman and the Minister of State-Owned Enterprises as the Vice. The members of KKIP consists of eleven other Ministers and two Head of Institutions, including TNI and the Police as the Users<sup>112</sup>. The military procurement process within KKIP is the invitation of Users and the state-owned companies in the national defense industry to sit together and discuss about the kinds and types of Alpalhankam needed<sup>113</sup>. Hence, one of the missions of KKIP is to achieve synergy within the framework of Indonesia as a unity<sup>114</sup>. When KKIP decides on something, it means that it is a decision by all executives and stakeholders where the representatives of Users, government as the one who provides the funds, and the state-owned companies in the defense industries are all present. KKIP is also the actor who determines the technology and the product of Alpalhankam to be produced and mastered. In terms of military-technical cooperation, KKIP is the one that authorizes the value of trade returns, offset, and local content, and all of the activities in the cooperation. Namely, the determination of the product type, components, and trade return priorities. KKIP also gives

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<sup>110</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2019. P. 32-33.

<sup>111</sup> About Us (Tentang Kami) // KKIP Website. URL: <https://www.kkip.go.id/tentang-kami/> (Access date: 8.12.2020)

<sup>112</sup> KKIP members are the Ministry of Industry, Ministry of Research and Technology, Ministry of Education and Culture, Ministry of Communication and Information Technology, Ministry of Finance, Ministry of National Development Planning, Ministry of Foreign Affairs, the Commander of the Indonesian National Armed Forces, and the Chief of the Indonesian National Police.

<sup>113</sup> Karim S. Building the Independence of the Indonesian Defense Industry, P. 157-159.

<sup>114</sup> Visi & Misi (Vision & Mission) // KKIP Website. URL: <https://www.kkip.go.id/visi-misi/> (Access date: 8.12.2020)

consent to the first and the last stages in all of Alpalhankam procurement activities and supervises the cooperation, including the issuance of marketing licenses<sup>115</sup>.

In the import and export activities, complementary bodies are involved consecutively in the process—namely, Ditjen Pothan, who receives the request for export and import license request. Ditjen Pothan then coordinates with the Indonesian Defense Attache in the relevant countries (or the foreign partners' representative) to confirm the validity of the documents submitted. Other actors involved in this stage are the Assistant Intelligence to the TNI Commander, KKIP and the People's Representative Council for import, and the Ministry of Finance and the People's Representative Council for export. In the implementation of the Alpalhankam overseas trade activities, there are examinations in the Indonesian custom areas. The Director-General of Customs and Excise and the TNI Strategic Intelligence Agency execute the physical inspections, especially when it involves firearms, ammunition, explosives, and chemical substances. A copy of the examination result shall also be directed to The Ministry of Trade.

In the near future, the Indonesian government will also establish a Defense Industry Acceleration Team that operates under the Ministry of State-Owned Enterprises as a form of sub-holding entity of the national defense industry. The body will consist of the domestic arms companies within one cluster of the national defense industry. They are expected to create a Long-Term Company Plan from 2020 through 2024 that aligns with the National Medium Term Development Plan. One of the goals is to increase the national defense capabilities in meeting the demand for Alpalhankam. By the time of the writing of this master thesis, the companies are still formulating the plan. The acceleration team will be directed by the President Director of PT Len Industri, Zakky Gamai Yasin<sup>116</sup>. He stated that the companies' coalition would create more focus, ease market penetration, and increase their bargaining power as commercial companies. The acceleration team is also expected to integrate the production and human resources development<sup>117</sup>.

There are, however, challenges with the current multi-stakeholder approach. A possible overlap and clash is a very likely scenario. For example, the past regulation stated that strategic planning in the national defense industry, arms procurement, and budget allocations would be

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<sup>115</sup> Ibid.

<sup>116</sup> There are four other companies in the cluster, which are PT Len Industri, PT Bahana, Pindad, PT PAL, PT DI.

<sup>117</sup> Genjot Industri Pertahanan Indonesia, Pemerintah Bentuk Tim Khusus (Boosting Indonesia's Defense Industry, Government Forms A Special Team) // tirta.id. 3.12.2019. URL: <https://tirta.id/genjot-industri-pertahanan-indonesia-pemerintah-bentuk-tim-khusus-emNh> (Access date: 9.12.2020)



under the Ministry of Defense's responsibility. However, with the KKIP coming into existence, it shifts the responsibility to the various stakeholders mentioned in the Defense Industry Law. There needs to be clear boundaries and harmonization among the actors involved to avoid potential domestic misunderstanding and interference. Moreover, there are also possibilities of the team being overlapped with KKIP.

To conclude, Indonesia needs sufficient Alpalhankam to answer the national conceptualization of threats. Military procurement in the past was dominated by foreign Alpalhankam, which created a high dependency and is dangerous to the national military forces' potential stagnation. Therefore, Indonesia developed nationalistic and protectionism policies in military procurement. However, the national defense industry still has limitations in providing Alpalhankam needs, especially in technical and specification demands. Therefore, arms imports are allowed whilst still prioritizing and revitalizing the national defense industry by obliging all procurements to give Indonesia returns and include the domestic companies' participation. This is where military-technical cooperation plays a crucial role in military procurement. For the armed forces, it meets the demands for Alpalhankam, achieves operational readiness to face threats, and fulfills MEF by 100%. For the national defense industry, it acts as a shortcut to get access to foreign technological advances and expand exporting partners and activities. Eventually, Indonesia will achieve self-reliance and have independence in arms productions with military-technical cooperation.

## **Chapter 2. The Foreign Partners of Indonesia's Complex Military-Technical Cooperation**

Following the declaration and implementation of the free and active principle, Indonesia has various foreign partners in its military-technical cooperation activities. It also acts as an effort to diversify Alpalhankam suppliers not to rely on certain parties too much due to the residual fear of the past embargo experience. The interrelated cooperation activities also support Indonesia's ideal goal to be an autarky in the production activities of the national defense industry to support the needs of TNI and expand Indonesia's export market in Alpalhankam trade activities. In this chapter, the author would like to highlight Indonesia's significant partners in the complex military-technical cooperation activities in the contemporary situation. By complex, the author means that there are a variety of different activities in the cooperation. There is a high interrelation of the cooperation elements, ranging from the projects to the time under cooperation frameworks. The structure of this chapter will use an approach of dividing the foreign partners based on its level of significance and intensity of the cooperation, as the scope and limitations of this study are also about the political aspects of Indonesia's foreign military-technical cooperation.

For that reason, South Korea and Turkey are divided into independent sub-chapters, as the cooperation activities are large-scale, interrelated, and continuous. The particular reason for the circumstance is that the Indonesian government, the national discourse, and the national public perceive South Korea and Turkey as significant partners that support the production of Alpalhankam in the contemporary situation, not just pure Alpalhankam imports. South Korea and Turkey are not the world's biggest arms importers, but they are two of the biggest for Indonesia in military-technical cooperation activities. Cases with these two partners explain the main direction of the Indonesian government in the field, as even though the activities are import-based, the government tries to avoid pure imports and make accents on complex cooperation simultaneously. Cooperation with South Korea and Turkey are the ideal cases of how the Indonesian government is implementing their policies explained in Chapter 1. This is possible because they are eager to work together with Indonesia in the defense industry. They are willing to share the knowledge and technology in Alpalhankam production and invest significant money and time in the cooperation. Moreover, Indonesia's joint-production activities with South Korea and Turkey are mostly precedent. It helps Indonesia gain firsthand experience in producing Alpalhankam units, such as submarines, fighter jets, and tanks that

Indonesia did not get anywhere before. Therefore, the devoted subchapters for Indonesia and Turkey are to explain the high intensity and complexity of the cooperation, as Indonesia's principles and policies are implemented better with them than anyone else. Also, the activities will directly support Indonesia's vision to produce its Alpalhankam at home in the future.

The other complex foreign military-technical cooperation with other partners will be placed in the last sub-chapter, also determined from the activities' intensity and scale. It will elaborate on other cases of complex cooperation but are comparatively smaller than the previous two partners. Even though the cases are relatively more minor, it still has elements of military-technical cooperation, and the various partners will demonstrate how Indonesia is diversifying its foreign partners. Also, there are ongoing discussions for other military-technical cooperation activities, as there are already agreements and talks from official visits, yet no significant activities made yet. However, considering that the output of military procurement, especially in military-technical cooperation, takes a long time, these cases also indicate more prospects for the activities and partners.

Thus, with the explained structure, this chapter aims to illustrate the diversity of foreign partners and narrate the level of significance of Indonesia's military-technical cooperation in the contemporary situation. The main research task of this chapter is to evaluate the implementation of Indonesia's basic policies about conditional arms imports, along with the declared free and active principle. To achieve the goal, this chapter will also bring the achievements and problems surrounding the cases of military-technical cooperation with the foreign Alpalhankam Providers.

### **2.1. The Development of Indonesia's National Defense Industry Partnership with South Korea**

South Korea is one of the most critical and strategic partners for Indonesia's Alpalhankam modernization and military procurement due to their possession of essential types of modern technology in the defense industry. The Indonesian government's perception is that South Korea is an important partner in its contemporary foreign military-technical cooperation, as some of the projects are still ongoing. Indonesia's national media has also been highlighting the cooperation with South Korea because the activities are the most recent. It involves precedent activities Indonesia does in Alpalhankam production efforts, such as submarine and fighter jet, which is why cooperation with South Korea is an independent sub-chapter. This subchapter will elaborate on the most recent developments of the bilateral defense industry

cooperation between Indonesia and South Korea and the underlying rationalization and reasons for the solid and complex military-technical cooperation.

The bilateral defense cooperation of both partners has been going on for a long time. The consulate relations between Indonesia and South Korea began in 1966. The diplomatic relations officially started in 1973. Along with the increasing intensity of relations, the defense cooperation also strengthened with several agreements that include activities of strategic dialogues; information and personnel exchange, such as technicians, experts, and trainers; also the help and support of defense logistic; and others<sup>118</sup>. With that, Indonesia-South Korea's defense cooperation entered a new chapter of "special strategic partnership."<sup>119</sup> Indonesia has a continuity of specific technical cooperation agreements with the partner over the years, such as Government Quality Assurance Acceptance Agreement for Defense Materials and Services, Defense Industry Special Cooperation, and Joint Development of the Korean KF-X Combat Aircraft<sup>120</sup>. Both countries then signed an agreement on 12 October 2013 for defense cooperation, and it was then agreed to be a Bill in 2018 to be a legal basis for the implementation<sup>121</sup>. In the defense industry, Indonesia and South Korea have been doing many activities in the framework of military-technical cooperation, such as joint production, joint venture, transfer of technology, joint-marketing, and counter purchase. In addition, KKIP also

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<sup>118</sup> Menhan dan Komisi I DPR RI Setujui RUU Kerja Sama Pertahanan RI – Korea (The Minister of Defense and Commission I DPR RI Approves the RI-Korea Defense Cooperation Bill) // Official Website of the Defense Ministry of the Republic of Indonesia. 9.06.2018. URL: <https://www.kemhan.go.id/2018/07/09/menhan-dan-komisi-i-dpr-ri-setujui-ruu-kerja-sama-pertahanan-ri-korea.html> (Access date: 20.03.2020)

<sup>119</sup> Profil Negara dan Hubungan Bilateral: Republik Korea (Country Profile and Bilateral Relations: Republic of Korea) // Official Website of the Foreign Ministry of the Republic of Indonesia. URL: [https://kemlu.go.id/seoul/id/pages/hubungan\\_bilateral/558/etc-menu](https://kemlu.go.id/seoul/id/pages/hubungan_bilateral/558/etc-menu) (Access date: 20.03.2020); and Korea Selatan Tingkatkan Kerjasama dengan RI Menjadi Kemitraan Khusus (South Korea Increases Cooperation with RI to Become a Special Partnership) // Official Website of the Defense Ministry of Indonesia. 30.01.2018. URL: <https://www.kemhan.go.id/2018/01/30/korea-tingkatkan-kerjasama-dengan-ri-menjadi-kemitraan-khusus.html>. 30.01.2018 (Access date: 27.04.2021).

<sup>120</sup> Ministry of Law and Human Rights of Indonesia. Naskah Akademik Keterangan Hasil Penyelarasan Naskah Akademik RUU tentang Pengesahan Persetujuan antara Pemerintah Republik Indonesia dan Pemerintah Republik Korea tentang Kerja Sama di Bidang Pertahanan (Academic Paper Information on Alignment Result of Academic Paper on Bill concerning Ratification of Agreement between the Government of the Republic of Indonesia and the Government of the Republic of Korea regarding Cooperation in the Defense Sector) // Indonesia's National Legal Development Agencies, 2017. P. 20-22. URL: [https://www.bphn.go.id/data/documents/na\\_riu\\_ri-korea\\_bid\\_pertahanan.pdf](https://www.bphn.go.id/data/documents/na_riu_ri-korea_bid_pertahanan.pdf). (Accessed 27.04.2021).

<sup>121</sup> Menhan dan Komisi I DPR RI Setujui RUU Kerja Sama Pertahanan RI – Korea (The Minister of Defense and Commission I DPR RI Approved the RI-Korea Defense Cooperation Bill) // Official Website of the Defense Ministry of Indonesia. 9.07.2028. <https://www.kemhan.go.id/2018/07/09/menhan-dan-komisi-i-dpr-ri-setujui-ruu-kerja-sama-pertahanan-ri-korea.html>. (Accessed 27.04.2021).

routinely holds Defense Industry Cooperation Committee (DICC) meetings with South Korea<sup>122</sup>.

In fact, South Korea is one of Indonesia's biggest Alpalhankam suppliers, although not the world's. According to Stockholm International Peace Research Institute (SIPRI) data, South Korea was fourth-leading Indonesia's supplier by the number of weapons in 2010-2020 (See Annex 2, Table 6). Among others, Indonesia signed a \$70 million contract value to procure combat vehicles from South Korea in 2009, produced in 2012, and delivered in 2013. In the contract, from 22 units of Tarantula Panzer to be produced, 11 will be produced domestically in a semi-assembly manner in Indonesia by the state-owned company, PT Pindad, from a technology transfer by Doosan DST. The Indonesian armored crew was also trained in South Korea for three months before the units were made operational<sup>123</sup>.

Under the cooperation frameworks, Indonesia's state-owned company, PT PAL Indonesia (PT PAL), also acquired the capability to produce Landing Platform Docks (LPDs) from the transfer of technology from South Korea's Daesun Shipbuilding & Engineering. It started from Indonesia's conditional procurement of the Makassar Class LPDs in 2004 from South Korea that obliged them to transfer their product technology. In the contract, two LPDs are manufactured in South Korea, and two others are produced in Indonesia, which led to the indigenous productions of Warships of the Republic of Indonesia (KRI - *Kapal Perang Republik Indonesia*), namely KRI Banjarmasin (592) and KRI Banda Aceh (593)<sup>124</sup>. The process takes time until 2011 for the last LPDs to be operational. In domestic production, some modifications are done to suit the national needs, such as the addition of command and control, weapon and air defense systems, and semi-stealth technology. With the successful domestic production, other countries have been eyeing Indonesian-made LPDs. Indeed, Indonesia has been exporting its indigenous LPDs to many foreign partners, such as the Philippines, Peru, and Malaysia.

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<sup>122</sup> RI – Korea Adakan The 1st Defense Industry Cooperation Committee Meeting (RI - Korea Held The 1st Defense Industry Cooperation Committee Meeting) // Official Website of the Defense Ministry of Indonesia. 22.05.2012. URL: <https://www.kemhan.go.id/2012/05/22/ri-korea-adakan-the-1st-defense-industry-cooperation-committee-meeting.html> (Accessed 27.04.2021).

<sup>123</sup> Fuaddah M.N. Tarantula 6 × 6: Combat Vehicle For Border Territory [in Indonesian] // Indo Militer. 14.10.2013. URL: <https://www.indomiliter.com/tarantula-6x6-panser-pemukul-untuk-wilayah-perbatasan/> (Access date: 20.04.2021).

<sup>124</sup> Condro H.S. Strategy to Improve Naval Shipbuilding Industry Self-Reliance in Indonesia // Master's Thesis, Naval Postgraduate School, Monterey, California. URL: <https://apps.dtic.mil/sti/pdfs/AD1053181.pdf> (Access date: 13.03.2021).

There is, however, a controversy resulting from this joint development project. In 2019, South Korea sold LPDs to Myanmar with a relatively subtle and unnoticed deal. Myanmar's procurement of UMS Moattama has a secretive impression<sup>125</sup>. In 2014, Indonesia's PT PAL held a dialogue about the potential procurement of LPD Makassar Class with Myanmar. It is somewhat expected since PT PAL previously produced Tarlac Class LPDs for Myanmar. Daesun Shipbuilding & Engineering will also get a royalty from Indonesia's export to Myanmar<sup>126</sup>. However, Myanmar's UMS Moattama is procured from South Korea instead of Indonesia. Nevertheless, this polemic did not stop Indonesia-South Korea's military-technical cooperation in other activities.

For the Indonesian Navy, Indonesia also did a series of procurement for KRI with a joint-production scheme in 2011 by PT PAL and Daewoo Shipbuilding and Marine Engineering (DSME) with a value of US\$ 1.1 billion partnership. The Changbogo Class submarines are named in the order as KRI Nagapasa-403, KRI Ardadedali-404, and KRI Alugoro-405, the years of delivery were done consecutively in 2017, 2019, and 2021<sup>127</sup>. In the contract, it was agreed that the first two submarines would be produced in South Korea, where Indonesia sent 113 engineers for On the Job Training (OJT) to the partnering country. The third submarine would then be co-produced domestically in Indonesia, with the help and transfer of knowledge and technology from South Korea. Ditjen Potan also gave consulting services assistance within the transfer of technology activities<sup>128</sup>.

KRI Alugoro-405 is the first Indonesia's domestically produced submarine, which also means the first time the national defense industry was involved in the co-production of the units. The project is also the first time for South Korea to do an export-production<sup>129</sup>. It is accompanied by technology and knowledge transfer with the working activities of the joint section, test, and trials. Prabowo stated in the delivery ceremony that he expects PT PAL to

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<sup>125</sup> Rahman M.R. What Myanmar's New Amphibious Ship Says About Its Naval Ambitions // The Diplomat. 09.11.2019. URL: <https://thediplomat.com/2019/11/what-myanmars-new-amphibious-ship-says-about-its-naval-ambitions/> (Access date: 08.03.2021).

<sup>126</sup> Perdana G. Terkesan Dirahasiakan, Korea Selatan Luncurkan Landing Platform Dock Pesanan Myanmar (Seems to Be Kept Secret, South Korea Launches Myanmar's Order Dock Landing Platform) // Indomiliter.com. URL: <https://www.indomiliter.com/terkesan-dirahasiakan-korea-selatan-luncurkan-landing-platform-dock-pesanan-myanmar/> (Access date: 08.03.2021).

<sup>127</sup> Indonesia Submarine Capabilities // Nuclear Threat Initiative. 18.02.2021. URL: <https://www.nti.org/analysis/articles/indonesia-submarine-capabilities/>. (Access date: 20.04.2021).

<sup>128</sup> Defense Ministry of the Republic of Indonesia. Laporan Tahunan Direktorat Jenderal Potensi Pertahanan (Annual Report of the Directorate General of Defense Potential), 2018. P. 76-77.

<sup>129</sup> Susdarwono E.T. Ekonomi Politik Pengadaan Alutsista Kapal Selam Changbogo dalam Rangka Menuju Proses Kemandirian Industri Pertahanan Indonesia (Political Economy of Procurement of the Changbogo Submarine's Alutsista Towards the Independence of the Indonesian Defense Industry) // Jurnal Ilmu Ekonomi Terapan, 2019. Vol. 4, No. 2. P. 5.

produce its own submarines from the design to production processes in the next five years. The addition of the submarines is a part of Alpalhankam modernization and evidence of strengthening the national defense industry. By this cooperation, Indonesia can now make its own submarines, being the first country in Southeast Asia capable of doing so<sup>130</sup>. In the future, Indonesia aims to be the region's alternative supplier of affordable submarines.

The military procurement of both partners goes both ways, as South Korea procured four of Indonesia's domestically produced CN235 Maritime Patrol Aircraft (MPA), ordered by the Korea Coast Guard (KCG) in 2003-2005. The order acts as a countertrade mechanism for Indonesia's T-50 Golden Eagle advanced jet fighters procurement. In total, South Korea's Air Force operates eight of Indonesia's domestically produced CN235. This agreement is done under the framework of Indonesia's national regulation about Alpalhankam procurement that countertrade mechanism shall be pursued as one of the activities in military-technical cooperation. The procurement plan by Indonesia to South Korea was already decided, yet the implementation took time until the nation succeeded in persuading the partner to procure back their CN235. Indonesia finally completed South Korea's counter-procurement of CN235 in 2012<sup>131</sup>. This barter agreement is mutually beneficial for Indonesia, as it complements both Air Forces in fighter jets and transport aircraft<sup>132</sup>.

In the case of Indonesia, military-technical cooperation has an obligatory nature, considering that it is regulated as a condition for Alpalhankam imports. However, the importer can also actively offer offset mechanisms to the buyers<sup>133</sup>, which happens with South Korea. Nevertheless, the decision on the offer is still under the discretion of the government. One example is after the success of the T-50 Golden Eagle cooperation; South Korea offered another offset mechanism with KT-1B with a more detailed design sharing. However, Indonesia rejected the offer due to the uneconomical reasons of not being too profitable.

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<sup>130</sup> The Alugoro-405 Submarine Has Officially Handed Over From the Shipyard to the Ministry of the Defense Republic of Indonesia // Official website of PT PAL Indonesia. URL: <https://pal.co.id/2021/03/publikasi/news-berita/the-alugoro-405-submarine-has-officially-handed-over-from-the-shipyard-to-the-ministry-of-the-defense-republic-of-indonesia/> (Access date: 24.03.2021).

<sup>131</sup> Pesawat CN-235 Pesanan Terakhir dari Korean Coast Guard Diterbangkan Menuju Korea Selatan (Korean Coast Guard's Last CN-235 Aircraft Flown to South Korea) // Official Website of the Defense Ministry of the Republic of Indonesia. 9.03.2012. URL: <https://www.kemhan.go.id/2012/03/09/pesawat-cn-235-pesanan-terakhir-dari-korean-coast-guard-diterbangkan-menuju-korea-selatan.html> (Access date: 20.04.2021).

<sup>132</sup> RI 'Barter' CN-235 dengan Jet Latih T-50 Korsel (The Republic of Indonesia 'Barter' with South Korea's T-50 Jet Trainers) // detikfinance. 18.5.2011. URL: <https://finance.detik.com/berita-ekonomi-bisnis/d-1641934/ri-barter-cn-235-dengan-jet-latih-t-50-korsel> (Access date: 10.03.2021).

<sup>133</sup> Eriksson E.A. Study on the Effects of Offsets on the Development of a European Defence Industry and Market // Final report of 06-DIM-022, 2007. P. 45; and Savitri. C.M. Contribution of Offset to Defence Industrialization in Indonesia P. 118.

Indonesia realizes that KAI wants to expand its presence in Indonesia's market, and it can further deepen its cooperation. However, PT Dirgantara Indonesia (PT DI) at that moment was already full of domestic and foreign orders. Instead, Indonesia and South Korea collaborate on the KFX/IFX joint development.

KFX/IFX is a notable project they currently do and probably is the most important for Indonesia-South Korea military-technical cooperation. The project is done with the involvement of PT DI and Korea Aerospace Industries (KAI). Indonesia received the invitation to co-produce the fighter jet with South Korea in 2010<sup>134</sup> due to the partner's willingness to share their technology, do joint production, and enter the third world market together. With the feasibility study, Indonesia accepted South Korea's offer to cooperate as the partner is reliable in producing defense industry products, especially jet fighters. The program includes technology development, manufacturing development, and production<sup>135</sup>. Moreover, Indonesia's Air Force has been using South Korea's co-developed Black Eagle with the US, so TNI is already used to the technicalities of the units. Indonesia expects that the KFX/IFX will replace the outdated F-5E/F Tiger that is almost 30 years old and gain technical mastery in supporting border protection and surveillance<sup>136</sup>.

Indonesia has previously been involved as a subcontractor in aviation with other foreign partners, but not for once, Indonesia was involved in producing jet fighters. So that this joint-development project will undoubtedly be helpful to support Indonesia's national defense industry revitalization and self-sufficiency in fighter jets, as Indonesia sees that South Korea is willing to share its technology, knowledge, and competence<sup>137</sup>. Indonesia's payment contribution is expected to be returned with one prototype, participation in design, obtaining technical data, and sharing production activities.

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<sup>134</sup> President of the Republic of Indonesia. Peraturan Presiden Republik Indonesia Nomor 136 Tahun 2014 tentang Program Pengembangan Pesawat Tempur IF-X (Presidential Decree of the Republic of Indonesia Number 136 of 2014 Concerning the IF-X Combat Aircraft Development Program), 2014. P. 1.

<sup>135</sup> Ibid. P. 2-3.

<sup>136</sup> Salsabiela B.F. Analisis Akuisisi Teknologi Industri Pertahanan Indonesia: Studi Kasus Pengembangan Pesawat Tempur Korean Fighter Xperiment/Indonesian Fighter Xperiment (KFX/IFX) (Analysis of Technology Acquisitions of Indonesian Defense Industry: A Case Study Of Jet Fighter Development of Korean Fighter Xperiment/Indonesian Fighter Xperiment (KFX/IFX)) // Jurnal Pertahanan dan Bela Negara. 2016. Vol. 6, No. 2. P. 62-63.

<sup>137</sup> Armandha S. A., et al. Ekonomi Politik Kerja Sama Korea Selatan - Indonesia dalam Joint Development Pesawat Tempur KFX/IFX (Political Economy of South Korea-Indonesia Cooperation in the Joint Development of the KFX / IFX Combat Aircraft) // Global Strategis, 2016. Vol. 10, No. 1. P. 66.



Aside from technology transfer, this cooperation also uses a joint-venture mechanism in the form of a cost-sharing agreement with a value of US\$ 8 million signed in 2016, where Indonesia only pays 20% of the total amount needed for the project<sup>138</sup>. The distribution is adjusted according to the contribution; from 168 units to be produced, South Korea will get 120 units while Indonesia gets 48 units<sup>139</sup>. In the payment scheme, the total hard currency needed in the second stage is about US\$6.7 million, and the first payment Indonesia makes is 1% of the total value. Then, in 2017-2026, Indonesia needs to pay 2% each year every April and October. Therefore, the payment subjected to Indonesia needs to be paid gradually and not all at once<sup>140</sup>, which is undoubtedly helpful with the constraint in the national defense budget.

However, this cooperation program is not free of obstacles, as it was delayed many times. Indonesia postponed the project in 2015 with an undetermined deadline due to contract disagreements in interrelated aspects with the surrounding problems and issues<sup>141</sup>. In terms of technology transfer, it was agreed that although Indonesia will only have some of the development shares, the nation will still get 100% development knowledge and transfer of technology<sup>142</sup>. However, Indonesia stated that South Korea has nine technology mastery that will not be shared, and the ownership will later only be 15%<sup>143</sup>. Another issue is the engineers' age sent to South Korea a limit of 35-40 years old, which is past the productive workers' age so that there will be no transfer of the knowledge gained to the successors<sup>144</sup>. PT DI's engineers complained that they did not get complete access to the knowledge, including the technology

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<sup>138</sup> Defense Ministry of the Republic of Indonesia. Peraturan Menteri Pertahanan Republik Indonesia Nomor 6 Tahun 2016 tentang Pelaksanaan Pelaksanaan Program Pengembangan Pesawat Tempur IF-X (Decree of the Minister of Defense Number 16 of 2016 Concerning the Implementation of the IF-X Combat Aircraft Development Program), 2016. P. 17.

<sup>139</sup> Jelang Peluncuran Pesawat KFX/IFX, Prabowo Temui Presiden Moon (Ahead of the KFX/IFX aircraft Launch, Prabowo Meets President Moon) // Antara News. URL: <https://www.antaraneews.com/berita/2092130/jelang-peluncuran-pesawat-kfx-ifx-prabowo-temui-presiden-moon#:~:text=Proyek%20KFX%20FIFX%20adalah%20proyek,dari%20tahun%202015%20sampai%202028> (Access date: 20.04.2021).; and Afiff G.I. Kepentingan Indonesia Melakukan Kerjasama Militer dengan Korea Selatan dalam Pengembangan Pesawat Tempur KFX/IFX (Indonesia's Interests in Military Cooperation with South Korea in the Development of KFX / IFX Combat Aircraft) // Jurnal Online Mahasiswa Fakultas Ilmu Sosial dan Ilmu Politik, 2016. Vol. 3, No. 2. P. 2.

<sup>140</sup> Defense Ministry of the Republic of Indonesia. Decree of the Minister of Defense Number 16 of 2016. P. 17.

<sup>141</sup> Chairil T. Indonesia's Aircraft Industry: Will It Fly Higher? // The Conversation. 19.06.2019. URL: <https://theconversation.com/indonesias-aircraft-industry-will-it-fly-higher-118044> (Access date: 10.03.2021).

<sup>142</sup> Susdarwono E.T. Political Economy of Procurement of the Changbogo Submarine. P. 9.

<sup>143</sup> RI Tak Disebut dalam Pengumuman Proyek Jet Tempur KFX Korsel (The Republic of Indonesia was not Mentioned in KFX South Korea Fighter Jet Project Announcement) // CNBC Indonesia. 15.09.2020. URL: <https://www.cnbcindonesia.com/news/20200915073112-4-186811/ri-tak-disebut-dalam-pengumuman-proyek-jet-tempur-kfx-korsel> (Access date: 20.04.2021).

<sup>144</sup> Ibid.

adopted in KFX/IFX<sup>145</sup>. This issue is impacted by the US' indirect involvement in the project, as the US gave the offset program from South Korea's procurement of F-35 Joint Strike Fighter Lightning II aircraft. The knowledge gained from that offset agreement, including from T-50 Golden Eagle, is expected to be implemented and adapted to KFX/IFX<sup>146</sup>. So that the unit's development is not fully provided by South Korea only.

Hence, it creates another problem in the political climate. Indonesia does not have a technical assistance agreement with the US. At the same time, the US wants Indonesia to have a Defense Technology Security System so that the technology and knowledge transfer from South Korea will not leak to other parties. This problem leads to the inability of Indonesia to obtain some of the technologies. Moreover, the radar, engine, and avionics are Lockheed Martin's products. The US needs to give Lockheed Martin permission to transfer their knowledge to South Korea, which will then be relayed to Indonesia. Historically, Lockheed Martin had doubts about Indonesia as the nation purchased Russia's Sukhoi. Although Indonesia officially and publicly declares that all military procurements are done under free and active principles, Russia is still the US' big competitor in the defense industry sphere.

The state of the economy in terms of budgeting is also one of the biggest problems faced. Although Indonesia only has to pay one-fifth of the total value, \$US 1.6 million is still a massive national defense budget. In 2017, Indonesia had only paid KRW 227,2 million from KRW 1,7 trillion. Furthermore, the project still needs additional domestic infrastructures, so that the total amount needed for the budget is more than Indonesia needs to pay to South Korea. The Vice Minister of Defense, Sakti Wahyu Trenggono, stated that Indonesia was not really benefited from this project, though not explicitly stating that it was canceled. COVID-19 also worsened the situation as Indonesia did not send back its 114 technical specialists from PT DI to South Korea. It creates domestic obscurity whether Indonesia will stay in the project or not<sup>147</sup>. However, South Korea continued the development of KFX regardless of Indonesia's delayed payment. The negativity was intensified because, in the KAI's 2020 announcement and official statement about its success in developing KFX, neither Indonesia nor PT DI was mentioned at all. KAI only expressed gratitude for their partners in general. However,

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<sup>145</sup> Ali A. H. Mengurai Sengkarut Program KFX/IFX antara Korsel & Indonesia (Unraveling the Confusion of the KFX / IFX Program between South Korea and Indonesia) // CNBC Indonesia. URL: <https://www.cnbcindonesia.com/opini/20210405122936-14-235283/mengurai-sengkarut-program-kfx-ifx-antara-korsel-indonesia> (Access date: 21.04.2021).

<sup>146</sup> Ibid.

<sup>147</sup> Lee C.J. and Shim K.S. Indonesia Appears Likely to Withdraw From Joint Fighter Jet Project // Korea JoonAng Daily. URL: <https://koreajoongangdaily.joins.com/2020/12/28/national/defense/KFX-Indonesia-Korea/20201228164600519.html> (Access date: 21.04.2021).

Indonesia's national media reported that both governments continue the negotiation and will still work together<sup>148</sup>. Indonesia is requesting more technology transfer and reduction of burden to 15%.

In April 2021, the first prototype was finished being assembled and was named KAI KF-21 Boramae by South Korea. Indonesia was invited to the rollout ceremony, with Joko Widodo personally congratulating South Korea in a video message, and Prabowo attended in person. South Korea mentioned Indonesia as an important partner who trusts them in the project implementation in the rollout<sup>149</sup>. Also, on the finished prototype, both South Korea and Indonesia flags are displayed on the forward fuselage. Therefore, with the rollout ceremony, Indonesia's participation, and Korean officials' statement, it can now be confirmed that the project is still on track to finish producing by 2032 with the participation continuity of both partners<sup>150</sup>.

There are underlying motives for these solid bilateral relations in the defense industry, making it a mixture of reasons. The foundation is the principle of interdependence. Indonesia needs capital, investments, technological products, also the very essence of technology needs for its national defense industry to produce the needed Alpalhankam. South Korea, in return, sees Indonesia as a source of natural resources and a potential for its defense industry market. For Indonesia, South Korea is an essential partner from the East Asia region, which acts as an alternative technological source, especially in heavy industry, technology and information, also telecommunications. South Korea has advanced their Alpalhankam, such as radar, weapons, submarines, and long-range missiles, from which Indonesia can extract the knowledge and technology from. Indonesia sees no political or military risks from the cooperation with South Korea. Indonesia identifies many mutual benefits<sup>151</sup>, such as transferring knowledge, personnel, scientific data, and logistics. Both countries can also do joint-marketing activities to

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<sup>148</sup> Indonesia Komitmen Lanjutkan Kerjasama Pembangunan Pesawat Tempur KFX/IFX Dengan Korsel (Indonesia is Committed to Continue Cooperation in the Development of KFX / IFX Combat Aircraft with South Korea) // Official Website of the Defense Ministry of the Republic of Indonesia. 04.05.2015. URL: <https://www.kemhan.go.id/2015/05/04/indonesia-komitmen-lanjutkan-kerjasama-pembangunan-pesawat-tempur-kfxifx-dengan-korsel.html> (Access date: 20.03.2020)

<sup>149</sup> Lendon B and Se Y.J. South Korea Rolls Out the Kf-21, Joining Elite Group of Global Supersonic Fighter Jet Makers // CNN. 9.04.2021. URL: <https://edition.cnn.com/2021/04/09/asia/south-korea-kf-21-fifth-generation-fighter-jet-intl-hnk/index.html> (Access date: 21.04.2021).

<sup>150</sup> Korea's KF-X Fighter Named KF-21 Boramae at Rollout // AIN Online. URL: <https://www.ainonline.com/aviation-news/defense/2021-04-09/koreas-kf-x-fighter-named-kf-21-boramae-rollout> (Access date: 21.04.2021).

<sup>151</sup> Information on the Alignment of Academic Paper on the Bill concerning Ratification of the Agreement between the Government of the Republic of Indonesia and the Government of the Republic of Korea, 2017. P. 24-25.

promote their jointly produced Alpalhankam as an affordable alternative product to the neighboring countries.

## **2.2. Indonesia-Turkey Complex Military-Technical Cooperation Activities**

Another significant partner in Indonesia's foreign military-technical cooperation activities is Turkey. Referred to as new economic powers in the future, together with Mexico, Indonesia, Nigeria, and Turkey (MINT)<sup>152</sup>, Indonesia and Turkey have been doing complex cooperation and interrelated activities mutually beneficial with their own reciprocal defense ambitions. The Indonesia-Turkey complex military-technical cooperation is based on several fundamental values. In the world's defense industry, there may be more prospective partners in terms of Alpalhankam quality. Yet, Turkey was the only country outside of ASEAN that the defense cooperation was ratified to be an Indonesian Bill until 2014<sup>153</sup>. It indicates the importance and significance of the complex cooperation of both countries.

The bilateral relations, in general, are substantial. Both are in the same international organizations, such as the Organization of Islamic Cooperation (OIC), G-8, G-20, and the United Nations (the UN) peacekeeping missions in Lebanon. There is also a common arms embargo experience in the past from the US. Turkey had this experience in 1974 due to their intervention in Cyprus, yet it built Turkey's national defense industry character, which is also to speed up indigenization<sup>154</sup>. The diplomatic relations of Indonesia-Turkey started in 1950, and it transformed into strategic relations in 2011 with the "Joint Declaration Indonesia-Turkey: Towards an Enhanced Partnership in a New World Setting" in Jakarta, Indonesia<sup>155</sup>. As a matter of fact, there has been continuity of military-technical cooperation from early Indonesia's independence era to the present day. The declaration facilitates the enhancement of both partners in many spheres, including political security, science and technology, and strategic industry. Indonesia also held a Defence Industry Cooperation Meeting (DICM) with Turkey and has been meeting annually since 2011. In the most recent meeting led by

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<sup>152</sup> Wright C. After The BRICS Are The MINTs, But Can You Make Any Money From Them? // Forbes. 06.01.2014. URL: <https://www.forbes.com/sites/chriswright/2014/01/06/after-the-brics-the-mints-catchy-acronym-but-can-you-make-any-money-from-it/?sh=4fef180f29a6> (Access date: 23.05.2021).

<sup>153</sup> Amrullah M.R. Diplomasi Pertahanan Indonesia Terhadap Turki: Studi Kasus Kerjasama Industri Pertahanan (Indonesian Defense Diplomacy Towards Turkey: A Case Study of Defense Industry Cooperation) // Jurnal Pertahanan, Vol. 6 No. 1, 2016. P. 151-167.

<sup>154</sup> Durmaz M. The US Arms Embargo of 1975-1978 and Its Effect on the Development of the Turkish Defense Industry. California. NPS, 2014. P. 66

<sup>155</sup> Indonesia & Turki (Indonesia and Turkey) // Official Website of the Foreign Ministry of the Republic of Indonesia. URL: <https://kemlu.go.id/ankara/id/pages/indonesia-turki/51/etc-menu> (Access date: 29.04.2020).

Indonesia's Ditjen Pothan and Turkey's Vice President of Defence Industries (SSB), both partners also talked about the prospects for more collaboration in Alpalhankam procurement, modernization, transfer of technology, and training<sup>156</sup>.

Not only that, Indonesia made Bill No. 19 of 2014 as an effort and national ratification to legally base the national implementation of the defense industry cooperation with Turkey. The Bill covers activities of military-technical cooperation; such as making facilities for joint research, development, production, and modernization projects; mutual assistance in the production and procurement of Alpalhankam products and services; final product marketing; exchanges of information on science and technology; also participation in defense industry fairs<sup>157</sup>. Both partners also exchanged regular official visits, and Prabowo visited Turkey five times during 2020 to enhance defense industry cooperation.<sup>158</sup> In the recent visit, the Foreign Ministry of Turkey, Mevlüt Cavuşoğlu, stated that the production facility would also be built in Indonesia without conditions, as it is now only in Turkey<sup>159</sup>. Indonesia and Turkey also have been expressing that in the future, they vision more cooperation in the aerospace industry, including Unmanned Aerial Vehicles (UAVs), drones, rocket launch sites, satellites, and satellite launch vehicles<sup>160</sup>; also submarine productions<sup>161</sup>. Turkey's president of Defense

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<sup>156</sup> Rapat Kerjasama Industri Pertahanan Ke-9 Republik Indonesia – Republik Turki (The 9th Defense Industry Cooperation Meeting of the Republic of Indonesia - Republic of Turkey) // Official Website of the Foreign Ministry of the Republic of Indonesia. 5/10/2020. URL: <https://www.kemhan.go.id/pothan/2020/11/05/rapat-kerjasama-industri-pertahanan-ke-9-republik-indonesia-republik-turki.html> (Access date: 29.04.2021).

<sup>157</sup> Republic of Indonesia. Undang-Undang Republik Indonesia Nomor 19 Tahun 2014 tentang Pengesahan Persetujuan Tentang Kerja Sama Industri Pertahanan Antara Pemerintah Republik Indonesia Dan Pemerintah Republik Turki (Bill of the Republic of Indonesia Number 19 of 2014 concerning the Agreement on Defense Industry Cooperation between the Government of the Republic of Indonesia and the Government of the Republic of Turkey), 2014. P. 1-2.

<sup>158</sup> Prabowo Bertemu Menlu Turki Bahas Kerja Sama Pertahanan (Prabowo Meets Turkish Foreign Minister to Discuss Defense Cooperation) // Anadolu Agency. 22.12.2020. URL: <https://www.aa.com.tr/id/nasional/prabowo-bertemu-menlu-turki-bahas-kerja-sama-pertahanan/2085183#> (Access date: 29.04.2021).

<sup>159</sup> Menhan RI Terima Kunjungan Menlu Turki, Lanjutkan Pembicaraan Kerjasama Industri Pertahanan (Indonesian Minister of Defense Receives Visit of Turkish Foreign Minister, Continues Talks on Defense Industry Cooperation) // Official Website of the Foreign Ministry of the Republic of Indonesia. 22.12.2020. URL: <https://kemlu.go.id/ankara/id/pages/indonesia-turki/51/etc-menu>. (Access date: 29.04.2020).

<sup>160</sup> Menhan RI Terima Kunjungan Delegasi Industri Pertahanan Turki (The Indonesian Minister of Defense Receives a Visit from the Turkish Defense Industry Delegation) // Official Website of the Foreign Ministry of the Republic of Indonesia. 4.09.2018. URL: <https://www.kemhan.go.id/2018/09/04/menhan-ri-terima-kunjungan-delegasi-industri-pertahanan-turki.html>. (Access date: 29.04.2020).

<sup>161</sup> Indonesia, Turkey Sign Various Cooperation Deals // Office of Assistant to Deputy Cabinet Secretary for State Documents & Translation. 6.07.2017. URL: <https://setkab.go.id/en/indonesia-turkey-sign-various-cooperation-deals/> (Access date: 29.04.2021).

Industries, Ismail Demir, also confirmed the prospects to cooperate with Indonesia in the marine and land vehicles production, development, and export activities<sup>162</sup>.

Indonesia sees Turkey as a strategic partner with its advanced national defense industry technology because they own potential resources and are open to cooperation opportunities based on mutual respect and benefits. For Turkey, Indonesia is one of the essential and most significant trade partners in the Asia Pacific. Turkey sees Indonesia's national defense industry as promising, has competitive prices, and has no political obstacles in the cooperation<sup>163</sup>. Moreover, Indonesia acts as a door for the market expansion of their Alpalhankam products. Turkey is willing to invest a considerable amount of money for defense cooperation with Indonesia. Most importantly, they are willing to share their knowledge and technology in Alpalhankam production.

Turkey's own ambition may explain this phenomenon. Turkey is gradually becoming one of the world's biggest arms producers and is ambitious to be the world's most significant arms exporter to expand from the markets of Europe to Asia, Middle East, and Africa<sup>164</sup>. In Turkey's 9th Development Plan, international cooperation activities in joint production, design, research, and development are the main objectives<sup>165</sup>. Like Indonesia, Turkey keeps on strengthening its national military forces and its national defense industry to achieve self-sufficiency and self-dependency. Although Turkey has not reached an autarky in Alpalhankam production, they have been actively doing their own foreign military-technical cooperation and designing their own products. Turkey's two state-owned defense companies, ASELSAN and TUSAS, are also consistently in the top 100 SIPRI Arms Industry Database for the last few years<sup>166</sup>.

Remarkably, the most significant military-technical cooperation of Indonesia-Turkey is the joint-development and joint-production of medium-weight tanks. Indonesia named the tank Harimau, while Turkey named it Kaplan. Both Kaplan and Harimau mean tiger, and the

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<sup>162</sup> Ismail Demir's Twitter Account. 22.07.2020. URL: [https://twitter.com/IsmailDemirSSB/status/1285964562823512066?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Eetweetembed%7Ctwterm%5E1285964562823512066%7Ctwgr%5E%7Ctwcon%5Es1\\_&ref\\_url=http%3A%2F%2Fwww.thejakartapost.com%2Fnews%2F2020%2F07%2F24%2Findonesia-looks-to-closer-security-defense-trade-with-turkey-ministry.html](https://twitter.com/IsmailDemirSSB/status/1285964562823512066?ref_src=twsrc%5Etfw%7Ctwcamp%5Eetweetembed%7Ctwterm%5E1285964562823512066%7Ctwgr%5E%7Ctwcon%5Es1_&ref_url=http%3A%2F%2Fwww.thejakartapost.com%2Fnews%2F2020%2F07%2F24%2Findonesia-looks-to-closer-security-defense-trade-with-turkey-ministry.html) (Access date: 29.04.2021).

<sup>163</sup> Turkey, Indonesia to Enhance Trade, Defense Cooperation // Anadolu Agency. 22.12.2020. URL: <https://www.aa.com.tr/en/asia-pacific/turkey-indonesia-to-enhance-trade-defense-cooperation/2085034> (Access date: 29.04.2021).

<sup>164</sup> Béraud-sudreau L. et al. Emerging Suppliers in the Global Arms Trade // SIPRI Insights on Peace and Security. No. 2020/13, 2020. P.8-9.

<sup>165</sup> Demir I. Transformation of the Turkish Defense Industry: The Story and Rationale of the Great Rise // Insight Turkey, Vol. 2, No. 3, 2020, P. 17-40.

<sup>166</sup> SIPRI Arms Industry Database // Stockholm International Peace Research Institute. URL: <https://www.sipri.org/databases/armsindustry> (Access date: 02.05.2021).

international name for the unit is KAPLAN MT Modern Medium Weight Tank. This government-to-government project was signed in 2015, and the tank is ready for mass production by 2018. Indonesia appointed PT Pindad to participate in the project with Turkey's FNSS Defence Systems. This project's value is \$US 30 million and is imposed equally by the partnering countries. In other words, the funding scheme for this cooperation uses a joint-venture mechanism, where the development cost is burdened to both collaborating partners. The intellectual property rights will also belong to both Indonesia and Turkey<sup>167</sup>.

In this deal, the partnering countries agreed to develop and produce two prototypes of tanks together in a 37-months development program. The activities include the phases of design, prototype, and trials. The first prototype was done in Turkey in 2016, with PT Pindad's engineers and domestic experts participating in Turkey's production facility to learn FNSS' technology about the medium tanks in engineering, manufacture, and quality assurance<sup>168</sup>. Then, the second prototype was produced domestically in Indonesia in 2017 solely by PT Pindad from the knowledge gained from Turkey. The equal change of the production location is advantageous for Indonesia regarding technological development for the national defense industry. The two finished collaborative prototypes were displayed at the biggest defense fair in Southeast Asia, Indo Defence Expo and Forum (IDEX) 2018. The tanks have passed the field test in Turkey and were certified by TNI during 2015-2019<sup>169</sup>. Indonesia's Ministry of Defense signed a letter of intent with PT Pindad to purchase up to 20 platforms, where PT Pindad and FNSS have signed a long-term agreement to deliver 18 tanks by 2021<sup>170</sup>.

The project was first started to meet Indonesia's armed forces' demand for a modern and medium-weight tank. When the tanks were ready for mass production, Indonesia and Turkey turned it into a joint production and joint-marketing project, with an estimated number of 200-400 units<sup>171</sup>. The general manager and CEO of FNSS, Nail Kurt, stated that these jointly developed tanks were produced not only to suit Indonesia's needs but also Turkey's and its

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<sup>167</sup> Turkey, Indonesia Agree to Develop Medium-Weight Tank // Hurriyet Daily News. 07.05.2015. URL: <https://www.hurriyetdailynews.com/turkey-indonesia-agree-to-develop-medium-weight-tank-----82091> (Access date: 29.04.2021).

<sup>168</sup> Defense Ministry of the Republic of Indonesia. Laporan Tahunan Direktorat Jenderal Potensi Pertahanan. P. 75-76.

<sup>169</sup> Turkish, Indonesian Firms Team up on Medium-Weight Tank // DefenseNews. 06.05.2019. URL: <https://www.defensenews.com/global/2019/05/06/turkish-indonesian-firms-team-up-on-medium-weight-tank/> (Access date: 29.04.2021).

<sup>170</sup> KAPLAN MT Modern Medium-Weight Tank // Army Technology. URL: <https://www.army-technology.com/projects/kaplan-mt-modern-medium-weight-tank/> (Access date: 28.04.2021).

<sup>171</sup> Turkish, Indonesian Tank Ready For Mass Production // Hurriyet Daily News. 07.05.2015. URL: <https://www.hurriyetdailynews.com/turkish-indonesian-tank-ready-for-mass-production-136535> (Access date: 03.05.2021).

allies. Although not specifying the country, Kurt stated that both producing countries had received two purchasing requests for the tanks<sup>172</sup>. FNSS also gave a license for Indonesia to export the combat vehicles abroad, providing Indonesia with the opportunities to expand its Alpalhankam exports.

From the technical perspective, this tank is attractive for the world market for an asymmetrical war environment and extreme terrain due to the lighter weight, while having almost the same power as the main battle tank. KAPLAN MT Modern Medium Weight Tank can operate from -30 to 50 degrees Celsius to be suitable for use in two and four seasons countries<sup>173</sup>. Equipped with a fully automatic transmission and ballistic guards, Fire Control System (FCS), the tank is designed with high resilience, easy to use, and low operational cost<sup>174</sup>. The joint-marketing efforts cover Asia for Indonesia and Europe for Turkey. The foreign customers for Indonesia's export of the tanks include the Philippines, Brunei Darussalam, Bangladesh, Malaysia, and Ghana. For Indonesia, aside from obtaining technology transfer for the product knowledge, the nation also gets to replace the old and outdated tanks, such as Scorpion and AMX-13 tanks. Not only more modern, but the jointly developed tank is suitable for Indonesia's tropical climate and geographical condition, where the maximum weight of the tanks should be under 30 tons.

Indonesia's PT Len Industri (PT Len) also cooperates with Turkey's ASELSAN in developing communication tools and military communication systems. Signed in National Defence and Hitech Industry (NDHI) 2016, the activities include building facilities for ASELSAN at Len Technopark, Indonesia, where the industrial area will be utilized as a product development facility for the state-owned PT Len<sup>175</sup>. The cooperation also includes the transfer of technology in the telecommunication system, a specialty and primary business of both collaborating companies. The framework of joint-production will be about the military

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<sup>172</sup> Turkish-Indonesian-Made Battle Tank Attracts More Buyers // Official Website of the Foreign Ministry of the Republic of Indonesia. 07.02.2020. URL: <https://kemlu.go.id/ankara/en/news/4684/turkish-indonesian-made-battle-tank-attracts-more-buyers> (Access date: 29.04.2021).

<sup>173</sup> Order Put for 100 Turkish-Indonesian Medium Battle Tanks // Hurriyet Daily News. 08.09.2018. URL: <https://www.hurriyetdailynews.com/order-put-for-100-turkish-indonesian-medium-battle-tanks-136615> (Access date: 3.05.2021).

<sup>174</sup> Peringati HUT TNI Ke-74, Pindad Hadirkan Kendaraan Tempur dan Taktis (Commemorating the 74th Anniversary of TNI, Pindad Presents Combat and Tactical Vehicles) // Official Website of the West Java Provincial Government. 10.05.2019. URL: [https://jabarprov.go.id/index.php/news/34714/Peringati\\_HUT\\_TNI\\_Ke\\_74\\_Pindad\\_Hadirkan\\_Kendaraan\\_Tempur\\_dan\\_Taktis](https://jabarprov.go.id/index.php/news/34714/Peringati_HUT_TNI_Ke_74_Pindad_Hadirkan_Kendaraan_Tempur_dan_Taktis) (Access date: 3.05.2021).

<sup>175</sup> Len Cooperation With Turkey For Military Communication Tools // Official Website of West Java Province. 13.07.2017. URL: [https://www.jabarprov.go.id/En/index.php/news/3754/Len\\_Cooperaton\\_With\\_Turkey\\_For\\_Military\\_Communication\\_Tools](https://www.jabarprov.go.id/En/index.php/news/3754/Len_Cooperaton_With_Turkey_For_Military_Communication_Tools) (Access date: 29.04.2021).



communication equipment for Software Defined Radio (SDR). This cooperation is a continuation of the previous 2014-2015 PT Len-ASELSAN cooperation in the procurement of 40 military radios in 36 Indonesia's border areas to strengthen the national border protection and security. Although this cooperation is business-to-business, it is still under government-to-government cooperation between Indonesia and Turkey, as the businesses always accompany official governmental meetings.

Along the lines of the mutual complex military-technical cooperation, Indonesia-Turkey also has several cooperation activities in the aerospace industry with both state-owned companies. PT DI and Turkish Aerospace Industries, Inc (TAI) signed an MoU in International Defence Industry Fair (IDEF) 2017, represented by Dirjen Pothan, Indonesian Ambassador to Turkey, and Indonesian Defense Attache to Turkey<sup>176</sup>. The agreement covers the joint-development of N245, certification, and joint-production of N219, and joint-development of UAVs. Furthermore, Turkey is the second biggest Indonesia's customer of domestically produced planes of CN235<sup>177</sup>. Turkey utilizes the platform as one of the air transports for their armed forces. In fact, since 1984, Turkey has been developing their own CN235 with a license bought from Spain's CASA, where some of the components are bought from Indonesia's Industri Pesawat Terbang Nusantara (IPTN) - now PT DI<sup>178</sup> as two of the collaborating producers of the planes. PT DI gave Turkey a mission to control modified technology and maintenance of CN235. Turkey's 9 of the 61 CN235 military means of transport have also been modified to be maritime patrol and anti-submarine versions<sup>179</sup>. Last year, Turkey's procured CN235 from Indonesia re-attracted Indonesia's public attention due to Turkey's violation of the air border in Greece with the planes, so that the cooperation was highlighted again<sup>180</sup>. Therefore, when Indonesia plans to develop N245, an upgraded mixture of CN235 and NC212,

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<sup>176</sup> CEO Turkish Aerospace Industries Kunjungi PTDI Pagi Ini (The CEO of Turkish Aerospace Industries Visited PTDI This Morning) // Anadolu Agency. 15.01.2018. URL: <https://www.aa.com.tr/id/ekonomi/ceo-turkish-aerospace-industries-kunjungi-ptdi-pagi-ini/1030950> (Access date: 29.04.2021).

<sup>177</sup> South Korea to Turkey, Aircraft Made in RI is Selling Overseas // Official Website of PT DI. 17.02.2020. URL: [https://www.indonesian-aerospace.com/news/detail/907\\_south+korea+to+turkey%2C+aircraft+made+in+ri+is+selling+overseas](https://www.indonesian-aerospace.com/news/detail/907_south+korea+to+turkey%2C+aircraft+made+in+ri+is+selling+overseas) (Access date: 29.04.2021).

<sup>178</sup> Asmara C.G. Korsel ke Turki, Pesawat Made in RI Ini Laris di Luar Negeri (South Korea to Turkey, These Made in RI Planes Are Selling Out Abroad) // CNBC Indonesia. 16.02.2020. URL: <https://www.cnbcindonesia.com/news/20200216092744-4-138174/korsel-ke-turki-pesawat-made-in-ri-ini-laris-di-luar-negeri> (Access date: 29.04.2021).

<sup>179</sup> Advertorial. The CN235 Maritime Patrol / Surveillance // Official Website of PT DI. 30.12.2020. URL: [https://www.indonesian-aerospace.com/news/detail/147\\_advertorial](https://www.indonesian-aerospace.com/news/detail/147_advertorial). (Accessed 30.04.2021).

<sup>180</sup> Turkish Jets Embark On Barrage of Violations // ekathimerini.com. 07.07.2020. URL: <https://www.ekathimerini.com/news/254468/turkish-jets-embark-on-barrage-of-violations-2/> (Access date: 30.04.2021).

PT DI chose TAI in the Framework Agreement for the industrial development program with an expectation to cooperate in the activities of production, market, and also financial sharing<sup>181</sup>.

For the N219, both countries plan to do joint-marketing and expansion of production efforts. This cooperation is also done under the framework of the signed MoU in IDEF 2017. Indonesia sees that this cooperation is beneficial for market expansion because many European and African countries are interested in procuring the planes. However, if PT DI does its own mass production in Indonesia, it can cost a significant amount of money and time, as it needs to be sent to Senegal first. Therefore, the place of production will be done in Turkey. Indonesia also trusts Turkey in its experience in the aerospace industry, from producing fighter jets to helicopters. Turkey is actually the first partnering country Indonesia approached during its early efforts in producing aircraft engine technology.

Another cooperation has also been done in the development of UAVs in the Medium Altitude Long Endurance (MALE) class since 2008. PT DI acknowledges TAI's experience in building high-altitude UAVs while building their own medium-altitude long-endurance UAV so that PT DI embraces the opportunity to collaborate with TAI. In this project, PT DI's Production Director also stated that Turkey, as a close Muslim-majority country with advanced experiences in the aviation industry, is willing to share and transfer their technical mastery, unlike other parties who are only interested in direct selling. This collaboration is also expected to reduce dependency on Western countries. His statement was mutually welcomed by TAI's CEO, saying that PT DI has an excellent reputation in the Asian aerospace industry<sup>182</sup>. Indonesia's Agency for the Assessment and Application of Technology (BPPT - *Badan Pengkajian dan Penerapan Teknologi*) and Center for Aerodynamics, Aeroelastics, and Aeroacoustics Technology (BBTA3 - *Balai Besar Teknologi Aerodinamika, Aeroelastika, dan Aeroakustika*) also hosted Turkey's new generation UAVs in the Indonesian Low-Speed Tunnel (ILST) facility for ANKA, the combat-proven UAVs for Intelligence, Reconnaissance, Surveillance, and Strike Systems. In this collaboration, Turkey provides an opportunity for Indonesia to study small UAVs and planes<sup>183</sup>.

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<sup>181</sup> Indonesia dan Turki Sepakat Buat Pesawat (Indonesia and Turkey Agree to Build Aircraft) // Liputan6. 9/07/2017. URL: <https://www.liputan6.com/bisnis/read/3015896/indonesia-dan-turki-sepakat-buat-pesawat> (Access date: 03.05.2021).

<sup>182</sup> Indonesia, Turkey Team up to Develop Military Drones // The Jakarta Post. 16.01.2018. URL: <https://www.thejakartapost.com/news/2018/01/16/indonesia-turkey-team-up-to-develop-military-drones.html> (Access date: 29.04.2021).

<sup>183</sup> 2008-2018, Satu Dekade Kerjasama Antara Indonesia Dan Turki Dalam Pengujian Terowongan Angin Untuk Pengembangan Pesawat Udara Nir Awak (UAVs, Unmanned Aerial Vehicle) (2008-2018, A Decade of

Turkey has also been participating and persuading Indonesia to procure Turkish produced Alpalhankam. Turkey has been joining a tender at the Indonesian Ministry of Defense to develop crewless aircraft in Indonesia since 2018. Turkey, competing with other foreign Providers, passed the final stage of the UAV procurement. However, there has been no recent news about Anka procurement nor the chosen foreign Provider. It was only mentioned that one of the competitors is China<sup>184</sup>. Nevertheless, TAI's website looks determined to provide Indonesia MALE Anka UAV while exhibiting the units in the Turkey-Indonesia Business Cooperation Days organized by TAI<sup>185</sup>. In the 6th Indonesia-Turkey Defence Industry Cooperation Meeting 2017, Turkey offered the joint-production of type 214 submarine and committed to helping Indonesia gain submarine mastery and control system production<sup>186</sup>. Turkey recognizes that Indonesia wishes to develop the national capability in producing submarines<sup>187</sup>. A Letter of Intent (LoI) was signed in IDEF 2017 by the Turkey-Germany joint venture of STM Defense Technologies and Engineering Inc and ThyssenKrupp Marine Systems. The LoI stated that after the first two submarines are built in Turkey, the following platforms will be built in Indonesia in a scheme of a joint-production<sup>188</sup>. Indeed, Indonesia did an open competition for submarine foreign Providers prospects. Alongside Turkey, the tender was participated by France, China, and South Korea. Indonesia re-considered Turkey's offer as the Indonesian Navy accepted the contract offer. However, Indonesia signed the second contract by choosing South Korea's diesel type 209/1400 submarine instead<sup>189</sup>.

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Cooperation Between Indonesia and Turkey in Testing Wind Tunnels for the Development of Unmanned Aerial Vehicles (UAVs, Unmanned Aerial Vehicles) // Official Website of BPPT. 19.10.2018. URL: <https://www.bppt.go.id/teknologi-hankam-transportasi-manufakturing/3325-2008-2018-satu-dekade-kerjasama-antara-indonesia-dan-turki-dalam-pengujian-terowongan-angin-untuk-pengembangan-pesawat-udara-nir-awak-uav-unmanned-aerial-vehicle> (Access date: 03.05.2018).

<sup>184</sup> Pesawat Tanpa Awak Turki Diuji Coba di Indonesia (Turkish Unmanned Aircraft Tested in Indonesia) // militermeter.com. 20.10.2018. URL: <https://militermeter.com/pesawat-tanpa-awak-turki-diuji-coba-di-indonesia/> (Access date: 03.05.2018).

<sup>185</sup> The New Goal of Anka: Watching Over Indonesia // Official Website of Turkish Aerospace Industry. URL: <https://www.tusas.com/en/news/the-new-goal-of-anka-watching-over-indonesia> (Access date: 30.04.2021).

<sup>186</sup> Turki Ajak RI Bikin Kapal Selam Type 214 dan UAV (Turkey Invites RI to Build Type 214 Submarine and UAV) // Militer.or.id. 7.09.2017. URL: <https://www.militer.or.id/5275/turki-ajak-ri-bikin-kapal-selam-type-214-dan-uav> (Access date: 03.05.2021).

<sup>187</sup> The Indonesian Minister of Defense Receives a Visit from the Turkish Defense Industry Delegation (Accessed 03.05.2021).

<sup>188</sup> Turkey, Germany to Produce Submarine for Indonesia // Dailysabah. 13.05.2017. URL: <https://www.dailysabah.com/defense/2017/05/13/turkey-germany-to-produce-submarine-for-indonesia> (Access date: 03.05.2021); and Turkey, Indonesia Team up in Defense, Enhance Military Ties // Dailysabah. 18.08.2017. URL: <https://www.dailysabah.com/defense/2017/08/18/turkey-indonesia-team-up-in-defense-enhance-military-ties> (Access date: 03.05.2021).

<sup>189</sup> Kemenhan Tinjau Kontrak Kapal Selam Korsel Rp 14,7 Triliun (Ministry of Defense Review South Korean Submarine Contract IDR 14.7 Trillion) // Republika. 05.04.2020. URL: <https://www.republika.co.id/berita/q8arwx484/kemenhan-tinjau-kontrak-kapal-selam-korsel-rp-147-triliun> (Access date: 03.05.2021).

To conclude, Indonesia-Turkey complex military-technical cooperation activities share the same spirit of Alpalhankam indigenization caused by the embargo experience, based on strengths of their bilateral relations. Both ambitions of strengthening their national defense industry are reciprocal and found mutually beneficial. Indonesia sees Turkey as an alternative provider of Alpalhankam technology source and vice versa. Turkey sees Indonesia's partnership as promising in terms of its market expansion.

### **2.3. Smaller Scale Cooperation Cases and Prospects with Diversified Foreign Partners**

From the chosen classification approach in this chapter, the cooperation with the partners in this subchapter is also complex. Yet, it is less momentous in terms of the significance and the continuation. Also, there are not as many interrelated activities done compared to the previous two partners. This is why there are many partners combined in this subchapter instead of a single one. Besides South Korea and Turkey, with the high intensity and significance, Indonesia also does military-technical cooperation with diversified foreign Providers from different parts of the world and different specialties in Alpalhankam production capabilities. The cases mentioned in this subchapter are not the only ones Indonesia is doing in contemporary situations. In reality, it is much more numerous in terms of the number of activities and partners. However, the examples given are taken by considering the goal of illustrating the diversity of partners and the complexity of Indonesia's foreign military-technical cooperation projects according to the national Strategic Planning and priorities for the technology masters programs of the national defense industry. The elaborations are given according to the data the author has gathered based on the complex cooperation (See Annex 2, Table 2).

In the land dimension, Indonesia is aiming to obtain the knowledge and technology in producing medium tanks, ammunitions, and propellants. To pursue this, Indonesia cooperates with different partners. With France, Indonesia does a joint-production for a 6x6 Panzer named Anoa. Anoa uses high technology in all of its components. It uses North Atlantic Treaty Organization (NATO) standard STANAG Level III armored armor material, making it resilient to 5.56 mm and 7.62 mm caliber weapons<sup>190</sup>. Anoa itself has many variants, including logistics,

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<sup>190</sup> Munasyaroh N., Jupriyanto, and Wahyudi B. Pengembangan Bisnis Produk Berbasis Teknologi Tinggi PT Pindad (Persero) (Studi Pada Panser Anoa dan Ekskavator) (High Technology Based Product Business Development PT Pindad (Persero) (Study on Anoa Panzer and Excavator)) // Jurnal Ekonomi Pertahanan, Vol. 6, No. 1, 2020, P. 63.

ambulance, recovery, mortar, command, and amphibious panzers<sup>191</sup>. The background for this production comes from the 2003 Aceh military operations. TNI needed combat vehicles and personnel transport vehicles, but Indonesia had difficulties finding the needed spare parts due to the past arms embargo. As a result, Indonesia ordered PT Pindad to urgently produce combat vehicles for personnel transport domestically. However, due to the limitation of the national defense industry's capability, Indonesia still needed to use French engines and transmission for the panzer. Therefore, the original design for the first generation of Anoa was done by PT Pindad, but there is a cooperation with a French company, Renault. Nevertheless, the local contents of the unit reach 75% as most of the components are produced domestically<sup>192</sup>.

Not only that, Indonesia also cooperates with France's Roxel Group and Eurengo to create a propellant factory in Indonesia by signing an MoU in 2013 to fulfill Indonesia's domestic needs of propellants. As propellant is included as part of the national defense technology development priorities, this is important as the factory is integrated with Indonesia's PT Dahana, an Indonesian-owned company that manufactures explosives. The cooperation is purposeful as it is a precedent case for Indonesia to have its own factory that produces propellants. Before this cooperation, Indonesia relied on the imports from Belgium for its propellant needs<sup>193</sup>. The resulting products of the factory will later be absorbed by the existing national defense industries, as propellants is a raw material to make bullets, rockets, missiles, and munitions<sup>194</sup>. In the agreement, Roxel helps Indonesia develop rocket propellers, hardware materials, and explosives, while Eurengo helps in the national development program for chemical materials used for defense and civilian purposes<sup>195</sup>. Therefore, this cooperation will undoubtedly help Indonesia in saving foreign exchange and at the same time give Indonesia an independent capability to produce propellant ammunition and rockets themselves.

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<sup>191</sup> Wahana Darat (Land Vehicles) // Official website of KKIP. URL: <https://www.kkip.go.id/wahana-darat/> (Access date: 30.04.2021).

<sup>192</sup> 164 Tank Harimau Buatan Pindad Bakal Dibeli 2 Negara di Asia (164 Tiger Tanks Made by Pindad Will Be Purchased by 2 Countries in Asia) // merdeka.com. URL: <https://www.merdeka.com/uang/164-tank-harimau-buatan-pindad-bakal-dibeli-2-negara-di-asia.html> (Access date: 02.05.2021).

<sup>193</sup> Amalia M.R. Kepentingan Indonesia Membangun Kerja Sama Militer dengan China dalam Produksi Rudal C-705 (Indonesia's Interest in Building Military Cooperation With China in Producing the C-705 Missile) // Jom FISIP, Vol. 3, No. 2, 2016, P. 5.

<sup>194</sup> Indonesia – Perancis Bangun Pabrik Propelan Bersama (Indonesia - France Build Joint Propellant Factory) // Press Release of Indonesia's Ministry of Defense. 26.05.2014. URL: <https://www.kemhan.go.id/2014/05/26/indonesia-perancis-bangun-pabrik-propelan-bersama.html> (Access date: 10.05.2021).

<sup>195</sup> New Propellant Factory to be Built in West Java // The Jakarta Post. 11.10.2014. URL: <https://www.thejakartapost.com/news/2014/10/11/new-propellant-factory-be-built-west-java.html> (Access date: 11.05.2021).

In the future, Indonesia hopes to penetrate the regional market with the products mastered from France.

To complement the Panzer, Indonesia is also aiming to own Main Battle Tanks (MBT). The issue about Leopard tank procurement raised national concerns, as it was one of the topics in the previous Presidential debate. The competing candidates argued differently about the procurement. The proponent says that Indonesia needs MBT to build the national defense posture and TNI's Alpalhankam modernization. The opponent argues that Leopard is not suitable for Indonesia's geographical locations, and domestic procurement is more critical than Alpalhankam imports. However, in the possibilities for conditional Alpalhankam imports, Indonesia seeks foreign Provider options for MBT, such as the US, Pakistan, United Kingdom (the UK), and the Netherlands. The decision was to directly procure Leopard tanks from Germany because it contains a scheme of technology transfer in the production of missiles for the tanks to be later continued as joint development. Moreover, Germany is the direct producer of Leopard tanks, so the technology and knowledge transfer are credible.

Indonesian government stated that other Providers did not fulfill Indonesia's demand for procurement, such as the Netherlands, which did not clarify the delivery time<sup>196</sup>. Another reason not to procure the Leopard tank from the Netherlands is that their parliament was hesitant to sell tanks to Indonesia because it could impact Indonesia's Human Rights issue. Indonesia sees that the freedom of Alpalhankam also needs to include the freedom to use it, considering the internal threats Indonesia has<sup>197</sup>. Actually, Indonesia did military-technical cooperation with the Netherlands to produce guided-missile destroyer escort under their license. However, the result was not as expected. PT PAL was the sub-contractor, not the lead integrator. Also, the Netherlands demanded payments for the royalty and license fee as much as 5% of the contract value. The transfer of technology was not that much. The export collaboration was less possible since the Netherlands offered the exact mechanism to prospective buyers in the region, such as Vietnam<sup>198</sup>.

Leopard procurement from Germany was also decided after a technical simulation that Leopard is indeed suitable for Indonesia's geographical condition. Moreover, Germany was

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<sup>196</sup> Kemhan Pastikan Beli Tank Leopard Dari Jerman (Ministry of Defense Ensures to Procure Leopard Tanks From Germany) // Official website of the Defense Ministry of Indonesia. 3.07.2012. URL: <https://www.kemhan.go.id/2012/07/03/kemhan-pastikan-beli-tank-leopard-dari-jerman.html> (Access date: 11.05.2021).

<sup>197</sup> Karim S. Building the Independence of the Indonesian Defense Industry. P. 78-79.

<sup>198</sup> Savitri. C.M. Contribution of Offset to Defence Industrialization in Indonesia P. 245-247.

willing to sell 100 MBTs, while Indonesia only had the budget to buy 44 units. Germany is also willing to use the foreign loan system in the procurement. Indeed, this cooperation is crucial as previously Indonesia did not have any MBT as the most powerful cavalry. Indonesia only had Light Battle Tanks such as Scorpion and AMX13<sup>199</sup>. Although there are running speculations that future conflicts will have drones and cyber attacks, MBT will not be non-activated until at least 2030. MBT is also crucial for the Indonesian Armed Forces (TNI-AD - *Tentara Indonesia Angkatan Darat*) - to complete the triad with fighter jets and KRI<sup>200</sup>. Furthermore, there are still domestic threats Indonesia faces, such as the separatism movement that is currently happening in Papua. The cooperation with the signed MoU allows Indonesia to produce spare parts for the tank and be the production and distribution center for Leopard Tank in Asia.

To equip the battle tanks, Indonesia also pursues cooperation in the production of propellants and ammunition. For the ammunition, Indonesia receives investment from Canada to build a small-caliber ammunition factory. The strategic cooperation involves PT Pindad, a domestic manufacturer of munitions, and Canada's Magnum Integrated Technologies Inc. The scheme for this military-technical cooperation is Build Operate Transfer (BOT), where Canada invests up to USD 100 million to use Indonesia's land to build production facilities, with the activities of joint-development and joint-production inside it. In the scheme, PT Pindad provides the location and human resources for the factory, while Magnum provides the production lines and manages production qualities with the affordable market price for Indonesia and the international markets<sup>201</sup>. PT Pindad, as a domestic manufacturer of munitions, has a target to increase its production and achieve more sales from the cooperation, with a number of 350 million pieces annually, which is actually still less than 500 million that Indonesian Users need per year<sup>202</sup>. Therefore, this cooperation is helpful as the additional production number will substitute Indonesia's imports for ammunition. It will also help

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<sup>199</sup> Kenapa Indonesia Memilih Membeli Tank Leopard (Why Indonesia Chooses to Procure Leopard Tank) // Press Release of the Defense Ministry of Indonesia. URL: <https://www.kemhan.go.id/2012/02/24/kenapa-indonesia-memilih-membeli-tank-leopard.html> (Access date: 11.05.2021).

<sup>200</sup> Kedatangan Tank Leopard Untuk Memenuhi Kebutuhan Pokok Minimum (The Arrival of Leopard Tanks To Meet The Minimum Essential Forces) // Official website of the Defense Ministry of Indonesia. URL: <https://www.kemhan.go.id/2014/07/09/kedatangan-tank-leopard-untuk-memenuhi-kebutuhan-pokok-minimum.html> (Access date: 11.05.2021).

<sup>201</sup> Pindad Bangun Pabrik Amunisi, Kerjasama Waterbury Investasi USD 100 Juta (Pindad Builds Ammunition Factory, Waterbury Collaborates with USD 100 Million Investments) // Official website of KKIP. 17.09.2017. URL: <https://www.kkip.go.id/2018/09/17/pabrik-amunisi/> (Access date: 11.05.2021).

<sup>202</sup> Pindad Jalin Kerjasama Dengan Waterbury di Bidang Amunisi (Pindad Collaborates With Waterbury in the Field of Ammunition) // PT Pindad's Press Release. URL: <https://pindad.com/pindad-jalin-kerjasama-dengan-waterbury-di-bidang-amunisi> (Access date: 11.05.2021).

Indonesia to master the caliber ammunition technology that has strategic values and deterrence effects.

With China, strategic cooperation has actually been going on since 2005. In the contemporary situation, specifically in 2011, Indonesia's Ministry of Defense and China's State Administration for Science, Technology and Industry for National Defense (SASTIND) signed MoU and LoI about defense industry and logistics cooperation. The cooperation revolves around military procurement and technology transfer in certain areas agreed by both governments, including C-705 anti-ship missiles<sup>203</sup>. Previously, Indonesia procured C-802 missiles from China, which is the start of the C-705 military-technical cooperation<sup>204</sup>. For the C-705, Indonesia is the first foreign customer<sup>205</sup>, and the procurement has the condition of a technology transfer that includes four steps. First, the Semi Knock Down step takes up to three years, where PT DI does the assembly with the materials still imported from China. The second step, Completed Knock Down, includes the imports of separated components, which means that the technology transfer will happen to assemble it<sup>206</sup>. The third and fourth steps are production and research and development. This cooperation also includes training for the Indonesian Navy (TNI-AL - *Tentara Indonesia Angkatan Laut*) in China.

Guided-missile itself is a sensitive platform, as the owned nation needs to have sufficient technology and human resources. Missiles are one of the seven priorities of Indonesia in fulfilling MEF, and Indonesia chose China as a partner because they have the capability to produce the missiles based on the suitable needs of Indonesia's specification, cost, and geographical conditions. Moreover, Indonesia and China are not tied to the Missile Technology Control Regime (MTCR) that forbids the technology transfer related to unmanned platforms with 500 kg and 300 km distance. This cooperation could be a start to more missile development cooperation in the future. In the strategic planning, Indonesia plans to equip the missiles as ammunition to utilize them in the border areas, as the missile can be equipped in combat vehicles on land and warships. So it will also be attached to TNI-AL patrol boats,

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<sup>203</sup> Kemhan Adakan 1st Defense Industry Cooperation Meeting RI – China (Indonesia's Ministry of Defense Held the 1st Defense Industry Cooperation Meeting between the Republic of Indonesia - China) // Official Website of the Defense Ministry of the Republic of Indonesia. 9.06.2018. URL: <https://www.kemhan.go.id/2012/07/26/kemhan-adakan-1st-defense-industry-cooperation-meeting-ri-china.html> (Access date: 6.06.2021).

<sup>204</sup> Amalia M.R. Kepentingan Indonesia Membangun Kerja Sama Militer dengan China dalam Produksi Rudal C-705, P. 2.

<sup>205</sup> Supriyanto R.A. Indonesia's Fast Attack Craft Acquisition: Toward a "Balanced" Fleet? // RSIS Commentaries, No. 056, 2012, P. 1-2.

<sup>206</sup> Pratama A.H. Understanding Defense Cooperation Between Indonesia-China Through State Owned Enterprise (Norinco and Indonesia's Government) // Global Insight Journal, Vol. 5, No. 1, 2020, P. 8-9.



specifically to support KRI in the disputed area, South China Sea. The Indonesian Ministry of Defense will gradually produce the missiles independently after the technology transfer and joint-production in procurement cooperation. After the two steps are done, the KKIP-appointed lead integrator, PT DI, is later expected to be able to produce its own anti-ship missiles domestically in the next five to ten years after the transfer of technology by China Precision Machinery Import-Export Corporation (CPMIEC).

However, there are also problems in this military-technical cooperation. In 2013, Indonesia's Ministry of Defense expressed its concern about China's regulation in technology transfer. This is because there are differences in both countries' legal bases. Indonesia bases its technology transfer activities on the 2012 National Defense Law. China bases it on the Intellectual Property Rights Act, where there needs to be a particular payment for the transfer of technology to happen<sup>207</sup>. Also, in a joint exercise XXIV/2016 by both partners, there was a failure of launching C-705 from KRI Clurit 641 with a 5 minutes delay and inability to hit the target. The failure in the test happened to one of the four missiles, and the TNI Commander General confirmed that the cause was a technical mistake<sup>208</sup>.

Jokowi ordered the Ministry of Defense to comprehensively revisit and review the procurement contract and the missile, whether it is broken before delivery or a problem in the communication system. The Member of Commission I in Indonesia's House of Representatives (DPR - *Dewan Perwakilan Rakyat*) also suggested canceling the missile's procurements and finding alternative partners for the foreign missile Provider<sup>209</sup>. DPR also requested the revisit of the transfer of technical cooperation with SASTIND, especially about the amount of local content by PT DI<sup>210</sup>. C-705 is planned to create a deterrent effect for KRI in its maritime patrol, especially in the disputed area of the South China Sea. So that if this failure continues, it will create a negative image for TNI-AL in the international eyes.

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<sup>207</sup> Indrawan R. . Turn Back ToT: C705 vs BRAHMOS // JakartaGreater. 25.10.2021. URL: <https://jakartagreater.com/turn-back-tot-c705-vs-brahmos/> (Access date: 09.05.2021).; and Perkembangan Kerjasama Rudal C-705 China – Indonesia (Development of China-Indonesia C-705 Missile Cooperation) // JakartaGreater. URL: <https://jakartagreater.com/perkembangan-kerjasama-rudal-c-705-china-indonesia/> (Access date: 09.05.2021).

<sup>208</sup> TNI Akui Kesalahan Teknis Produk Militer Saat Uji Coba (TNI Commander General Gatot Nurmantyo) // Tempo. 21.09.2016. URL: <https://nasional.tempo.co/read/806238/tni-akui-kesalahan-teknis-produk-militer-saat-uji-coba/full&view=ok> (Access date: 09.05.2021).

<sup>209</sup> Rudal China Gagal Meluncur, TNI AL Diminta Batalkan Pembelian (Chinese Missile Failed to Launch, Indonesian Navy Asked to Cancel Purchase) // Official Website of the Defense Ministry of the Republic of Indonesia. 22.09.2016 URL: <https://www.kemhan.go.id/itjen/2016/09/22/rudal-china-gagal-meluncur-tni-al-diminta-batalkan-pembelian.html> (Access date: 09.05.2021).

<sup>210</sup> Ibid.

Actually, in 2020, Indonesia was offered Russo-Indian Brahmos supersonic cruise missiles by India. Prabowo visited India to talk about defense cooperation, especially in the dynamics of the South China Sea. Indonesia has no overlapping claims with China in the South China Sea. However, Indonesia's Exclusive Economic Zone (EEZ) in the South Natuna is often trespassed by China's PLA, saying it is included in their Nine-Dash Line patrol area. However, both Indonesia and China declared no territorial dispute between them<sup>211</sup>, and it did not stop the military-technical cooperation. Moreover, TNI-AL already uses a Russian-made P-800 Oniks supersonic cruise missile, a predecessor to BrahMos. However, Indonesia is under the shadow of CAATSA should Indonesia proceed with the BrahMos procurement<sup>212</sup>. To this day, there is yet a final decision nor final statement about Brahmos. Moreover, the C-705 cooperation was already done since 2014, and the BrahMos offer only happened in 2020.

Regardless of the failure in practice and the discussion about alternatives, the cooperation for the C-705 missile with China continues. Prabowo visited China in 2019 to re-negotiate with SASTIND about this project. The continuation is also indicated with the usage of the missile in 2017<sup>213</sup> and 2021<sup>214</sup> TNI-AL's practice. In the 2021 patrol exercise in Natuna islands, two KRIs released C-705 each and accurately hit the target from 70 km away. In the training, the target is a decommissioned KRI Balikpapan, which directly sinks after being hit. Ditjen Potnan is cooperating with the national domestic industry to do reverse engineering for the C-705 missiles, along with PT DI, the contributing domestic companies are PT Pindad and PT LEN. Currently, Indonesia already has the ability to produce airframes and missile propellants. The national target is to continue the independent missile program for research and development along with the mastery of sensor, guide, material casing, and motor rocket technologies that are essentials for guided missile production.

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<sup>211</sup> Suryadinata L. Did the Natuna Incident Shake Indonesia-China Relations? // Yusof Ishak Institute, No. 19, 2016, P. 1.

<sup>212</sup> Panda A. Will Indonesia Purchase the Indo-Russian BrahMos Supersonic Cruise Missile? // The Diplomat. 09.01.2019. URL: <https://thediplomat.com/2019/01/will-indonesia-purchase-the-indo-russian-brahmos-supersonic-cruise-missile/> (Access date: 09.05.2021).

<sup>213</sup> TNI AL Uji Coba Rudal C-705 dan Torpedo Sut (Indonesian Navy Tests C-705 and Torpedo Sut missiles) // InfoPublik. 18.11.2017. URL: <https://infopublik.id/kategori/nasional-politik-hukum/234166/tni-al-uji-coba-rudal-c-705-dan-torpedo-sut>. (Access date: 9.05.2021).

<sup>214</sup> Dua Kapal Perang TNI AL Berhasil Menembakan Rudal C-705 dan Mengenai Target (Two Indonesian Navy Warships Successfully Fired C-705 Missiles and Hit the Target) // Official Website of the Indonesian Navy. 09.04.2021. URL: <https://www.tnial.mil.id/berita/22661/DUA-KAPAL-PERANG-TNI-AL-BERHASIL-MENEMBAKAN-RUDAL-C-705-DAN-MENGENAI-TARGET/>. (Access date: 9.05.2021).

Guided-missile development is complex; it also needs nozzle technology development as a missile component that affects its performances<sup>215</sup>. Indonesia already has nozzle technology from the RX-550 rocket technology development, where the rocket uses nozzles from Indonesia's National Institute of Aeronautics and Space (LAPAN - *Lembaga Penerbangan dan Antariksa Nasional*). This is possible because, in 2012, LAPAN did a military-technical cooperation with the National Space Agency of Ukraine (NSAU). After several technical failures in the past, LAPAN received a transfer of technology from NSAU to fix the motor tubes and rocket nozzle. In the cooperation, the design still comes from Indonesia, Ukraine mainly contributes to the other developments of the nozzle program. Indonesia's national capabilities and budgeting for the research and development program are limited. Ukraine is a suitable and competent partner as they have high budgeting and sufficient facilities in its program that Indonesia can utilize<sup>216</sup>. In the national space program, Indonesia plans to carry national satellites using domestically made rockets. Producing one's own rockets will be a milestone for a state to produce types of missiles as part of the national air defense system. However, currently, Indonesia still focuses on domestically made rockets, and the utility of the rocket for the future is still undetermined<sup>217</sup>.

After the success of the rocket program military-technical cooperation, Indonesia cooperated with Ukraine's SFTE Spetstechnoexport (SPETS) to produce combat vehicles in 2020<sup>218</sup>. Indonesia wants to equip its arsenal with fire control and surveillance radars and reduce the workforce needed to be supported by the automatic computerization of the air defense system. Indonesia hopes to gain the knowledge and technology for its own maintenance and modernization program from Ukraine in the cooperation, especially in the joint-production of amphibious combat vehicles for TNI-AL. The plan is to develop Ukraine's

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<sup>215</sup> Amalia M.R. Kepentingan Indonesia Membangun Kerja Sama Militer dengan China dalam Produksi Rudal C-705. P. 6.

<sup>216</sup> Wujudkan Roket Anak Negeri RX-550, Lapan Gandeng Ukraina (Making True of the RX-550 Nation's Rocket, Lapan Cooperates with Ukraine) // Official website of LAPAN. 22.02.2014. URL: <https://www.lapan.go.id/post/268/wujudkan-roket-anak-negeri-rx550-lapan-gandeng-ukraina> (Access date: 10.05.2021).

<sup>217</sup> Roket RX 550 Lapan Kerjasama dengan Ukraina (Rx 550 Lapan Rocket in Cooperation With Ukraine) // Official website of LAPAN. 22.02.2014. URL: <https://www.lapan.go.id/post/952/roket-rx-550-lapan-kerjasama-dengan-ukraina> (Access date: 10.05.2021).

<sup>218</sup> Kerjasama PT. Pindad Dengan Ukraina yang Disaksikan Wamenhan (Cooperation of PT. Pindad With Ukraine Witnessed by the Vice Minister of Defense) // Official website of KKIP. 12.02.2020. URL: <https://www.kkip.go.id/2020/02/12/kerjasama-pt-pindad-dengan-ukraina-yang-disaksikan-wamenhan/> (Access date: 10.05.2021).

Mozak II for the needs of TNI and already bring in one unit for the 2021 TNI parade<sup>219</sup>. This military-technical cooperation will also support Indonesia's agenda in the MBT self-sufficient production.

In aeronautical technology, Indonesia's strategic cooperation with Spain has been going for a long time, with at least 40 years of technology transfer activities. Indonesia is by far the only industry in Southeast Asia that can make planes from the design until manufacturing processes. Spain also sees the importance of doing aeronautical technology cooperation with Indonesia<sup>220</sup>. Moreover, for Spain, the production cost is cheaper in Indonesia than done in Europe. The defense industry cooperation in aerospace between Indonesia and Spain roots back in 1975, Indonesia's Nurtanio (formerly IPTN - now PT DI) and Spain's Construcciones Aeronáuticas SA (CASA) - now Airbus Defence and Space (ADS) jointly produced C212/NC212 Family plane under CASA's license. From the total of 583 units, 105 were produced by PTDI in Indonesia. The naming of "NC" itself is derived from Nurtanio and Cassa, the two original producers. PT DI gained the license to produce the planes in 2006 with all production facilities from Spain and the rights to export the products domestically and to the neighboring ASEAN countries. PT DI is the only company with the license to produce the plane outside of Spain's production facility. Currently, the plane has been modified and modernized by PT DI into CN212 Series. To this day, PT DI, as a single provider, has produced up to 128 planes of NC212-200 in both civilian and military versions<sup>221</sup>.

Then, three years later, after NC212, PT DI and CASA did a joint-venture and formed Aircraft Technology Industries (AirTech) to develop the CN235 multi-purpose aircraft. Both companies worked in collaboration; CASA's engineers designed and constructed the front frame and inner wings, while PT DI's were assigned parts for the rear frame and outer wing. The first prototype produced by CASA flew for the first time in 1983, while the second prototype, in turn, was produced by PT DI and did its first flight in the same year. This joint-production by both partners became the first stage of the airplane model in realizing the

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<sup>219</sup> Wamenhan Saksikan Kerjasama Pindad Dengan Manufaktur "Ranpur" Ukraina (The Deputy Minister of Defense Witnessed the Cooperation Between Pindad and the Ukrainian "Ranpur" Manufacturer) // Official Website of the Ministry of Defense Indonesia. 08.02.2020. URL: <https://www.kemhan.go.id/2020/02/08/wamenhan-saksikan-kerjasama-pindad-dengan-manufaktur-ranpur-ukraina.html> (Access date: 10.05.2021).

<sup>220</sup> Zaskya A.D. Diplomasi Teknologi Indonesia dan Spanyol dalam Pengembangan Pesawat Baling-Baling (Indonesian and Spanish Technological Diplomacy in Propeller Aircraft Development) // Jurnal Hubungan Internasional, Vol. 12, No. 2, 2019, P. 331-348.

<sup>221</sup> NC212 Family // Official website of PT DI. URL: [https://www.indonesian-aerospace.com/aircraft/detail/12\\_nc212+family](https://www.indonesian-aerospace.com/aircraft/detail/12_nc212+family) (Access date: 30.04.2021).

technology mastery effort of aircraft in Indonesia. PT DI and CASA collaborate in exporting the multi-purpose aircraft, with PT DI producing outer wings, horizontal stabilizers, vertical fins, and doors for Airbus Defense & Space. Vice versa, ADS produces disassembled noses, disassembled cockpit, and center wings for PT DI. With the independence gained by PT DI, more developments have been made. The Indonesian state-owned company now calls the multi-purpose aircraft CN235 Family. It includes CN235-220 Civil, CN235-220 Military Transport, and CN235-220 Special Mission. Until today, more than 300 CN235 have been produced and are exported to more than 50 countries by Indonesia, including Venezuela, Senegal, Burkina Faso, United Arab Emirates, Pakistan, Turkey, Malaysia, South Korea, Thailand, Nepal, Brunei Darussalam. Malaysia, most recently, converted the commercial planes to be a maritime surveillance planes for their military purposes.

Spain and Indonesia jointly developed a newer generation of NC212, named CN295 in 2008, with an exchange of the production place. The colonel of KKIP, Gita Amperawan, in 2013, stated that Indonesia's Air Force ordered a total of nine CN295 planes. The first four planes are mainly produced in Spain, but the painting and finishing will be done in Indonesia. The fifth to the seventh planes will be customized in Indonesia, and the last two units will solely be assembled and produced by PT DI in Indonesia<sup>222</sup>. Even though the source of the idea for this plane comes from Airbus and CASA, PT DI gained the full license from Spain to produce the plane as Indonesian Aerospace CN295. In total, Spain gave Indonesia license to produce CN235, CN295, and CN212-400 planes to Indonesia's PT DI. Indeed, in the aerospace industry, Indonesia gained strengths in plane production, influenced by the huge role of former President B.J. Habibie, an engineer in aviation and aerospace, CEO of PT DI, and the State Minister of Research and Technology.

Indonesia also pursues dual-use technology and cyber capabilities considering the hybrid nature of threats and the technological advancement of weapons. For this, Indonesia cooperates with the UK. PT Pindad and the UK's BAE Systems signed an MoU in 2015 for their defense products cooperation and supported Indonesia's cyber-security capabilities. PT Pindad itself is a state-owned company that specializes in ammunition and combat vehicles. However, PT Pindad is currently planning to create a division of cybersecurity in the company structure. Therefore, with this cooperation, Indonesia will absorb knowledge and technology from BAE

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<sup>222</sup> TNI AU Akan Terima Dua Pesawat CN-295 Bulan Depan (Indonesian Air Force to Receive Two CN-295 Aircrafts Next Month) // Antaranews.com. 24.08.2013. URL: <https://www.antaranews.com/berita/392071/tni-au-akan-terima-dua-pesawat-cn-295-bulan-depan> (Access date: 23.04.2021).

systems to produce software and hardware essentials for cybersecurity development programs. PT Pindad plans to manifest the dual-use technology from the defense sphere to protect Indonesia's strategic interest from cyber attacks<sup>223</sup>.

Among the lines of the mentioned cases, Indonesia actually still has many military-technical cooperation with various partners. Indonesia signed many MoUs, has strategic cooperations with long-term duration, and has ongoing talks and approaches different partners to become the foreign Alpalhankam providers (See Annex 2, Table 3). From this chapter, there are at least two patterns that can be drawn. First, in the limitations of conditional imports, Indonesia really does diversify their foreign Alpalhankam Providers. Second, the cooperation activities are also various and complementary based on the national priorities to achieve the Integrated Triad.

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<sup>223</sup> Pindad Gandeng BAE Systems Bangun Cyber Security Division (Pindad Engages BAE Systems to Build Cyber Security Division) // Official website of Pindad. URL: <https://pindad.com/pindad-gandeng-bae-systems-bangun-cyber-security-division> (Access date: 10.05.2021).

### **Chapter 3. The Government Activities and Implementation of Policy in the Alpalhankam Domestic Production, Export, and Import**

Military-technical cooperation is interrelated to arms import and export activities. In the defense industry, the activities and sales are heavily influenced by government policies, including in the export and import policies. The government can limit imports to support the domestic companies and push for local products to compete in the global market, as Indonesia is aiming for. On the contrary, the government can also limit exports to focus on domestic production and fulfill the national demand as a priority. This chapter will continue elaborating on Indonesia's Alpalhankam foreign trade. Indonesia has a triple helix concept to support research and development in substituting imports and supporting exports. It means that there is involvement and synergy between the government, researchers, expert groups, and industry<sup>224</sup>, which the government is also aiming for with its policies.

However, before discussing export and import activities, it is essential first to understand Indonesia's indigenous capabilities in producing Alpalhankam. Hence, the first subchapter will elaborate on Indonesia's national defense industry profile and its variety of product coverage. With the benefits gained from military-technical cooperation and the indigenous production capabilities, Indonesia can sell its Alpalhankam products abroad directly. With this logic, the main focus of the second subchapter will be Indonesia's export achievements and the government's effort in supporting them. Then, from the given achievements and capabilities, the limitations and shortcomings can then be identified. Indonesia still needs to, and still is, importing Alpalhankam from abroad under strict regulations, conditions, and considerations as described in Chapter 1.

The third subchapter will show Indonesia's arms import trends in contemporary situations, considering the time, types of Alpalhankam, and importing partners. Finally, in the fourth chapter, a specific case of import Providers competition will be given as an independent subchapter, fighter jet procurement. It is the most recent case in Indonesia that intrigues national debates and discussions. The procurement competition illustrates very well the political considerations of Alpalhankam imports in the national decision-making process. The case demonstrates the complexity of Alpalhankam import, which is time-consuming,

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<sup>224</sup> Konsep Triple Helix Untuk Membangun Industri Pertahanan Nasional (Triple Helix Concept To Build The National Defense Industry) // Official website of the Ministry of Defense of Indonesia. 23.08.2017. URL: <https://www.kemhan.go.id/2017/08/23/konsep-triple-helix-untuk-membangun-industri-pertahanan-nasional.html> (Access date: 19.05.2021).

competitive, and needs to have numerous careful considerations. By the end of this chapter, a demonstration of the ability and inability of Indonesia's national defense industry can be drawn, as well as the implementation of the government's policies in the Alpalhankam import and export decisions.

### **3.1. Domestic Production Capabilities in Indonesia's National Defense Industry**

Achieving genuine arms production self-sufficiency, in reality, is hard, especially for countries with limitations on capital, technology, and infrastructure<sup>225</sup>. It is the reason why Indonesia is doing military-technical cooperation in the first place. Still, Indonesia aims to be competitive in the global market, and in the context of Indonesia's Alpalhankam, the highest independence in the ladder of national defense industry is in production<sup>226</sup>. For that reason, this section will provide Indonesia's achievements and abilities on indigenous production of its own, whether it is gained from the benefits of military-technical cooperation or those purely produced indigenously.

Indonesia's national defense industry has existed since the Dutch colonialism period that was established to support the Dutch army needs. Then, after Indonesia's independence, some of them were nationalized to be state-owned companies. In the contemporary situation, the industry is considered strategic, meaning that the industry is controlled by the government, essential for the country and the people's lives, contribute to the added value of strategic natural resources, and is related to the state's defense and security<sup>227</sup>. Indonesia's Alpalhankam current profile is extensive. The 2018-2019 catalog of KKIP records 41 companies (8 state-owned and 33 private-owned companies) with various specialties and products, ranging from raw materials, components, the arms themselves, and maintenance and repairment services. The range is also broad, from ammunition, light weapons, heavy industry to aerospace<sup>228</sup>.

In terms of Alpalhankam production, Indonesia has indigenous production capability across various products in the integrated triad. PT Pindad, which specialized in rifles, ammunition, and tanks, has notable achievements. From Belgium's production license for FNC,

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<sup>225</sup> Boutin J.D.K. *Emerging Defense Industries: Prospects and Implications // The Modern Defense Industry: Political, Economic, and Technological Issues*. Santa Barbara. Praeger Security International. Bitzinger R.A. (ed.), 2009. P. 235.

<sup>226</sup> Karim S. *Membangun Kemandirian Industri Pertahanan Indonesia*. P. 72.

<sup>227</sup> Republic of Indonesia. *Undang-Undang Republik Indonesia Nomor 3 Tahun 2014 tentang Perindustrian (Bill of the Republic of Indonesia Number 3 of 2014 Concerning Industry)*, 2014. P. 34.

<sup>228</sup> Direktori Industri Pertahanan Indonesia 2018-2019 (Indonesian Defense Industry Sector 2018-2019) // Catalog of KKIP. URL: [https://kkip.byproweb.co.id/www\\_kkip/wp-content/uploads/2018/10/Direktori-Indhan-Revisi-11-Okt-2018-Bagian-1.pdf](https://kkip.byproweb.co.id/www_kkip/wp-content/uploads/2018/10/Direktori-Indhan-Revisi-11-Okt-2018-Bagian-1.pdf) (Access date: 18.05.2021).



PT Pindad gained an indigenous capability to produce SS1, which then was developed and modified to be SS2, a NATO-standard caliber assault rifle. SS2 is well known internationally, as TNI won international military shooting competitions many times. Including the Australian Army Skills at Arms Meeting (AASAM), Brunei International Skills at Arms Meeting (BISAM), and ASEAN Army Rifle Meeting (AARM), even beating Australia and the US<sup>229</sup>. PT Pindad can also produce sniper rifle series, including SPR-2 Cal. 12.7 mm, used by Kopassus. This sniper is also well-known, as Indonesia is the only country outside the US and Europe to be able to produce high precision array rifles<sup>230</sup>. The domestic collaboration of PT Pindad and TNI-AL's Research and Development Agency also successfully produced an underwater assault rifle<sup>231</sup>. Not only that, but the Pindad-produced G2 pistol is also selling well in the Middle East; with a shooting range up to 40 meters, this pistol matches the US-standard Beretta M9<sup>232</sup>.

In the aerospace industry, a notable state-owned company is PT DI, which became the first company that gained advantages of self-reliance in plane production from military-technical cooperation. As of today, up to 103 medium transport aircraft and maritime patrols have been produced by PT DI as a single provider, including the civilian and military versions<sup>233</sup>. PT DI also successfully produced the prototype of the US-designed Folding Fin Aerial Rocket (FFAR) indigenously. Initiated by the Research and Development Agency of the Ministry of Defense, this project became a consortium between the Ministry of Defense, TNI-AU, BPPT, ITB University, PT DI, PT LEN, and LAPAN. Initially, the rocket was produced due to the demand for it to be used in TNI-AD's assault helicopters and TNI-AU's jet fighters. Now it has become one of the most famous small rockets used in the world<sup>234</sup>. FFAR will also be integrated into Indonesia's soon-to-be produced MALE drone in 2024, Black

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<sup>229</sup> 5 Alat Perang Indonesia Laku Keras di Dunia (5 Indonesian Weapons Are Selling Well in the World) // merdeka.com. 9.05.2016. URL: <https://www.merdeka.com/uang/5-alat-perang-indonesia-laku-keras-di-dunia.html> (Access date: 19.05.2021).

<sup>230</sup> Ini Dia Sniper Buatan Indonesia yang Bikin Dunia Terkesima (This Is the Sniper Made In Indonesia That Makes The World Amazed) // Liputan6. 06.04.2015. URL: <https://www.liputan6.com/bisnis/read/2207291/ini-dia-sniper-buatan-indonesia-yang-bikin-dunia-terkesima> (Access date: 19.05.2021).

<sup>231</sup> Perkembangan Senjata Serbu Bawah Air (SSBA) (Development of Underwater Assault Rifle // Jakartagreater. 19.04.2014. URL: <https://jakartagreater.com/perkembangan-senjata-serbu-bawah-air/> (Access date: 19.05.2021).

<sup>232</sup> Tak Hanya TNI, Ini Penyebab Senjata Buatan Indonesia Dibeli Banyak Negara (Not only the Indonesian Armed Forces, This Is the Reason Why Indonesian-Made Weapons Are Procured by Many Countries) // merdeka.com. 11.04.2019. URL: <https://www.merdeka.com/peristiwa/tak-hanya-tni-ini-penyebab-senjata-buatan-indonesia-dibeli-banyak-negara.html?page=2> (Access date: 19.05.2021).

<sup>233</sup> NC212 Family // Official website of PT DI. URL: [https://www.indonesian-aerospace.com/aircraft/detail/12\\_nc212+family](https://www.indonesian-aerospace.com/aircraft/detail/12_nc212+family) (Access date: 30.04.2021).

<sup>234</sup> Catalog of KKIP. P. 31.

Eagle<sup>235</sup>. The drone is a product of collaboration between Indonesia's state-owned companies and institutions, which symbolizes Indonesia's commitment to aerospace key technology mastery across stakeholders. Currently, Indonesia is in the process of producing vehicles for the multiple rocket launcher system (MRLS), R-HAN 122B. The project involves many Indonesian defense companies and institutions, such as PT Dahana, PT DI, PT Pindad, and LAPAN, which successfully conducted the dynamic test recently in 2018<sup>236</sup>.

At sea, among PT PAL's product portfolio are naval shipbuilding, including warships, submarines, and commercial ships; also in its MRO<sup>237</sup>. PT PAL can also produce Strategic Sealift Vessels (SSV) and broke the first warship export record in Indonesia by selling it to the Philippines. Indonesia can also now produce a multi-purpose hospital ship, a transformation from LPD, which was recently used as a transport ship in response to COVID-19. Recently, an indigenously made tank transport ship, KRI Teluk Weda-526, was also launched<sup>238</sup>. BPPT has finished designing a 32 M mini-submarine for reconnaissance and infiltration missions to achieve Indonesia's submarine goal<sup>239</sup>. For the ammunition, PT DI took part in producing SUT torpedoes, with the ability gained from Germany's Allgemeine Elektrizitäts-Gesellschaft (AEG) license<sup>240</sup>.

With the extensive-term of Alpalhankam, Indonesia also includes supporting components inside the umbrella of the national defense industry. KKIP classifies this as "Individual & Support Equipment"<sup>241</sup>. Moreover, as a matter of fact, Indonesia does not have a single and exclusive defense industry company. However, the companies serve a dual-use for

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<sup>235</sup> Indonesia Introduced BLACK EAGLE, Unmanned Aircraft // Official Website of PT DI. 01.06.2021. URL: [https://www.indonesian-aerospace.com/news/detail/892\\_indonesia+introduced+black+eagle%2C+unmanned+aircraft](https://www.indonesian-aerospace.com/news/detail/892_indonesia+introduced+black+eagle%2C+unmanned+aircraft) (Access date: 19.05.2021).

<sup>236</sup> Mengenal Kehebatan R-Han 122B, Kendaraan Peluncur Roket Karya Anak Bangsa (Get to Know R-Han 122B, Domestically Made Rocket Launcher Vehicle) // Official website of LAPAN. 14.02.2021. URL: <https://lapan.go.id/post/6950/mengenal-kehebatan-rhan-122b-kendaraan-peluncur-roket-karya-anak-bangsa#:~:text=Dikutip%20dari%20laman%20instagram%20Kementerian,multiple%20rocket%20launcher%20system%2DMRLS>. (Access date: 19.05.2021).

<sup>237</sup> Produk & Solusi (Products and Solution) // Official Website of PT PAL. URL: <https://pal.co.id/ship-building/> (Access date: 19.05.2021).

<sup>238</sup> Kemhan Resmi Luncurkan KRI Teluk Weda-526 Buatan Dalam Negeri (The Ministry of Defense Officially Launches the Domestically Made KRI Teluk Weda-526) // Official Website of the Ministry of Defense of Indonesia. 28.02.2021. URL: <https://www.kemhan.go.id/2021/02/28/kemhan-resmi-luncurkan-kri-teluk-weda-526-buatan-dalam-negeri.html> (Access date: 19.05.2021).

<sup>239</sup> Kapal Selam Mini 32m - BPPT (Mini Submarine 32m - BPPT) // Official website of BPPT. 15.04.2021. URL: <https://tirbr.bppt.go.id/services-berita/83-kapal-selam-mini-32m-bppt> (Access date: 19.05.2021).

<sup>240</sup> Torpedo SUT Buatan PT Dirgantara Indonesia (Torpedo SUT Made by PT Dirgantara Indonesia) // Official website of KKIP. 7.01.2021. URL: <https://www.kkip.go.id/2021/01/07/torpedo-sut-buatan-pt-dirgantara-indonesia-1/> (Access date: 19.05.2021).

<sup>241</sup> Peralatan Perorangan & Pendukung (Individual & Support Equipment) // Official website of KKIP. URL: [https://www.kkip.go.id/project\\_category/peralatan-perorangan-pendukung/](https://www.kkip.go.id/project_category/peralatan-perorangan-pendukung/) (Access date: 19.05.2021).

military, and at the same time civilian and commercial purposes. For example, PT DI produces both military and civilian aircraft. PT Pindad produces weapons and explosives also utilized for other industries like mining, PT PAL's ships are warships but also merchant ships. Indonesia's past strategy is to have a dual-use industry to be used flexibly during wartime and peacetime. Therefore, the supporting industries are as important. One example is Indonesia's private-owned PT Sritex, the biggest textile and garment manufacturing company in Southeast Asia, supplying military uniforms to many countries besides Indonesia. With the military uniform certification from Germany, its export sales grew 31.71% year on year, and customers now cover 36 countries, including the neighboring Southeast Asian, NATO countries, and the US<sup>242</sup>. However, the government has specified that only state-owned companies can be lead integrators<sup>243</sup>.

Nationally, Indonesia also creates efforts to showcase its Alpalhankam products, gain domestic confidence, and reflect Indonesia's indigenous production achievements. For the first time, the 2020 Defense Ministry leadership meeting was closed by the exhibition of domestically produced Alpalhankam from state-owned and private companies<sup>244</sup>. The products range from aircraft, ships and combat vehicles, missiles, weapons, communication tools, and drones to soldiers' uniforms. The 2019 Domestic Private Defense Industry Product Exhibition was also held in the Ministry of Defense office yard. The exhibition was participated in by the National Defense and Security Equipment Industry Association (*Pinhantanas - Perkumpulan Industri Alat Peralatan Pertahanan dan Keamanan Nasional*). Notable products are P-100 bombs used for jet fighter pilot training, drones, missiles, heavy vehicles, and weaponry, such as Carbine Adjustable Butt Stock, Mount System, KM1 Grip, and ammunitions<sup>245</sup>.

In the national supply chain, some Indonesian companies can already contribute to the finished products of Alpalhankam in terms of the components. Such as the APC production in PT Pindad that already uses glass, trackwheel, and interiors from the local production. In the

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<sup>242</sup> Exports to the US increased, sales of Sritex (SRIL) grew 17.16% // Official website of PT Sritex. 30.01.2020. URL: <https://www.sritex.co.id/news/exports-to-the-us-increased-sales-of-sritex-sril-grew-17-16/> (Access date: 19.05.2021).

<sup>243</sup> Republic of Indonesia. National Law of the Republic of Indonesia Number 16 of 2012. P. 4.

<sup>244</sup> Industri Pertahanan Dalam Negeri Gelar Pameran Alutsista Pada Rapim Kemhan, TNI dan Polri 2020 (The Domestic Defense Industry Holds an Alutsista Exhibition at the 2020 Ministry of Defense, TNI and Polri Rapim) // Official Website of the Ministry of Defense of Indonesia. 7.11.2018. URL: <https://www.kemhan.go.id/2020/01/23/industri-pertahanan-dalam-negeri-gelar-pameran-alutsista-pada-rapim-kemhan-tni-dan-polri-2020.html> (Access date: 19.05.2021).

<sup>245</sup> Inilah Alat Pertahanan Buatan Indonesia yang Dipamerkan Menhan Prabowo (Weapons System and Equipment Made in Indonesia Displayed by Defense Minister Prabowo) // merdeka. 04.12.2019. URL: <https://www.merdeka.com/trending/inilah-alat-pertahanan-buatan-indonesia-yang-dipamerkan-menhan-prabowo.html?page=6> (Access date: 19.05.2021).

value chain, the local components of Alpalhankam are already growing<sup>246</sup>. Moreover, the national defense industry contribution to MEF fulfillment is increasing year on year (See Annex 2, Figure 3). Along the lines of the achievements of indigenous production capabilities, Indonesia has gained confidence in its national defense industry and aims to be competitive in the global market. Indonesia has been actively exporting its Alpalhankam abroad, with the main customers mostly coming from the neighboring Southeast Asian states.

### **3.2. The Indonesian Government's Policies, Efforts, and Achievements in Alpalhankam Export**

Under the framework of military-technical cooperation, which initially acts as a request for the buying country's compensation, offset has now been practiced to support arms export as a strategic marketing tool<sup>247</sup>. In military-technical cooperation, for the importing countries, the examples are production under license and joint production. For the exporting countries, joint marketing and strategic partnerships are two activities that can be done to support exports. Continuing Indonesia's indigenous production ability, this subchapter will elaborate on the Indonesian government's implementation of policies in export activities.

The government intervention with its policies depends on the national planning and goals, and sometimes it can be counterproductive to increase exports. To illustrate the Indonesian context, there are historical examples of isolated cases when the government needs to limit exports to concentrate on domestic production. In 2010, PT PAL's foreign orders reached 43% from abroad, including Japan and Germany. However, the company could not fulfill all of the orders due to limitations in infrastructure and capital, and PT PAL at that time already controlled 60% of the domestic market for shipbuilding. Then, following MEF, the government ordered PT PAL to focus on warship production to support its naval modernization agenda. In return, the government made a contract for PT PAL to manufacture Fast Patrol Boat, tugboat, and landing craft units instead<sup>248</sup>. Another case is South Korea's offer of another military-technical cooperation for KT-1B in 2011 that Indonesia turned down because PT DI already had numerous orders from home and abroad. Moreover, PT DI stated that the proposed

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<sup>246</sup> Industri Pertahanan Modern (Modern Defense Industry) // Online Seminar of Curie Maharani Savitri. 20.06.2020. URL: <https://www.youtube.com/watch?v=TgjV7BwDbwE> (Access date: 22.04.2021).

<sup>247</sup> Martin S. and Hartley K. Defense Equipment, Exports and Offsets: The UK Experience // Defense Analysis, Vol. 11, No. 1, 1995. P. 21-30.

<sup>248</sup> Savitri. C.M. Contribution of Offset to Defence Industrialization in Indonesia. P. 245

cooperation would not be too beneficial, considering the small sales volume<sup>249</sup>. Another case is the cancelled export of Indonesia's panser to Malaysia due to PT Pindad's production limitation to be focused on domestic fulfillment needs for TNI. Indonesia-Malaysia negotiation was initially planned to use barter mechanism, where Malaysia will give Proton with an amount of 25% of the total transaction<sup>250</sup>.

Those cases demonstrate that government intervention in domestic production, export, and military-technical cooperation is crucial depending on the policy direction. The above three cases share the same timeline, which is the start of the MEF program (Renstra I) (See Annex 1, Figure 1). In this stage, the government was still formulating future programs and future products, so that the priority was still to focus on domestic production and fulfill TNI's demand. However, now that MEF is at the third stage (Renstra III), and there is the confidence gained from the national defense industry, the Indonesian government now fully supports the export activities of Alpalhankam. The government has been creating efforts to promote Alpalhankam products abroad as an essential part of the policies. The types of government support activities are various, ranging from official visits for negotiations, participation in arms affairs and upsell efforts. Indonesia has confidence in this since its Alpalhankam products have been used by many countries, offering a more competitive price than the leading arms industry. The Indonesian government is aiming to cover Asia and Africa for its Alpalhankam export market expansion. Eventually, Indonesia aims to align itself with the world defense industry by 2029 in the international market<sup>251</sup>.

Over the years, the government has been making official and non-official visits and included the Alpalhankam promotion as a part of the agenda. In 2013, Indonesia's Ministry of Defense, with the Director of PT DI, visited many countries in Southeast Asia, including the Philippines, Brunei Darussalam, Vietnam, Myanmar, Thailand, and Malaysia, to promote the company's products<sup>252</sup>. Aside from the neighboring countries, Indonesia's official visits and meetings are also often used to slip the Alpalhankam promotion agenda. Indonesia actively promotes Indonesia's products to Jordan, United Arab Emirates (UAE), Ghana, Iraq, and Egypt. Indonesia sees Egypt as a great prospect, acknowledging that their military

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<sup>249</sup> Ibid. P. 226-227.

<sup>250</sup> Beli Panser Indonesia, Malaysia Barter Sedan Proton (Procuring Indonesia's Panser, Malaysia Barter Proton Sedan) // Okenews. 09.07.2010. URL: <https://news.okezone.com/read/2010/06/09/339/341204/beli-panser-indonesia-malaysia-barter-sedan-proton> (Access date: 28.05.2021).

<sup>251</sup> Produk Industri Pertahanan Indonesia Dilirik Dunia (The World Glances at Indonesia's Defense Industry) // The Ministry of Defense of Indonesia's Official Magazine, Media Informasi Kementerian Pertahanan. 2014. P. 15.

<sup>252</sup> Ibid.

modernization agenda is vital in the middle of their counterinsurgency operations. The geopolitical interest is that Indonesia believes Egypt will be a door for other countries in the region to gain interest in Indonesia's Alpalhankam products. Egypt has been eyeing non-US arms suppliers, and Indonesia is confident in the chance of promoting its Alpalhankam to them<sup>253</sup>. At the same time, the South African region is a prospect market for countertrade mechanisms in military-technical cooperation, considering that coffee and palm oil is an essential commodity in the region that Indonesia can use to substitute hard currencies, should Indonesia do cooperation with them. Efforts of upselling Alpalhankam products to existing customers are also made. President Jokowi specifically requested PT Pindad to process Brunei's procurement of Indonesia's weapons and tanks accurately in the planned delivery time. In the process, Jokowi also persuades Brunei to procure Indonesia's other Alpalhankam, such as ships and planes<sup>254</sup>.

Indonesia also actively participates in many world defense fairs, such as Brunei Darussalam International Defense Exhibition (BRIDEX), Malaysia's Defense Service Asia (DSA), and UAE's International Defence Exhibition & Conference, and Naval Defence & Maritime Security Exhibition (NAVDEX). Often, the participation results in strategic cooperation with various partners. A recent example is an MoU signing in 2018 IDEX with Germany, Belgium, Poland, South Korea, and Thailand<sup>255</sup>. PT Pindad also signed an MoU with UAE's Caracal to jointly produce machine guns, which later will be used by UAE's armed forces and marketed in the Middle East. The agreement also covers UAE's procurement of PT Pindad's barrels and weapons components for Caracal's weapons<sup>256</sup>. It actively demonstrates that International arms fairs definitely help Indonesia expand its connection and prospects for military-technical cooperation.

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<sup>253</sup> Senjata Buatan Indonesia Potensial Dipasarkan di Mesir (Indonesian-Made Weapons Have the Potential to Be Marketed in Egypt) // [sindonews](https://international.sindonews.com/berita/1377691/40/senjata-buatan-indonesia-potensial-dipasarkan-di-mesir). 11.04.2019. URL: <https://international.sindonews.com/berita/1377691/40/senjata-buatan-indonesia-potensial-dipasarkan-di-mesir> (Access date: 19.05.2021).

<sup>254</sup> Diplomasi Bulutangkis, Presiden Jokowi: Sultan Brunei Akan Beli senjata Pindad dan Tank Anoa (Badminton Diplomacy, President Jokowi: The Sultan of Brunei Will Buy Pindad and Anoa Tanks) // Official website of the the Cabinet Secretariat of the Republic of Indonesia. 04.05.2018. URL: <https://setkab.go.id/diplomasi-bulutangkis-presiden-jokowi-sultan-brunei-akan-beli-senjata-pindad-dan-tank-anoa/> (Access date: 19.05.2021).

<sup>255</sup> PT Pindad Teken Beberapa MoU Dengan Mitra Strategis Pada Pameran Indo Defence 2018 (PT Pindad Signed Several MoUs with Strategic Partners at the 2018 Indo Defense Exhibition) // Official Website of the Defense Ministry of Indonesia. 8.11.2018. URL: <https://www.kemhan.go.id/2018/11/08/pt-pindad-teken-beberapa-mou-dengan-mitra-strategis-pada-pameran-indo-defence-2018.html> (Access date: 19.05.2021).

<sup>256</sup> Pindad Tandatangani Perjanjian Kerja Sama Dengan Caracal UEA (Pindad Signs Cooperation Agreement With Caracal UEA) // Official Website of the Ministry of State-Owned Enterprises of Indonesia. 08.03.2021. URL: <https://bumn.go.id/media/news/pindad-tandatangani-perjanjian-kerja-sama-dengan-caracal-uea> (Access date: 19.05.2021).

In fact, since 2010, Indonesia has been holding its own annual defense fair, named Indo Defence Expo & Forum. As a part of the government activity in defense diplomacy, this event aims to establish business contacts and transfer technology and promote Indonesia's Alpalhankam products internationally through live demonstrations of Alpalhankam. The Defense Ministry of Indonesia claims that it is the biggest defense fair in Southeast Asia, with 867 participating companies from 61 different countries, including the participants' official delegations<sup>257</sup>. In 2018, the event added Indo Helicopter Expo & Forum and Indo Marine Expo & Forum simultaneously, complementing Indonesia's variety of products and capabilities<sup>258</sup>. Although the latest event was canceled due to the pandemics, Indonesia has announced a new date for the 2022 Indo Defence Expo & Forum in November.

In terms of numbers, data from Statistics Indonesia (BPS - *Badan Pusat Statistik*) shows that Alpalhankam is one of the industrial manufacturing products with a promising future for exports. However, Indonesia's total number of Alpalhankam exports is too shaky, with the numbers climbing high and dropping drastically year on year unevenly (See Annex 2, Table 4). Although from 2014 to 2015, the number of exports dropped ten times smaller, the number climbed and multiplied by another ten times from 2016 to 2017. Although the total number in 2019 is less than the previous year, the period of January-September grew by 500,26% compared to the same period in the previous year<sup>259</sup>. The numbers provided by BPS were calculated by the transfer of hardware so that the unsteady numbers mean that there are dynamics of the arms export contracts Indonesia secures. From the trends in the export table, a conclusion can be derived that Indonesia is still a beginner in arms exports. Sometimes Indonesian companies are pretty successful in signing contracts with other countries, but it is not guaranteed to sign contracts in a similar amount every year. Indonesian domestic defense companies are still a minor player in the international arms market, considering that there are no stable market export connections and ties with specific countries where the export activities and contracts are stable, long term, and generally growing. However, the government is still

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<sup>257</sup> Indo Defence Expo & Forum Official Website. URL: <https://indodefence.com/> (Access date: 19.05.2021).

<sup>258</sup> Wapres RI Resmi Buka Pameran Industri Pertahanan “Indo Defence 2018 Expo & Forum” (The Vice President of the Republic of Indonesia Officially Opens the Defense Industry Exhibition "Indo Defense 2018 Expo & Forum") // Official Website of the Ministry of Defense of Indonesia. 7.11.2018. URL: <https://www.kemhan.go.id/2018/11/07/wapres-ri-resmi-buka-pameran-industri-pertahanan-indo-defence-2018-expo-forum.html> (Access date: 19.05.2021).

<sup>259</sup> Prabowo Gencar Promosi Senjata Made in RI, Prospeknya Cerah! (Prabowo Intensively Promotes Weapons Produced in Indonesia, The Prospects Are Bright! ) // CNBC Indonesia. 13.12.2019. URL: <https://www.cnbcindonesia.com/news/20191213091756-4-122754/prabowo-gencar-promosi-senjata-made-in-ri-prospeknya-cerah/2> (Access Date: 19.05.2021).

determined to do other activities to support the national defense industry and the armed forces.

From the achievements in domestic Alpalhankam production, it can be concluded that Indonesia's national defense industry is moving towards diversification of products in the three triads, also in the main and supporting components. The wide range of products are complementary and offer flexibility, and it can be made consistent in the future for being self-sufficient. With the technological, political, and industrial ambitions, Indonesia's defense industry has the potential to be developed into a high-technology one, supported by the government's substantial investment and commitment in its policies on military-technical cooperation. However, there are still parts and kinds of Alpalhankam Indonesia at times unable to be produced domestically. Hence, imports shall still be done under the applicable regulations.

### **3.3. Indonesia's Alpalhankam Import Trends in the Last Decade**

Although Indonesia gained more production capabilities from military-technical cooperation activities that add to the indigenous one, Indonesia still has limitations that make the government still import Alpalhankam abroad. A notable Indonesian scholar who made remarkable studies about Indonesia's defense offset and procurement, Curie Maharani, stated in a lecture that The Ministry of National Development Planning or National Development Planning Agency (BAPPENAS - *Badan Perencanaan Pembangunan Nasional*) conducted research in 2019 about Indonesia's national defense industry and the chances for the nation to be self-sufficient in production. The study concludes that even though domestic production capability in contribution to fulfilling MEF are increasing (See Annex 1, Figure 2), Indonesia still relies heavily on imports for its Alpalhankam. The only sphere that Indonesia can reduce the dependency on is combat vehicles. This is because the Indonesian national defense industry only relies on the government for research and development activities, in which it is also restricted to relying on technology transfer from military-technical cooperation. At the same time, the domestic companies mostly do the work only in the assembly lines, with the research center and facilities still located in the foreign investing partner<sup>260</sup>.

Indonesia is the third biggest arms importer in the Southeast Asian region during 2016-

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<sup>260</sup> Online Seminar of Curie Maharani Savitri



2020 and remained in the ten biggest arms importer globally during 2013-2017<sup>261</sup>. Data from SIPRI recorded that between 2010 and 2020, Indonesia imports diesel engines the most, seen from the number of deals. The engines are mostly used to complete and modernize Indonesia's existing Alpalhankam; such as submarines, landing ships, combat vehicles, and self-propelled guns. The second and third biggest numbers in weapon types include armored personnel vehicles (APC) and self-propelled MRLS. Although Indonesia can already produce combat vehicles, the import of APC is still done because it was modernized before delivery, and the period was when Indonesia did military-technical cooperation with France for the Leopard tanks<sup>262</sup>.

Although the 2012 Defense Industry Law obliges domestic companies to be the lead integrator, there are only three state-owned companies with the potential, which are PT Pindad, PT PAL, and PT DI, while others are only acting as component suppliers<sup>263</sup>. The expected cluster of Indonesia's defense industry is actually not yet achieved, as the relatively new defense companies can only be the end-product assembler<sup>264</sup>. Although Indonesia is now gaining production technology and knowledge for submarines and fighter jets, Indonesia still imports frigates and corvettes from the Netherlands, the UK, and Germany. Moreover, even though the strengthening of national defense industry efforts exists, Indonesia still imports many raw materials for the Alpalhankam production. Until 2014, PT Pindad still uses around 60% of imported raw materials, PT Krakatau Steel imports around 80% raw materials from the US, and so does PT Dahana with the materials for their explosives<sup>265</sup>.

In terms of importing partners, the same ten years period of SIPRI data shows that both the trend indicator value (TIV) and trade register for imports in Indonesia came from the US (See Annex 3, Table 2 and Table 3). However, most of the import deals are just pure imports to modernize the existing weapons or second hand ones as a form of aid. There are examples of the military-technical cooperation between the US and Indonesia, but it did not help

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<sup>261</sup> Impor Senjata RI: Salah Satu yang Terbesar di Dunia—dan Diminta Jokowi Direm (Indonesia's Arms Imports: One of the Largest in the World - and Asked by Jokowi to Slow Down) // Kumparan. 12.07.2020. URL: <https://kumparan.com/kumparanbisnis/impor-senjata-ri-salah-satu-yang-terbesar-di-dunia-dan-diminta-jokowi-direm-1tmi7FsxgFr> (Access date: 18 May 2021).

<sup>262</sup> SIPRI Arms Transfer Database. URL: <https://www.sipri.org/databases/armstransfers> (Access date: 20.05.2021).

<sup>263</sup> Gindarsah I. and Sebastian L. Indonesia's Emerging Defence Economy: The Defence Industry Law and Its Implication. P. 7.

<sup>264</sup> Karim S. Membangun Kemandirian Industri Pertahanan Indonesia. P. 239.

<sup>265</sup> Kajian Triwulan III TA 2014, Pemanfaatan Industri Strategis Untuk Mendukung Modernisasi Alutsista TNI AD di Masa Yang Akan Datang (Third Quarterly Study of FY 2014, Utilization of Strategic Industries to Support the Modernization of the Armed Forces of the Indonesian Army in the Future) // Indonesian Army Command and General Staff College, 2014. P. 11.

Indonesia's national defense industry to gain production capability. For example, Indonesia produced spare parts for the F-16 that the US will export to other countries. Yet the cooperation ended there and there was no continuation nor more developments. PT DI also was involved in the transfer of technology for Bell 412-EP Helicopters with the US, where the production was done in the US to then be assembled and sold by PT DI in Indonesia. However, the scheme only allows PT DI to gain capability in assembling and completing equipment and supplies according to the Users' needs, not the end-to-end knowledge of the production<sup>266</sup>.

There are several reasons why the US does not contribute much to Indonesia's defense industry. Firstly, the US limits the transfer of technology of their arms to other countries. As a matter of fact, the US is known to have the most complex export control in the world, such as the policy that they will only share technologies of arms production to close allies<sup>267</sup>, in which Indonesia is not. An example is the KFX-IFX program where the US refused to give its permission for South Korea to share the obtained knowledge about critical technology of the F-35 to be adapted to the collaborative Indonesia-South Korea joint production, which adds to the complexity of the program. Secondly, the first visit of Prabowo to the US after the banning also did not mention Indonesia's defense industry at all, although the visit was done to fulfill the US invitation. The discussions were only heavily put into defense relations in general, maritime security, and military training<sup>268</sup>.

The above cases of Indonesia-US dynamics of defense industry cooperation can indicate that Indonesia will not pursue the US for military-technical cooperation. However, the US still remains the biggest arms importer for Indonesia. As a matter of fact, in 2018, US-Indonesia bilateral defense relations were intensified by the emergence of military programs, such as arms sales and training aids. Indonesia received used F-16 fighter jets from the US as a part of its Excess Defense Articles (EDA) program. Yet, it is the most significant transfer of defense article in the history of both relations<sup>269</sup>. Even with the past embargo, since the New Order era, Indonesia imported many kinds of different weapons from the US, such as fighter jets, transport

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<sup>266</sup> Ibid

<sup>267</sup> Chairil T. Kunjungan Prabowo Subianto Ke Amerika Serikat Tidak Akan Berdampak Signifikan Pada Industri Pertahanan Indonesia (Prabowo Subianto's Visit to the United States Will Not Have a Significant Impact on Indonesia's Defense Industry) // The Conversation. 9.11.2020. URL: <https://theconversation.com/kunjungan-prabowo-subianto-ke-amerika-serikat-tidak-akan-berdampak-signifikan-pada-industri-pertahanan-indonesia-149747> (Access date: 27.05.2021).

<sup>268</sup> Ibid.

<sup>269</sup> Parameswaran P. US-Indonesia Defense Relations in the Spotlight with F-16 Fighter Jet Ceremony // Jakarta Post. 07.03.2018. URL: <https://thediplomat.com/2018/03/us-indonesia-defense-relations-in-the-spotlight-with-f-16-fighter-jet-ceremony/> (Access date: 20.05.2021).

aircraft, radar, and communication tools.

This fact may be rationalized by several different reasons. From the geopolitical perspective, the US regards Indonesia as a strategic partner in the region for natural resources, so that the security and prosperity of Indonesia contributes directly to the US' interest, in which Indonesia embraces this bandwagon opportunity. An Indonesian scholar theorized that the US invitation visit for Prabowo's merely due to the US' geopolitical strategy in the Asia Pacific, since Indonesia has close economic relations with the US' strategic competitor, China<sup>270</sup>. One indicator is that the US Defense Ministry report speculated that China "have likely considered" to build military logistics facilities in Indonesia among other countries in Asia<sup>271</sup>. However, Indonesia's Foreign Minister, Retno Marsudi, dismissed this report immediately by re-emphasizing in a statement that Indonesia will not and will never give up their soil to hold anyone's military bases<sup>272</sup>, in accordance with the free and active principle that refrains from aligning itself with any global power. China's approach to Indonesia on the other hand may be explained by their willingness to strengthen their presence in the region amidst the South China Sea dispute.

Yet, Indonesia has been doing its own efforts to balance itself within the geopolitical rivalry of the US and China by not establishing formal military alliance, but will actively pursue bilateral ties with both countries in general<sup>273</sup>, including in arms sales. This explains why Indonesia still imports Alpalhankam from the US. Annex 2, Table 5 shows that even though the US is the top importing partner for Indonesia during the last decade, it does not reach 17% from the total importers. SIPRI's trade register for Indonesia from the US also shows that the arms sales deals during the last two years decreased by 16%. Moreover, the overall table shows that the US is just one of the importing partners from 23 and 26 other partners. In 2020, the US Defense Security Cooperation Agency published a press release that they have decided to grant

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<sup>270</sup> Faktor Hubungan Ekonomi Indonesia-China Disebut Jadi Alasan Prabowo Diundang ke AS (Factors in Indonesia-China Economic Relations are Cited as the Reasons for Prabowo Invited to the US) // Kompas. 11.10.2020. URL: <https://nasional.kompas.com/read/2020/10/11/09235911/faktor-hubungan-ekonomi-indonesia-china-disebut-jadi-alasan-prabowo-diundang?page=all> (Access date: 27.05.202).

<sup>271</sup> Military and Security Developments Involving the People's Republic of China // The US Office of the Secretary of Defence. 2020. P. 128. URL: <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF> (Access date: 27.05.202).

<sup>272</sup> Indonesia Won't Be Military Base for Any Country', Retno Says, Dismissing Pentagon Report // The Jakarta Post. 04.09.2020. URL: <https://www.thejakartapost.com/news/2020/09/04/indonesia-wont-be-military-base-for-any-country-retno-says-dismissing-pentagon-report.html> (Access date: 27.05.2021).

<sup>273</sup> Hamilton-Hard and McRae. Indonesia: Balancing the United States and China: Aiming for Independence // Research Report of the US Security Partnerships in Southeast Asia, 2006.

Indonesia's request to buy 8 units of MV-22 Block C Osprey helicopters<sup>274</sup>. However, just a day after the US press release, Jokowi gave a statement to stop importing foreign Alpalhankam, which was followed by Prabowo's denial about the procurement request<sup>275</sup>. There were no official statements about the final decision of the helicopters to the present day.

The fact that the F-16 from EDA contributed to the biggest number of US-Indonesia arms transfers only demonstrates a continuation that TNI-AU are used to operationalizing the units. Indonesia's usage of the F-16 has a long history and dynamics. Indonesia first procured 12 units through the Peace Bima Sena I program in 1989. Then, another procurement was done for 24 second hand units in 2011 that was upgraded and refurbished called the Peace Bima Sena II<sup>276</sup>. From the technical perspective, this biggest number is only a continuation of a habit. Moreover, F-16 procurement is just one of the jet fighters Indonesia is pursuing in the contemporary situation to fulfill the national Alpalhankam modernization agenda, whilst still on track in the joint-production of KFX/IFX and engaging with other partners for other fighter jet procurements. Another scholar also argued that the US relying on military assistance alone to strengthen defense relations between US-Indonesia may not be a solid foundation. So it is less likely that the US will dominate Indonesia's arms suppliers for the MEF program<sup>277</sup>.

Moreover, in the Asia Pacific arms sales, including Indonesia, exporters have higher leverage than importers<sup>278</sup>. Although European countries in Indonesia also hold the position of the main importing partners, they have limited political influence to the partner<sup>279</sup>. One example is Airbus who opened an overseas facility in Indonesia due to the local regulation of offset for the cooperation in C295 transport planes and helicopters. Yet, Indonesia threatened

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<sup>274</sup> Indonesia - MV 22- Block C Osprey Aircrafts // Defense Security Cooperation Agency of the United States of America. 6.07.2020. URL: [https://www.dsca.mil/sites/default/files/mas/indonesia\\_20-27.pdf](https://www.dsca.mil/sites/default/files/mas/indonesia_20-27.pdf) (Access date: 27.05.2021).

<sup>275</sup> Indonesian Weapons Imports: One of the Largest in the World - and Asked by Jokowi to Slow Down.

<sup>276</sup> Gelombang Kedua Pesawat Tempur F-16 C 52ID Asal Hibah Dari AS Diterima TNI AU (The Second Wave of F-16 C 52ID Combat Aircraft Originally Received from the US Air Force) // Official website of the Indonesian Air Force. 18.11.2014. URL: <https://tni-au.mil.id/gelombang-kedua-pesawat-tempur-f-16-c-52id-asal-hibah-dari-as-diterima-tni-au/> (Access date: 27.05.2021).

<sup>277</sup> Laksamana E.A. Are Military Assistance Programs Important For US – Indonesian Ties? // East Asia Forum. 18.04.2018. URL: [https://static1.squarespace.com/static/57e3c9e1d1758e2877e03ba5/t/5c2a9e758a922d1c5eabffe1/1546296950250/EAF\\_Are\\_military\\_assistance\\_programs\\_importa.pdf](https://static1.squarespace.com/static/57e3c9e1d1758e2877e03ba5/t/5c2a9e758a922d1c5eabffe1/1546296950250/EAF_Are_military_assistance_programs_importa.pdf) (Access date: 20.05.2021).

<sup>278</sup> Hellendorff B. The Complex Drivers of Military Modernisation in Asia: The Case of Indonesia // Guns, Engines and Turbines: The EU's Hard Power in Asia. Pejsova E. (ed.). Paris. The European Union Institute for Security Studies (EUISS), 2018. P. 67-78.

<sup>279</sup> Bromley M and Duchâtel M. Influence by Default: Europe's Impact on Military Security in East Asia. European Council on Foreign Relations. URL: [https://ecfr.eu/publication/influence\\_by\\_default\\_europes\\_impact\\_on\\_military\\_security\\_in\\_east\\_asia\\_7288/](https://ecfr.eu/publication/influence_by_default_europes_impact_on_military_security_in_east_asia_7288/) (Access date: 27.05.2021).

to retaliate against the European Union (EU) by considering to stop buying Airbus products in return for their campaign on banning palm oil<sup>280</sup>, the biggest export commodity for Indonesia to Europe. Another example is the fact that Indonesia secured Leopard tanks offer from Germany right after the Netherlands rejected Indonesia's requests for the same Alpalhankam.

A controversial importing partner, Israel, was revealed from UNROCA that Indonesia imported Alpalhankam from Israel at least three times. Domestic criticism rises because Indonesia formally has no diplomatic relations with Israel, it is worsened by the fact that the national sentiments towards Israel is also defective. Indonesia reported that they imported 83 calibres from Israel in 2008, while the partner did not report anything<sup>281</sup>. The reason for the absence of diplomatic relations is purely political. Indonesia's free and active principle roots back to the Cold War period, while the nation is still struggling to complete the Dutch decolonization even after independence. Hence, Indonesia's position here is purely based on the disagreement of colonialism and solidarity for self-determination<sup>282</sup>. Therefore, Indonesia will not establish diplomatic relations with Israel until they gain independence to Palestine, although Israel tried many times to establish relations with Indonesia. However, in reality, there are military and intelligence relations between both countries.

One example is 1978 Alpha Operations by Indonesia's State Intelligence Agency (BIA - *Badan Intelijen Angkatan Bersenjata Republik Indonesia*) to procure A-4 Skyhawk fighter jets that used the arms manufacturing industry in Singapore through a broker. To avoid suspicions, all of the units are covered with aircraft wrapping cloth written by F-5, and the pilots were sent to the US after training. Indonesia also procured MP-2 semi-automatic guns<sup>283</sup>. There are also other Israel-made Alpalhankam procurements, such as Heron UAVs for surveillance and attack missions. A retired Lieutenant General TNI stated that the intelligence mission succeeded as it was done under the public radar. It was mainly based on technical and military considerations

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<sup>280</sup> Indonesia Mulls Campaign Against Airbus Planes to Retaliate Against EU // The Jakarta Post. 19.05.2017. URL: <https://www.thejakartapost.com/news/2017/05/19/indonesia-mulls-campaign-against-airbus-planes-to-retaliate-against-eu.html> (Access date: 27.05.2021).

<sup>281</sup> Indonesia // United Nations Register of Conventional Arms. URL: <https://www.unroca.org/> (Access date: 13.05.2021).

<sup>282</sup> Anwar D.F. Foreign Policy, Islam and Democracy in Indonesia // Journal of Indonesian Social Sciences and Humanities Vol. 3, No. 1, 2011, P. 37-54.

<sup>283</sup> Fuaddah M.N Operasi Sangat Rahasia: Indonesia Beberapa Kali Membeli Senjata dari Israel Seperti Senapan Serbu hingga Jet Tempur Meski Tak Punya Hubungan Diplomatik, Kok Bisa? (Top Secret Operations: Indonesia Procured Weapons From Israel Many Times, From Assault Rifles to Fighter Jets Even Though They Don't Have Diplomatic Relations, How Is It Possible?) // Intisari. 22.05.2020. URL: <https://intisari.grid.id/read/032162755/operasi-sangat-rahasia-indonesia-beberapa-kali-membeli-senjata-dari-israel-seperti-senapan-serbu-hingga-jet-tempur-meski-tak-punya-hubungan-diplomatik-kok-bisa?page=all> (Access date: 13.05.2021).

that the needed Alpalhankam could only be provided by Israel during that time. It also did not bring significant political impacts to Indonesia's policy about the diplomatic relations<sup>284</sup>. The procurement from Israel was never officially recognized by TNI, it was only discovered in the national public when one of TNI-AU pilots published an autobiography and through UNROCA.

It also actively demonstrates the reason why the main partners of military-technical cooperation in Indonesia for the contemporary situation are South Korea and Turkey, instead of the SIPRI-recorded leading arms supplier, the US. This situation also shows what the Indonesian government wants to change, not letting one importing partner singularly dominate the percentage of arms suppliers. What matters in the partner at the moment is their willingness to share the knowledge and technology in Alpalhankam production, as to how Indonesia sees South Korea as an alternative technological source, with the sharing of intellectual property rights<sup>285</sup>. Moreover, the chosen partners are those with expertise in Indonesia's national planning, such as jet fighters and submarines. The cases and trends above show that even though some countries have a common position with their arms export policies, the granting of decisions for arms transfer still comes unilaterally. Moreover, even though some countries are Indonesia's main Alpalhankam importing partners, Indonesia could still find a workaround to prevent an overly dominant leverage against them. Such as finding other partners for the same equipment, or having political leverage even from non-defense related issues.

To conclude, Indonesia's arms imports are still done regularly despite the government's policy to prioritize the national defense industry. This is because some Alpalhankam still cannot be produced purely independently, especially for the raw materials and high technology items. However, even though some Alpalhankam still needs to be imported, there are still measures to ensure knowledge and technology transfer as preconditions for military procurement from abroad. Just as the export numbers, the trend of Alpalhankam imports are also too unsteady to identify whether arms imports are generally decreasing. Moreover,

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<sup>284</sup> Hubungan Rahasia Indonesia-Israel: Operasi Alpha, Temu Suharto-Rabin, Pembelian Pesawat Tempur (Secret Indonesia-Israel Relations: Operation Alpha, the Suharto-Rabin Meeting, Purchase of Combat Aircraft) // BBC Indonesia. 12.12.2017. URL: <https://www.bbc.com/indonesia/indonesia-42305112> (Access Date: 13.05.2021).

<sup>285</sup> Ministry of Law and Human Rights of Indonesia. Naskah Akademik Keterangan Hasil Penyelarasan Naskah Akademik RUU tentang Pengesahan Persetujuan antara Pemerintah Republik Indonesia dan Pemerintah Republik Korea tentang Kerja Sama di Bidang Pertahanan (Academic Paper Information on Alignment Result of Academic Paper on Bill concerning Ratification of Agreement between the Government of the Republic of Indonesia and the Government of the Republic of Korea regarding Cooperation in the Defense Sector) // Indonesia's National Legal Development Agencies, 2017, P. 20-22. URL: [https://www.bphn.go.id/data/documents/na\\_ruu\\_ri-korea\\_bid\\_pertahanan.pdf](https://www.bphn.go.id/data/documents/na_ruu_ri-korea_bid_pertahanan.pdf). (Accessed 27.04.2021).

considering the timeframe of military procurement takes a long time, and some projects are still ongoing, the government policy is considered relatively new so that it is still early to judge whether domestic production can completely replace procurement from abroad in the near future. However, the government is still committed to support the national defense industry and reduce pure imports gradually by doing military-technical cooperation. Another effort is to diversify foreign Providers to prevent an over dependence on a single supplier not to grant one a leverage against Indonesia.

### **3.4. Foreign Providers Competition in Indonesia's Fighter Jet Procurement**

This subchapter provides the most recent case study of Indonesia's arms import in the context of foreign Provider competition, fighter jet procurement. It is provided as an independent subchapter because the competition is very well demonstrating the complexity of political problems and considerations in Indonesia's decision-making in military procurement from abroad. The fighter jet procurement competition case is well-known in the domestic and international public since it involves many prospective Providers, and it intrigues national debates and discussions. As combat aircraft are included in the government's priority in technology mastery program, this procurement goes in line with the general goal of strengthening TNI and fulfilling MEF.

Currently, Indonesia has a total of less than 60 various fighter jets from various manufacturers; such as the UK's Hawk, T-50 Golden Eagle from the US-South Korea collaboration, Brazil's EMB-314 Super Tucano, the US' F series also Su-27 and Su-30 from Russia. Although the exact number of operational aircrafts is undisclosed, the capacity of Indonesia's owned jet fighters are still below minimum, with the operational level readiness of only up to 35% due to the past embargo<sup>286</sup> and aging platforms. Therefore, Indonesia wants to procure more heavyweight and multi-role jet fighters capable of carrying modern combat missions, various weapons, and flying a long distance.

Previously, Indonesia planned to procure more Sukhoi from Russia, Su-35, and an MoU was signed in 2017 between Rostec and Indonesian state-owned PT Perusahaan Perdagangan Indonesia (PPI)<sup>287</sup>. However, Russia was only able to give less than 35% of the offset value,

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<sup>286</sup> Ispriyanti E.U. Realisasi Defense Offset dalam Pengadaan Pesawat Jet Tempur Sukhoi Tahap III (Realization of Defense Offset in Procurement of Phase III Sukhoi Fighter Jets) // Master's Thesis, Universitas Pembangunan Nasional Veteran, Jakarta. URL: <http://repository.upnvj.ac.id/1601/>. (Access date: 11.04.2021).

<sup>287</sup> Rostec Signed a Cooperation Memorandum With an Indonesian Company // Official Website of Rostec. 4.08.2017. URL: [https://rostec.ru/en/news/4520787/?sphrase\\_id=265250](https://rostec.ru/en/news/4520787/?sphrase_id=265250). (Accessed 22.04.2021).

so Indonesia proposed to replace the hard currency payment with other commodities, such as palm oil and coffee<sup>288</sup> as a countertrade mechanism instead of using a full-amount hard currency. The export potential for Indonesia's commodities reached 50% from the contract value<sup>289</sup>. In this case, Indonesia actually got more bargaining power during the proposal, since during this time, Russia was sanctioned due to the Crimea crisis and the US election. The first Sukhoi procurement, done during the embargo, was an alternative source for providers. It was also done with a countertrade mechanism. The 2003 MoU was agreed to fulfill the contract by another sources of finance<sup>290</sup>. The 2003 MoU was agreed to fulfill the contract by another source of finance. The deal involved a hard currency down-payment of 13.5 % of the US\$192 million contracts, with the remaining settled through the countertrade of commodities of palm oil, rubbers, and its byproduct paid in 18 months<sup>291</sup>. Also, Russia does not give any conditionalities nor special requirements in procurement. Moreover, Russia is willing to transfer its technology to Indonesia through license and co-production.

In addition, the technical consideration is the already existing Russian fighter jets, so the Indonesian Air Force (TNI-AU - *Tentara Nasional Indonesia Angkatan Udara*) is already accustomed to operationalizing Sukhoi. Russia also planned to build a maintenance, repair, and overhaul (MRO) facility in Indonesia as a part of the 85% offset obligation compliance<sup>292</sup>. The facility will be beneficial since Indonesia still needs to send its Sukhoi fighters to Russia for maintenance, indicating a high dependency. The MRO facility also can be a regional maintenance hub for other Sukhoi owners in the region, such as Malaysia and Vietnam<sup>293</sup>. Indonesia has also built facilities to replace its old F-5 E/F Tiger II with the Su-35 in the home

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<sup>288</sup> Pembelian Sukhoi Su-35 Beri Potensi Ekspor Indonesia-Rusia (The Purchase of the Sukhoi SU-35 Gives Indonesia-Russia Export Potential) // Indonesia's Directorate General for National Export Development. 25.08.2017. URL: [http://djpen.kemendag.go.id/app\\_frontend/accepted\\_rses/view/599fd3da-a654-4a19-a72d-4186c0a83402](http://djpen.kemendag.go.id/app_frontend/accepted_rses/view/599fd3da-a654-4a19-a72d-4186c0a83402). (Access date: 23.04.2021).

<sup>289</sup> Skema Imbal Beli SU-35 Indonesia-Rusia, Tingkatkan Pertahanan dan Ekspor Nasional (Indonesia-Russia SU-35 Countertrade Scheme Increases National Defense and Exports) // Official Website of Defense Ministry of Indonesia. 22.08.2017. URL: <https://www.kemhan.go.id/2017/08/22/10557.html>. (Access date: 21.04.2021).

<sup>290</sup> Foreign Ministry of the Republic of Indonesia. Memorandum Kesepahaman antara Pemerintah Republik Indonesia dan Pemerintah Federasi Rusia tentang Bantuan dalam Rangka Pelaksanaan Program Kerjasama Teknik Militer Indonesia - Rusia Tahun 2006-2010 (Memorandum of Understanding Between the Government of the Republic of Indonesia and the Government of the Russian Federation Regarding Assistance in the Framework of Implementing the 2006-2010 Indonesian-Russian Military Technical Cooperation Program), 2003. P. 2.

<sup>291</sup> Megawati Menandatangani Imbal Beli Sukhoi (Megawati Signs Sukhoi Megawati Signs Sukhoi Counter Trade) // Liputan6.com. 23.04.2003. URL: <https://www.liputan6.com/news/read/53399/megawati-menandatangani-imb-al-beli-sukhoi#>. (Access date: 23.04.2021).

<sup>292</sup> Sukhoi Plans to Build MRO Facility in Indonesia // Jakartaglobe. 10.11.2017. <https://jakartaglobe.id/news/sukhoi-plans-to-build-mro-facility-in-indonesia/> (Access date: 24.04.2021).

<sup>293</sup> Wood B. Indonesia's SU-35 Countertrade Deal: Worth Its Weight in Jet Fighters? // The Jakarta Post. 27.09.2017. URL: <https://www.thejakartapost.com/academia/2017/09/27/indonesias-su-35-countertrade-deal-worth-its-weight-in-jet-fighters.html>. (Accessed 23.04.2021).



base preparation<sup>294</sup> and prepare their personnel to learn Russian as the platform is expected to come<sup>295</sup>.

However, the implementation is endlessly delayed, and there has not been any official statements about the final decision whether it was canceled or continued. There are, however, events to trace and try explaining about the procurement journey. In 2018, Ryacudu stated that there are dynamics surrounding the delay of the procurement. However, the process left to do is just the signing of the countertrade mechanism contract about commodity types to trade. The Expert Staff of the Minister of Defense for Economic Affairs stated that Russia wants raw materials of rubbers, but Indonesia wants Russia to receive finished goods of rubbers for more added value<sup>296</sup>. Ryacudu also stated that he has signed the contract, but is still waiting for the Ministry of Trade about the countertrade mechanism. Meanwhile, the Director General of Foreign Trade, stated that he is also still waiting for the process from the Ministry of Defense<sup>297</sup>. Local media has been saying that Indonesia is hesitant to purchase another Sukhoi from Russia due to the US' Countering America's Adversaries Through Sanctions Act (CAATSA), especially after what happened to Turkey, Egypt, and China. The US is reported to be pressuring Indonesia to drop the Su-35 negotiation<sup>298</sup>, although the former US Minister of Defense, James Norman Mattis, said that he guaranteed that Indonesia is exempted from embargo should Indonesia continues procuring Sukhoi<sup>299</sup>.

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<sup>294</sup> Kuker Kasau di Madiun, Kasau: Gantikan F5 Tiger II, TNI AU Siapkan Sukhoi Su-35 (A Working Visit of the Chief of Staff of the Indonesian Air Force in Madiun, Chief: Replace F5 Tiger II, Indonesian Air Force prepares Sukhoi Su-35) // Official Website of Indonesian Air Force. 10.03.2019. URL: <https://tni-au.mil.id/kuker-kasau-di-madiunkasau-gantikan-f5-tiger-ii-tni-au-siapkan-sukhoi-su-35/>. (Access date: 10.02.2021).

<sup>295</sup> Siap Terima Sukhoi SU-35, Senin Lanud Iwj Buka Kursus Intensif Bahasa Asing (KIBA) Rusia (Ready to Receive Sukhoi SU-35, on Monday, TNI-AU Military Air Base Opens Russian Intensive Foreign Language Course) // Official Website of Indonesian Air Force. 30.08.2018. URL: <https://tni-au.mil.id/siap-terima-sukhoi-su-35-senin-lanud-iwj-buka-kursus-intensif-bahasa-asing-kiba-rusia/> (Access date: 10.02.2021).

<sup>296</sup> Kemenhan: Proses Pembelian Sukhoi Tinggal Tandatangani Kontrak (Ministry of Defense: Sukhoi Procurement Process is Just to Sign Contract) // Official Website of the Defense Minister of the Republic of Indonesia. 03.01.2019. URL: <https://www.kemhan.go.id/itjen/2018/01/03/kemenhan-proses-pembelian-sukhoi-tinggal-tandatangani-kontrak.html>. (Access date: 22.04.2020).

<sup>297</sup> Menhan Tunggu Kemendag soal Barter Hasil Kebun RI dengan Sukhoi (The Minister of Defense awaits the Ministry of Trade regarding the Barter of Indonesian Commodity Products with Sukhoi) // Official Website of the Defense Minister of the Republic of Indonesia. 27.06.2019. URL: <https://www.kemhan.go.id/itjen/2018/01/03/kemenhan-proses-pembelian-sukhoi-tinggal-tandatangani-kontrak.html>. (Access date: 22.04.2020).

<sup>298</sup> US Pressured Indonesia to Abandon Su-35 Fighter Jet Contract with Russia // Defenseworld.net. 12.03.2018. URL: <https://www.defenseworld.net/news/22128#.YIJf337Q4j>. (Accessed 23.04.2021).

<sup>299</sup> Menhan AS Jamin Indonesia Bebas Sanksi Atas Pembelian Sukhoi (The US Defense Minister Guarantees That Indonesia Is Free of Sanctions for the Purchase of Sukhoi) // Tempo.co. 29.08.2018. URL: <https://nasional.tempo.co/read/1121658/menhan-as-jamin-indonesia-bebas-sanksi-atas-pembelian-sukhoi/full&view=ok>. (Accessed 22.04.2021); and US to Exempt India, Indonesia and Vietnam from

Indeed, ideally, the military and procurement policies of Indonesia are prioritized over modernization and technicalities over foreign policy orientations. It is supported by the fact that Indonesia rejected the US' request to land and refuel its P-8 Poseidon maritime surveillance planes. Although Indonesian officials do not make any comments, it was reported that Indonesia upholds its neutrality foreign policy since the US' proposal arose from the escalation of US-China Southeast Asia's geopolitical influence competition<sup>300</sup>. However, suppose the risk is another embargo. In that case, Indonesia is still hesitant due to the residual fear from the experience of being blocked in using and doing maintenance for the existing Alpalhankam. Moreover, arms suppliers' complexity and alliances will add collateral damage to the national armed forces and foreign policies.

In tandem with the long-lasting dynamics of fighter jet procurement, the owned platforms keep aging, and Indonesia still aims to replace all above 30-40 years old units. As an alternative, Indonesia has been eyeing other foreign suppliers, alongside the ongoing joint-production project with South Korea. Ryacudu had a bilateral meeting with Sweden in 2017 while expressing interest in procuring JAS 39 Gripen produced by Saab, with offset production mechanism and transfer of technology according to 2012 Defense Industry Law<sup>301</sup>. Also, during the whole of 2020, even despite the pandemic, Prabowo visited many prospective partners for alternatives. Prabowo wanted to procure Austria's second hand Eurofighter Typhoon by sending a letter to Austria's Minister of Defense, Klaudia Tanner, to negotiate purchasing all 15 platforms owned by the Austrian Air Force. The letter dated 10 July 2020 was leaked to Indonesian national media, claiming that it was from an Austrian source<sup>302</sup>. Tanner confirmed the letter's existence and responded positively with the leaked scanned version of the letter<sup>303</sup>.

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- CAATSA Sanctions // Defenseworld.net. 24.07.2018. URL: [https://www.defenseworld.net/news/23031/US\\_to\\_Exempt\\_India\\_Indonesia\\_and\\_Vietnam\\_from\\_CAATSA\\_Sanctions#.YIGSAX37Q4g](https://www.defenseworld.net/news/23031/US_to_Exempt_India_Indonesia_and_Vietnam_from_CAATSA_Sanctions#.YIGSAX37Q4g). (Access date: 22.04.2021).
- <sup>300</sup> Exclusive: Indonesia Rejected U.S. Request to Host Spy Planes - Officials // Reuters.com. 20.10.2020. URL: <https://www.reuters.com/article/indonesia-usa-idUSKBN2750M7>. (Accessed 23.04.2021).
- <sup>301</sup> Indonesia Akan Mengganti Pesawat Tempur dan Kapal Tempur yang Telah Usang (Indonesia Will Replace Outdated Combat Aircraft and Battleships) // Official Website of Defense Ministry of Indonesia. 9.05.2017. URL: <https://www.kemhan.go.id/2017/05/09/indonesia-berencana-mengganti-pesawat-tempur-dan-kapal-tempur-yang-telah-usang.html> (Access date: 23.04.2021)
- <sup>302</sup> Santosa N.I. Prabowo to Visit Austria to Talk About Possible Typhoon Jet Fighter Deal: Leaked Document // The Jakarta Post. 13.10.2020. URL: <https://www.thejakartapost.com/news/2020/10/13/prabowo-to-visit-austria-to-talk-about-possible-typhoon-jet-fighter-deal-leaked-document.html>. (Access date: 23.04.2021).
- <sup>303</sup> Sontani R. Austria Nyatakan Siap Jual Typhoon Ke Indonesia, Jakarta Siap? (Austria Declares Ready to Sell Typhoon to Indonesia, Is Jakarta Ready?) // Airspace Review. 07.09.2020. URL: <https://www.airspace-review.com/2020/09/07/austria-nyatakan-siap-jual-typhoon-ke-indonesia-jakarta-siap/> (Access date: 23.04.2021).

The publicized plan received much criticism from the former military personnel and the national public. There are at least two reasons for the disagreements. First, from the technical perspective, the Eurofighter can only be upgraded until Tranche 1 out of 3. The upgrading and maintenance cost is high, with the rare spare parts estimated at US\$445.8 million per year. The units are almost 30 years old, so Indonesia can only utilize them for approximately another 13 years. The unit is also inferior to the already owned platforms. It belongs to an older generation aircraft and is not equipped with an infrared search and tracking system (IRST)<sup>304</sup>. Second, from the political perspective, there are two extra steps for procurement to happen: It needs the agreement from another four producing countries, Germany, the UK, Italy, and Spain. Only then can Austria release the units to Indonesia. Not only that, but permission also needs to be gained from the US, which supplies equipment in the jet production. Airbus Defence & Space shall buy the platform from Austria, then resell it to Indonesia. These two steps make the procurement process more complicated and time-consuming, although it will still be faster in deployment than procuring brand new platforms or those not produced yet. The manufacturer, Airbus, actually offered to move an assembly line from Spain to Indonesia if the procurement is done, following Indonesia's offset obligation. However, the Eurofighter procurement will violate the 2012 National Defense Law since there are no offset mechanisms inside the contract, and Prabowo does not seem to negotiate about the upgrade package for the sake of the national defense industry<sup>305</sup>.

Although there are no official statements about the final decision of the Eurofighter, the criticism of buying secondhand Alpalhankam arose again amidst the recent submarine incident, KRI Nanggala-402, that went sub-sunk in a torpedo shooting practice. The submarine was 42 years old, while the acceptable operational age was 35. Although the real cause of the incident is still being investigated, it is more than enough to raise domestic awareness about a push for modernization, replace the aging units, and not procure secondhand Alpalhankam. There is also a national demand for auditing the routine maintenance activities for the existing ones.

Prabowo also seeks to procure France's Rafale jet fighters following the high-level meeting during 2020-2021. Should the procurement happen, Indonesia will be the first Southeast Asian country to operate the 4.5 generation Rafale fighter jet. Moreover, despite the

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<sup>304</sup> News Desk (The Jakarta Post). Critics Slam Prabowo's Plan to Purchase 'Outdated' Austrian Jet Fighters // The Jakarta Post. 28.07.2020. URL: <https://www.thejakartapost.com/news/2020/07/28/critics-slam-prabowos-plan-to-purchase-outdated-austrian-jet-fighters.html> (Access date: 23.04.2021).

<sup>305</sup> Santosa N.I. To Buy or Not to Buy: Tech Transfer Is the Answer for Typhoons // The Jakarta Post. 27.07.2020. URL: <https://www.thejakartapost.com/academia/2020/07/27/to-buy-or-not-to-buy-tech-transfer-is-the-answer-for-typhoons.html> (Access date: 12.05.2021).

fact that the military-technical cooperation framework has not been clearly defined, France assured Indonesia that they are open and willing to cooperate with PT DI in partnership and transfer technology scheme. France also stated that Rafale would support the independence of its Users since the unit is fully French-made<sup>306</sup>. The statement and assurance is definitely a response to the puzzles and extra steps of Eurofighter jets Indonesia considered. The fact that Indonesia is already an eminent Airbus customer will only make the cooperation scheme more possible since the buying-nation already has domestic production capabilities of CN235 and C295 tactical transport aircraft<sup>307</sup>.

With the past obscurity and absence of official statements about the decision, finally, the 2021 Indonesia's Air Force Leadership Meeting gives clarity. The Chief of Staff of the TNI-AU mentioned future procurement focused on achieving Air Supremacy and Air Superiority. The fighter jets mentioned are 36 Dassault Rafale and F-15EX. Other Alpalhankam includes Hercules C-130J transport aircraft, multi-role tanker transport (MRTT), and various other defense equipment<sup>308</sup>. It is also reported that the list extends to 3 Lockheed Martin C-130J Super Hercules transport aircraft, 3 Airbus A330 tankers, 6 MQ-1 Predator drones, and Italy's Leonardo early-warning radar system<sup>309</sup>.

From this polemic of fighter jet procurement, there are mainly two biggest considerations. From the technical and military operational consideration, the fighter jets need to be from at least 4.5 generation and Multi Role, has all capabilities to perform in different combat missions to reach a far-radius target, and able to carry a Network Centric Warfare, equipped with modern systems and warfare equipment, and easy to be maintained<sup>310</sup>. On the other hand, the political considerations align with the basic principles of being free from embargoes and conditionalities, supporting the national defense industry, and avoiding possible dependency from a single Provider - be it with a direct Provider or export license giver. The

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<sup>306</sup> France Ready to Give RI Technology Transfer // Jakarta Post. 26.03.2015. URL: <https://www.thejakartapost.com/news/2015/03/26/france-ready-give-ri-technology-transfer.html> (Access date: 27.05.2021).

<sup>307</sup> Waldron G. Will Scars From US Sanctions Drive Indonesia to Buy Rafale? // Flight Global. 15.12.2020. URL: <https://www.flightglobal.com/defence/will-scars-from-us-sanctions-drive-indonesia-to-buy-rafale/141608.article> (Accessed 24.04.2021).

<sup>308</sup> Danlanud Wiriadinata Ikuti Rapat Pimpinan TNI AU Tahun 2021 (Commander of the Air Force Base Wiriadinata Attends the TNI AU Leadership Meeting in 2021) // Official Website of Indonesian Air Force. 10.03.2019. URL: <https://tni-au.mil.id/danlanud-wiriadinata-ikuti-rapat-pimpinan-tni-au-tahun/>. (Accessed 19.02.2021).

<sup>309</sup> McBeth J. Indonesia to Arm up With Rafale, F-15 Fighter Jets // Asia Times. URL: <https://asiatimes.com/2021/02/indonesia-to-arm-up-with-rafale-f-15-fighter-jets/> (Accessed 22.04.2021).

<sup>310</sup> Mencari Pengganti F-5E Tiger TNI AU (Looking for a Replacement for the TNI AU's F-5E Tiger) // Official Website of TNI AU. 25.09.2014. URL: <https://tni-au.mil.id/mencari-pengganti-f-5e-tiger-tni-au/> (Access date: 12.05.2021).

chosen foreign Providers for fighter jets may be the best alternative in the past obscurity and possible haunting sanctions ahead.

In conclusion, there are existing capabilities in domestic Alpalhankam production gained from foreign military-technical cooperation or obtained domestically. In the case where there are mixed producers, Indonesian companies have been escalating the number of local components in the finished products of Alpalhankam to support the goal of being self-reliant. With the increased confidence and performance, the government has been doing intervention with national policies in Alpalhankam import and export depending on what they want to achieve. In the contemporary situation, Indonesia has been active as a player in exporting its Alpalhankam abroad, although considered as a relatively new player with no stable and long-term contracts. However, the government still wants to expand its export market reach to the remaining countries in Southeast Asia, South Africa, and the Middle East. In the import activities, Indonesia still procures Alpalhankam products and components that they cannot produce themselves. Nevertheless, the import data trends show that even the top importing partners cannot singularly create dependency because Indonesia pursues different types of cooperation and arms deals with various partners.

## Conclusion

The Indonesian government has a foreign policy principle of free and active, which means that the nation will not formally form military alliances and not lean to any side. The governing principle is also applied in military-technical cooperation with foreign partners. In consequence, Indonesia has no political or military allies to directly help during crisis. At the same time, Indonesia has gone through the evolution of national threat conceptualization, calling it a hybrid, which means that threats can come from military and non-military nature, or domestic and international. Indonesia also acknowledges other countries' military power modernization and is aware that military technology is essential. Therefore, Indonesia has been actively doing military-technical cooperation activities as a way to absorb technology and knowledge from foreign partners.

This master thesis is constructed to find an answer to: What are the recent developments and main directions of Indonesia in the foreign military-technical cooperation? — In approaching the answer, a thorough examination of the government official documents and regulations are needed to study the development of the policy in the sphere of military procurement. The research finds several factors that shape Indonesia's policy in military-technical cooperation.

First, Indonesia wants to prioritize the national defense industry in military procurement to increase indigenous production capabilities. This goal roots back to the arms embargo experience that paralyzed the whole national defense forces due to Indonesia's past policy choices in facing separatism movements. The residual fear is worsened with the background of the struggle for independence so that Indonesia has sentiment towards foreign power intervention and military aggression. Therefore, Indonesia has created conditions to limit Alpalhankam imports from abroad to be self-sufficient in producing and using its own units.

Second, there is growing confidence from domestic companies in the national defense industry. Therefore, regulations were created as a policy to limit Alpalhankam imports to prioritize procurements at home, to support the first factor. Some achievements indicate that Indonesia can now produce Alpalhankam indigenously or increase the local content in the finished products. Moreover, the contribution of the national defense industry to MEF is also consistently growing year on year. The profile and product coverage of Indonesian defense companies are also comprehensive and complementary. Nevertheless, Indonesia still has limitations in producing their own weapons indigenously, so that Indonesia shall still do

imports under certain conditions. The conditions include the obligation of offset mechanisms and the freedom of political conditionalities and possible embargoes in the procurement contract of Alpalhankam from abroad.

Third, Indonesia has been diversifying its foreign partners in complex military-technical cooperation not to gain any side leverage over Indonesia's defense sector and national military posture. It is also done to absorb different knowledge and technology from various partners with different specialties. The numerous partners and projects complement Indonesia's planning to pursue the priority program of essential technology mastery: Fighter jets, submarines, propellants, rockets, missiles, military satellites, medium tanks, UAVs, and underwater sensing. Indonesia has been trying to create accents of cooperation instead of pure imports to pursue the indigenosity of the national defense industry. Nevertheless, despite the different partners, the dependency level of imports is still there. At times, the cooperation only covers assembly or components supply, with the research and development facilities still not located in the Indonesian soil.

With the above factors as findings, this research can then formulate a policy direction. In the early stage of MEF, the government created an intervention to focus more on the domestic fulfillment of TNI instead of increasing exports. However, now that MEF is at the last phase, and Indonesia has gained more knowledge and technology in production and maintenance, the nation has gained more confidence in exports. The goal is to act more as an Alpalhankam supplier by covering more neighbors in the Southeast Asian region and expand its export market coverage to South Africa and the Middle East. However, the annual export numbers are still unsteady throughout the years, indicating that Indonesia is still at the early stage of a new player in the global arms trade. Moreover, domestic companies still import raw materials, making it challenging to be an autarky in Alpalhankam production.

Therefore, since Indonesia launched the policy, there is a visible growth of domestic production in terms of local components, domestic defense companies' activities, and its contribution to fulfilling MEF. Yet, at the same time, there is still a high dependency on imports, especially in the raw materials and high technology Alpalhankam. Nevertheless, the Indonesian government has a strong determination in fulfilling MEF and being self-sufficient in Alpalhankam production. Though limited, conditional military procurement from abroad is contributing to the increased capacity of the domestic companies, in which some cases are precedents for Indonesia, such as the joint-production of medium tanks, submarines, and fighter jets.

To conclude, recent developments in Indonesia's foreign military-technical cooperation are that there is a change of trajectory to diversify partners and pursue large-scale and interrelated activities to continue activities. Should foreign Providers want to sell their weapons to Indonesia, one needs to share the knowledge and technology in the procured Alpalhankam — as what happens with the rising global arms industry, South Korea and Turkey. Indonesia chooses technicalities and modernization agendas over foreign policy choices in military procurement because there is a stable practice of free and active foreign policy principles. Nevertheless, the residual fear of embargo might be a blockage for some situational cases, such as the fighter jet procurement. Yet, the procurement is done simultaneously with Indonesia's own joint-production project with a completely different partner. The main direction of the policy is to reach the ultimate goal of being self-sufficient in production and export market expansion.



## Annexes

### Annex 1. Figures

**Figure 1. National Defense Industry Development Masterplan in MEF Framework<sup>311</sup>**

KKIP released a masterplan for the national defense industry for the period of 2010-2029, following the timetable of MEF along with the agendas of relevant stakeholders. It is expected that by the end of the period, the national defense industry will be able to collaborate internationally with sustainable development. Defense companies in Indonesia are expected to meet domestic demands, be competitive with foreign products, and contribute to national economic growth<sup>312</sup>.

Defense Industry Target	<ol style="list-style-type: none"> <li>1. Professional, effective, efficient, integrated, and innovative</li> <li>2. Independent</li> <li>3. Increased Alpalhankam production and maintenance capabilities</li> </ol>			
Users Target	High mobility and Great deterrence			
Alpalhankam Fulfillment Target	MRO and new 1,200 Alpalhankam items			
Agenda	<ol style="list-style-type: none"> <li>1. Program determination</li> <li>2. Stabilization and optimization of the defense industry</li> <li>3. Preparation of defense industry regulations</li> <li>4. Preparation of new future products</li> </ol>	<ol style="list-style-type: none"> <li>1. Support minimum posture</li> <li>2. Increase production-cooperation capabilities</li> <li>3. New product development</li> </ol>	<ol style="list-style-type: none"> <li>1. Support ideal posture</li> <li>2. Industry growth (medium-term product)</li> <li>3. Increase international cooperation (in advanced technology)</li> </ol>	<ol style="list-style-type: none"> <li>1. Significant independence of the defense industry</li> <li>2. The ability to collaborate internationally</li> <li>3. Sustainable development</li> </ol>
Time	MEF I / Renstra I (2010-2014)	MEF II / Renstra II (2015-2019)	MEF III / Renstra III (2020-2024)	Post MEF (2025-2029)
	Alpalhankam Minimum Posture	Alpalhankam Transition Posture	Alpalhankam Ideal Posture	Post-MEF

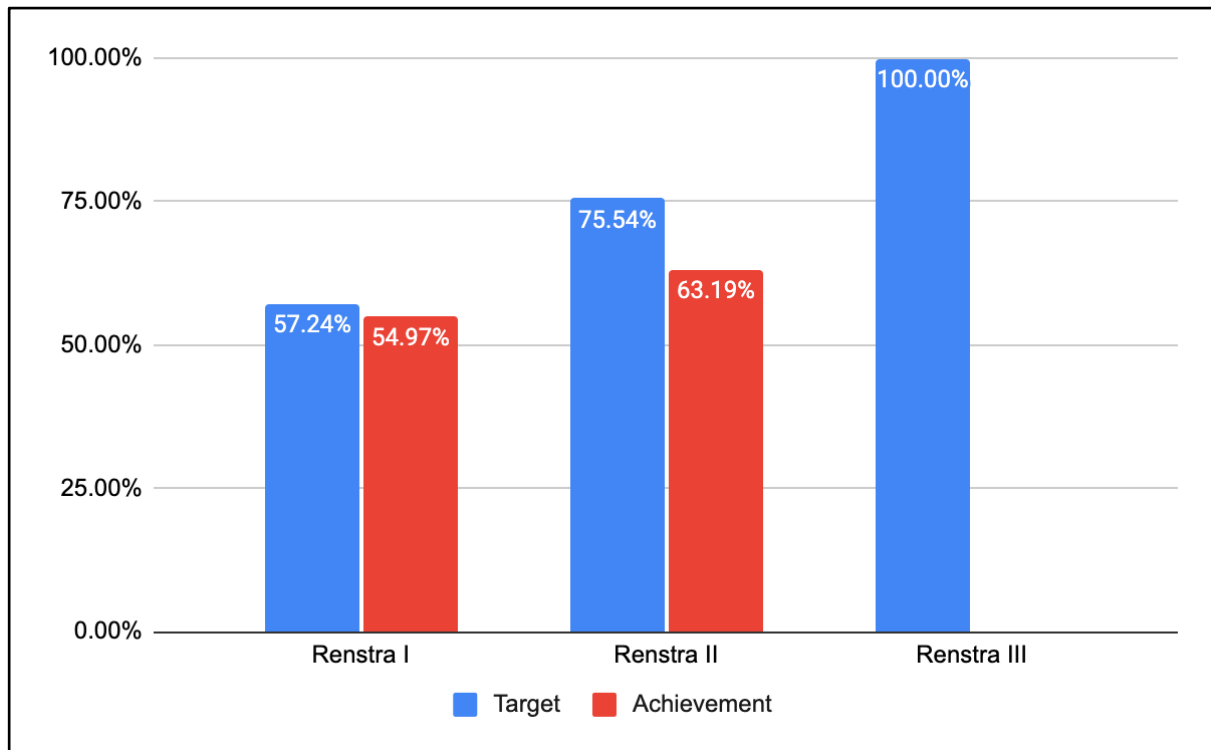
<sup>311</sup> Masterplan Pengembangan Industri Pertahanan (National Defense Industry Development Masterplan) // Official website of KKIP. URL: [https://kkip.byproweb.co.id/www\\_kkip/wp-content/uploads/2018/10/Master-Plan-Pengembangan-Indhan.jpg](https://kkip.byproweb.co.id/www_kkip/wp-content/uploads/2018/10/Master-Plan-Pengembangan-Indhan.jpg) (Access date: 24.04.2021).

<sup>312</sup> KKIP Jelaskan Perkembangan Pengelolaan Industri Pertahanan (KKIP Explains Development of Defense Industry Management) // Official website of the Ministry of Defense of Indonesia. 10.11.2016. URL: <https://www.kemhan.go.id/2016/11/10/kkip-jelaskan-perkembangan-pengelolaan-industri-pertahanan.html> (Access date: 24.05.2021).



**Figure 2. Achievements of MEF in the Physical Aspects of Alpalhankam<sup>313</sup>**

The House of Representatives of Indonesia released a graph about Indonesia's fulfillment progress of MEF seen from the physical aspects of Alpalhankam until 7 October 2019. The graph shows that Indonesia did not achieve the arranged target in the two stages, which was caused by long procurement planning and process<sup>314</sup>.

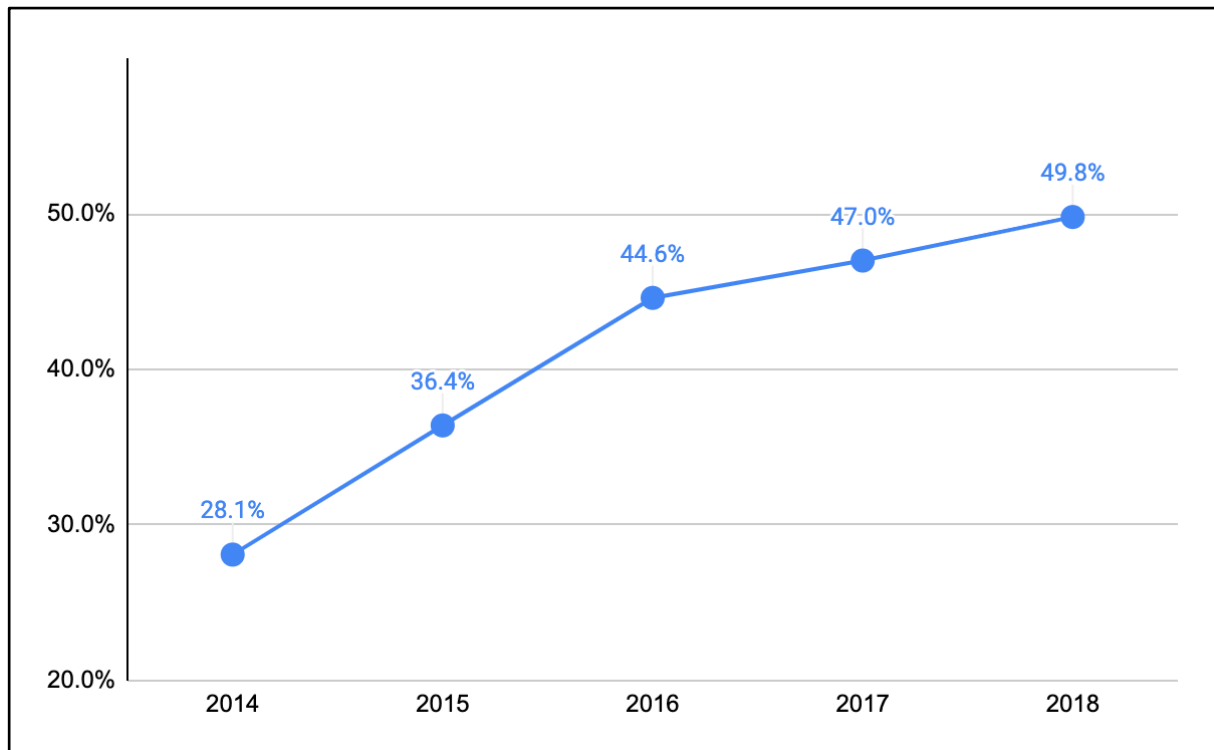


<sup>313</sup> Zahara E.L and Rizky A. Analisis Ringkas Cepat Anggaran Pertahanan Indonesia Pemenuhan Minimum Essential Force (Quick Brief Analysis of Indonesia's Defense Budget for the Fulfillment of Minimum Essential Force) // Pusat Kajian Anggaran Badan Keahlian Sekretariat Jenderal DPR RI 2020. No. 04/arc.PKA/IV/2020, April 2020.

<sup>314</sup> Rakernis Bidang Materiil Ditjen Kuathan Kemhan Ta. 2020, 19 Februari 2020 (Technical Work Meeting of the Directorate General of the Defense Ministry in the Material Sector in 2020, 19 February 2020) // Official website of the Ministry of Defense of Indonesia. 10.02. 2020. URL: <https://www.kemhan.go.id/kuathan/2020/02/19/rakernis-bidang-materiil-ditjen-kuathan-kemhan-ta-2020-19-februari-2020.html> (Access date: 27.05.2021).

**Figure 3. Contribution of the National Domestic Industry to MEF Fulfillment<sup>315</sup>**

In terms of the figure of achievements, the number of contribution by Indonesia's national defense industry to MEF fulfillment is quite large. The planning of procurement was based a life cycle approach, which means that there is a change of paradigm from defense budget from merely procurement to investment for the national defense industry<sup>316</sup>.



<sup>315</sup> Online Seminar of Curie Maharani Savitri.

<sup>316</sup> Ibid.

## Annex 2. Tables

**Table 1. Official Regulations of Indonesia Containing Military-technical Cooperation Elements<sup>317</sup>**

Below is the compilation of the legislative documents of Indonesia about Alpalhankam procurement. There is no single specific regulation, as there is no national definition, so sometimes the terms used and its definitions are overlapping. However, there are similar elements in the practice of military-technical cooperation in Alpalhankam procurements from abroad.

Regulation	Element	KLO	Offset	Local Content	Trade Return
Law No. 16/2012	Definition	X	Industry participation or arrangements to return some contract value	Domestic products owned by Indonesian individuals or legal entities	Procurement with counter trade mechanisms, including offset
	Mechanism	X	Co-production, joint venture, buy-back, technology transfer, knowledge transfer, training, trade return, offset	X	X
Government Decree No. 76/2014	Definition	X	Reciprocal trading activities for procurement	Domestic products owned by Indonesian individuals or legal entities	Reciprocal trading activities for procurement
			Maintenance, overhaul, refurbishment, and	Design; engineering; intellectual property rights;	Barter: A form of direct exchange

<sup>317</sup> Illustrated by author based on Indonesian legislative documents about military-technical cooperation

	Mechanism	X	modification; retrofitting and upgrading; production under license; joint stock; buy back; joint production; subcontracting; competency development in RnD; joint development; technology transfer; transfer of competence through research and education; product marketing development; and / or investment for the manufacturing industry	raw material; cost of facilities and infrastructure; education and training; labor costs; and/or after-sales service.	between foreign Alpalhankam and domestic products of the same or comparable value without the use of payment instruments  or  Buy-back: Obligation of the state and / or foreign Providers to purchase domestic products with agreed value
Ministry of Defense Decree No. 30/2015	Definition	Products or activities required for abroad procurement	Arrangement between Indonesian government and foreign Providers to return some contract value	Alpalhankam produced by Indonesia and accepted by Providers as a part of the products	Reciprocal trading activities for procurement
	Mechanism	Maintenance; overhaul, refurbishment, and modification, retrofitting and upgrading; production under license; joint stock; buy back; joint production; subcontracting; competency development in research and	X	Design; engineering; intellectual property rights; raw material; cost of facilities and infrastructure; education	Barter or buy-back

		development; joint development; technology transfer; transfer of competence through research and education; Defense Industry product marketing development; and / or investment for the manufacturing industry		and training; labor costs; and / or after-sales service.	
Defense White Paper 2015	Definition	x	Industry participation, offset, as a return of some part of contract value to Indonesia	Domestic product owned by individuals/Indonesia legal entities containing component elements, Intellectual Property Rights, engineering, man hour, customer support and training and after sales services	Indonesian products purchased by Providers, measured in contract transaction value of the procurement
	Mechanism	x	Maintenance and service, overhaul, refurbishment and modification, retrofit and upgrade, joint production, subcontract, R and D, joint development, transfer of technology, transfer of competency through R and D, marketing development, investment manufacturing industry	Component elements, Rights of Intellectual Property, engineering, man hour, customer support and training and after sales services.	Buy-back

**Table 2. Complex Military-Technical Cooperation with foreign Providers<sup>318</sup>**

This table illustrates the diversity of partners and the complexity of military-technical cooperation activities in Indonesia. All of the activities are interrelated and includes technology transfer.

<b>Partner</b>	<b>Alpalhankam</b>	<b>Scheme</b>
South Korea	Panzer	Joint production
South Korea	LPDs	Joint production
South Korea	Submarine	Joint production and joint development
South Korea	Aircrafts	Counter purchase
South Korea	Fighter Jet	Joint venture and joint production
Turkey	Tanks	Joint development and joint-production
Turkey	Communication systems	Investment and joint production
Turkey	Aircrafts	Joint development, license, certification, joint production, joint marketing
Turkey	UAVs	Joint development
France	Panzer	Joint production
France	Propellant	Investment and joint production
Germany	MBT	Joint production, technology transfer
Canada	Ammunition	Investment, joint-development, and joint-production
China	Missiles	Joint production
Ukraine	Nozzle	Joint development
Ukraine	Combat vehicles	Joint production
Spain	Aircrafts	Joint production, license, joint development
The UK	Cyber security	Joint development

<sup>318</sup> Compiled by author from various sources



**Table 3. Ongoing Talks and Prospects for Future Military-Technical Cooperation<sup>319</sup>**

This table contains the ongoing talks and prospects of Indonesia's military-technical cooperation on a smaller scale than Table 1.

<b>Partner</b>	<b>Prospect</b>
Belarus	Signed an MoU on Defense Industry Cooperation in 2013
Sweden	Drafting a bill for defense industry cooperation since 2020
Japan	Signed a Defense Equipment and Technology Transfer Agreement in 2021
The Philippines	Signed an MoU on logistics and defence industry cooperation in 2020
Poland	Offered Indonesia to cooperate in the radar systems and light armored vehicles development
UAE	Signed an agreement to jointly market Indonesia's assault rifle
Australia	Had a discussion about defense industry cooperation in 2017
Pakistan	Had a discussion about defense industry cooperation in 2017
Hungary	Had a discussion about defense industry cooperation in 2017

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<sup>319</sup> Compiled by author from various sources

**Table 4. Indonesia's Alpalhankam Exports<sup>320</sup>**

The table below is taken from the data of Indonesia's Central Bureau of Statistics, with the available year with the earliest and latest data available. The code for Alpalhankam is weapon and ammunition, including its parts and accessories. The numbers are net value in USD.

	2014	2015	2016	2017	2018	2019	2020
Australia	69,005.00	0.00	0.00	292.91	559,475.91	0.00	0.00
Bangladesh	0.00	0.00	0.00	0.00	0.00	0.00	1,837.00
Belgium	0.00	0.00	0.00	0.00	53,170.89	111,889.11	54,054.96
Brunei Darussalam	0.00	0.00	4,620.00	0.00	0.00	29,828.75	1,158.00
Canada	244.00	0.00	1,623.00	0.00	0.00	167,993.00	202,443.25
China	139.00	171.00	0.00	0.00	0.00	1,408.18	5,438.93
East Timor	39,725.00	1,836.45	0.00	101.25	0.00	30.00	0.00
France	2,888.00	73,771.00	0.00	0.00	0.00	0.00	1,467.87
Germany	1,569.00	1,247.64	0.00	0.00	0.00	0.00	0.00
India	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00
Japan	136.00	0.00	0.00	0.00	0.00	43,252.92	0.00
Laos	212,275.00	196,342.00	0.00	0.00	0.00	0.00	0.00
Malaysia	0.00	0.00	1,000.00	0.00	132,624.00	0.00	474.00
Mexico	0.00	0.00	115.00	0.00	0.00	0.00	0.00
Philippines	0.00	0.00	0.00	0.00	0.00	92.00	0.00
Russia	0.00	114.00	0.00	0.00	0.00	0.00	0.00
Singapore	3,614,400.00	392.09	123.87	209.43	0.00	691.02	3,813.94
South Africa	0.00	0.00	0.00	30.00	132,624.00	284,832.00	0.00
South Korea	1,200.00	12,986.40	0.00	10,500.00	0.00	0.00	0.00
Spain	0.00	0.00	488.46	0.00	0.00	11,188.81	0.00
Sudan	1,250.00	0.00	0.00	0.00	0.00	0.00	0.00
Sweden	0.00	0.00	0.00	0.00	25.00	0.00	0.00
Switzerland	0.00	12,865.66	0.00	0.00	0.00	0.00	0.00
Taiwan	0.00	0.00	0.00	0.00	405.00	0.00	0.00
Thailand	0.00	136,335.00	0.00	7,320.00	23,381.71	0.00	258.73
The Netherlands	125.00	0.00	0.00	0.00	0.00	0.00	0.00
United Arab Emirates	0.00	3,500.00	0.00	0.00	307.41	0.00	0.00
United Kingdom	23,426.00	0.00	0.00	0.00	0.00	0.00	0.00
United States	58,347.00	17,824.00	13,600.00	230,311.18	0.00	0.00	776.24
Vietnam	26,728.00	0.00	0.00	0.00	0.00	0.00	0.00
	4,051,457.00	459,585.24	21,570.33	248,764.77	902,013.92	651,205.79	271,722.92

<sup>320</sup> Indonesia's Alpalhankam Export Data // Official Website of the Central Bureau of Statistics of Indonesia. URL: <https://www.bps.go.id/exim/> (Access date: 19.05.2021).

**Table 5. Indonesia's Importer TIV Table<sup>321</sup>**

SIPRI recorded that from 2010 to 2020, the main importing partner of Indonesia is the US, followed by South Korea and the UK. However, the US only has 16.34% from the total of 23 different importing partners.

No	Supplier	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	Percentage
1	United States		0	35	84	150	83	94	246	90	21	90	893	16.34%
2	South Korea		120	19	184	123	6		150	150	86	6	844	15.44%
3	United Kingdom					589	15	32	41	2	12		691	12.64%
4	Russia	191	58	19	351	54							672	12.30%
5	Netherlands					3			449				452	8.27%
6	France	33	29	21	13	18	54	39	98	15	57	48	422	7.72%
7	China	2	8	64	73	34	38	40	34	16	21	16	347	6.35%
8	Germany		7	1	11	85	29	113	76	20	0	0	344	6.29%
9	Switzerland					33	90				4	61	188	3.44%
10	Australia				18	19	37	22	34				131	2.40%
11	Spain			24	47	32	24	4					131	2.40%
12	Brazil			18		23	46	18				26	130	2.38%
13	Belgium				13	1	5	4	17	16	2	3	61	1.12%
14	Italy					8			26	20			54	0.99%
15	Canada		1	10	6	6	6	2					30	0.55%
16	Brunei		24										24	0.44%
17	Norway											20	20	0.37%
18	Czechia							4			12		16	0.29%
19	Denmark		2				5				2		8	0.15%
20	Ukraine						0	4					4	0.07%
21	Austria								1				1	0.02%
22	Israel			1									1	0.02%
23	Poland							1					1	0.02%
Total		226	249	212	800	1178	438	377	1172	329	217	270	5465	100.00%

<sup>321</sup> SIPRI Arms Transfer Database.

**Table 6. Indonesia's Trade Register for Suppliers<sup>322</sup>**

SIPRI provides data of arms deals between Indonesia and foreign partners in the last decade. The data shows that the US is also the main partner. However, this data also includes the deals of military-technical cooperation so that pure imports and joint production cannot be clearly distinguished.

No	Supplier	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	Percentage
1	Unites States	2	20	58	189	156		165	390	15	49	8	1,052	29.10%
2	France	12	100	325	2	16		66	18	48			587	16.24%
3	United Kingdom			500	3	5							508	14.05%
4	South Korea	134	55	150					1	63	3		406	11.23%
5	Germany		45	193					18		17		273	7.55%
6	Belgium					150		55			18		223	6.17%
7	China		125		8	1	9	3	8				154	4.26%
8	Russia	6		6	37						43		92	2.54%
9	Brazil		8	44							27		79	2.19%
10	Italy			2	27			10				1	40	1.11%
11	Canada		8	26						3			37	1.02%
12	Austria							4			23		27	0.75%
13	Israel										23		23	0.64%
14	Switzerland			12		1		2		3	4		22	0.61%
15	Turkey										18		18	0.51%
16	Poland							14					14	0.39%
17	Australia				7		5						12	0.33%
18	Ukraine					10							10	0.28%
19	Spain			9									9	0.25%
20	Czechia					8			1			0	9	0.25%
21	Netherlands			1	4							2	7	0.19%
22	Sweden							1			4		5	0.14%
23	Denmark				1				2				3	0.08%
24	Norway								2				2	0.06%
25	Brunei	2											2	0.06%
26	New Zealand					1							1	0.03%
	Grand Total	156	361	1,326	278	348	14	320	440	132	229	11	3,615	100.00%

<sup>322</sup> Ibid

## List of Abbreviation

AARM	ASEAN Army Rifle Meeting
AASAM	Australian Army Skills at Arms Meeting
ADIZ	Air Defence Identification Zone
ADS	Airbus Defence and Space
AEG	Allgemeine Elektrizitäts-Gesellschaft [General Electric Company]
AirTech	Aircraft Technology Industries
Alpalhankam	Alat Peralatan Pertahanan dan Keamanan [Defense and security equipment tools]
APC	Armoured Personnel Vehicle
ASEAN	Association of Southeast Asian Nations
ATT	Arms Trade Treaty
BAPPENAS	Badan Perencanaan Pembangunan Nasional [The Ministry of National Development Planning or National Development Planning Agency]
BBTA3	Balai Besar Teknologi Aerodinamika, Aeroelastika, dan Aeroakustika [Center for Aerodynamics, Aeroelastics, and Aeroacoustics Technology]
BIA	Badan Intelijen Angkatan Bersenjata [Armed Forces Intelligence Service]
BISAM	Brunei International Skills at Arms Meeting
BOT	Build Operate Transfer
BPPT	Badan Pengkajian dan Penerapan Teknologi [Agency for the Assessment and Application of Technology]
BPS	Badan Pusat Statistik [Statistics Indonesia]
BRIDEX	Brunei Darussalam International Defense Exhibition
CAATSA	Countering America's Adversaries Through Sanctions Act
CASA	Construcciones Aeronáuticas SA
CPMIEC	China Precision Machinery Import-Export Corporation
DICC	Defense Industry Cooperation Committee
DICM	Defence Industry Cooperation Meeting

Ditjen Potthan	Direktorat Jenderal Potensi Pertahanan [Directorate General of Defense Potential]
DPR	Dewan Perwakilan Rakyat [Indonesia's House of Representatives]
DSA	Defense Service Asia
DSME	Daewoo Shipbuilding and Marine Engineering
EDA	Excess Defense Articles
EEZ	Exclusive Economic Zone
EU	European Union
FCS	Fire Control System
FFAR	Folding Fin Aerial Rocket
GGE	Group of Governmental Experts
IDEF	International Defence Industry Fair
IDEX	Indo Defence Expo and Forum
ILST	Indonesian Low-Speed Tunnel
IPTN	Industri Pesawat Terbang Nusantara [Archipelago Aircraft Industry]
IRST	Infrared Search and Tracking System
KAI	Korea Aerospace Industries
KCG	Korea Coast Guard
KFX/IFX	Korean Fighter Experimental/Indonesian Fighter Experimental
KKIP	Komite Kebijakan Industri Pertahanan [Defense Industry Policy Committee]
KLO	Kandungan Lokal dan Ofset [Local Content and Offset]
Kopassus	Komando Pasukan Khusus [Indonesia's Special Forces Command]
KRI	Kapal Perang Republik Indonesia [Warships of the Republic of indonesia]
LAPAN	Lembaga Penerbangan dan Antariksa Nasional [National Institute of Aeronautics and Space]
LoI	Letter of Intent
LPDs	Landing Platform Docks

MACAN	Modernisation of Avionics Capabilities for Armament and Navigation
MALE	Medium Altitude Long Endurance
MBT	Main Battle Tanks
MEF	Minimum Essential Force
MINT	Mexico, Indonesia, Nigeria, and Turkey
MPA	Maritime Patrol Aircraft
MRLS	Multiple Rocket Launcher System
MRO	Maintenance, Repair, and Overhaul
MRTT	Multi-Role Tanker Transport
MTCR	Missile Technology Control Regime
NATO	North Atlantic Treaty Organization
NAVDEX	Naval Defence & Maritime Security Exhibition
NDHI	National Defence and Hitech Industry
NSAU	National Space Agency of Ukraine
OIC	Organization of Islamic Cooperation
OJT	On the Job Training
Pinhantanas	Perkumpulan Industri Alat Peralatan Pertahanan dan Keamanan Nasional [National Defense and Security Equipment Industry Association]
PPI	Perusahaan Perdagangan Indonesia [Indonesian Trading Company]
PT DI	PT Dirgantara Indonesia [Indonesian Aerospace]
Renstra	Rencana Strategis [Strategic Planning]
SASTIND	State Administration for Science, Technology and Industry for National Defense
SDR	Software Defined Radio
SIPRI	Stockholm International Peace Research Institute
Sishankamrata	Sistem Pertahanan Rakyat Semesta [Total people's defense and security system]
SPETS	SFTE Spetstechnoexport

SSB	Savunma Sanayii Başkanlığı [Presidency of Defence Industries]
SSV	Strategic Sealift Vessels
TAI	Turkish Aerospace Industries, Inc
TIV	Trend Indicator Value
TNI	Tentara Nasional Indonesia [Indonesian National Armed Forces]
TNI-AD	Tentara Indonesia Angkatan Darat [Indonesian Army]
TNI-AL	Tentara Indonesia Angkatan Laut [Indonesian Navy]
TNI-AU	Tentara Nasional Angkatan Udara [Indonesian Air Force]
UAE	United Arab Emirates
UK	United Kingdom
UAVs	Unmanned Aerial Vehicles
UN	The United Nations
UNROCA	United Nations Register of Conventional Arms
US	United States of America



## Glossary of Indonesian Technical Terms

Term	Meaning
Alat Peralatan Pertahanan dan Keamanan (Alpalhankam) [Defense and security equipment tools]	Indonesia addresses all means of equipment to support state defense and security and public order as Alpalhankam. Alpalhankam is categorized into four: The primary tool of the weapon system, primary and/or supporting components, components and/or support, raw materials.
Direktorat Jenderal Potensi Pertahanan (Ditjen Potan) [Directorate General of Defense Potential]	An Echelon I unit under the Defense Ministry of Indonesia to formulate and implement policies concerning the potentials in the field of state's defense.
Kandungan Lokal dan Offset (KLO) [Local Content and Offset]	A term used in the Decree of the Ministry of Defense No. 30 of 2015 to address the conditions for arms imports.
Kapal Perang Republik Indonesia (KRI) [Naval Vessel of the Republic of Indonesia]	The names of the warships and submarines of Indonesia start with KRI.
Komando Pasukan Khusus (Kopassus) [Indonesia's Special Forces Command]	A part of the Indonesian Armed Forces to conduct special operations and missions; such as unconventional warfare, direct action, sabotage, counter-insurgency, counter-terrorism, intelligence gathering and special reconnaissance.
Komite Kebijakan Industri Pertahanan (KKIP) [Defense Industry Policy Committee]	An organization that represents the government in coordinating the national defense industry policy from planning, implementation, supervision, and evaluation. KKIP was established following the 2012 National Defense Law to strengthen the national defense industry.
Minimum Essential Force (MEF)	An umbrella national strategy and goal to modernize the whole Indonesian national defense system; including the human resources, weapons and equipment, facilities, national defense industry, organization, and budget. The "minimum" is the level of number and strengths Indonesia wants to achieve. The timetable of MEF is divided into three: 2010-2014, 2015-2019, and 2020-2024.
New Order	The second president, Soeharto, governmental era from 1966 to 1988.
Old Order	The first president, Soekarno, governmental era from 1945

	to 1956.
Rencana Strategis (Renstra) [Strategic Planning]	A goal-oriented official planning document that defines future policies and strategies made for 5-years duration. Renstra also acts as a direction in the allocation of state's budget and resources.
Sistem Pertahanan Rakyat Semesta (Sishankamrata) [Total people's defense and security system]	An Indonesian concept adapted from the total war, originated from the struggle for independence. The national definition is the allocation and utilization of all resources, military personnel, and civilians to defend the nation.
Tentara Indonesia Angkatan Darat (TNI-AD) [The Indonesian Armed Forces]	One of the branches of the armed forces and is part of the TNI, responsible for the defense operations of the Republic of Indonesia on the ground.
Tentara Indonesia Angkatan Laut (TNI-AL) [The Indonesian Navy]	One of the branches of the armed forces and is part of the TNI, responsible for the defense operations of the Republic of Indonesia at sea.
Tentara Indonesia Angkatan Udara (TNI-AU) [The Indonesian Air Force]	One of the branches of the armed forces and is part of the TNI, responsible for the defense operations of the Republic of Indonesia in the air.
Tentara Nasional Indonesia (TNI) [The Indonesian National Armed Forces]	The official name of the armed forces of the Republic of Indonesia, which consists of the Army, the Navy, and the Air Forces.
Trimatra Terpadu [Integrated Triad]	An Indonesian concept appeared in the early 2000s as a foundation of the three dimensions, which are land, sea, and air powers for the national doctrine.

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