

THE DEVELOPMENT OF NATIONAL FOOD ESTATE: THE INDONESIAN FOOD CRISIS ANTICIPATION STRATEGY

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Abstract – Indonesia responds to the urgency of the threat of food crisis by developing national food estate. According to reports released by FAO and United Nations, the Covid-19 pandemic has the potential to threaten more than 50 million people towards extreme poverty. This has an impact on the global food crisis that threatens other countries if they do not take the right steps immediately. Food crisis is one of the non-traditional threats because it has significant impact on lives of many people in a country. Non-traditional threats are defined as security threats that hit a country non-militarily, it can be in the form of issues of climate change, economy, limited resources, disease outbreaks, or food security. Food security can be achieved when access to food can be easily achieved by all elements of society and meets the domestic needs. However, when access to food cannot be easily accessed by public, it creates a potential for a food crisis. This is because food is the primary need of every individual which must be fulfilled at any time so it is a national security issue. Through these problems, the availability of national food security must be guaranteed by the government. Along with high population growth and a pandemic outbreak, national food security and stability is on the verge of limitations. This article aims to explain the development of food estate as Indonesia's strategy in facing the threat of food crisis in the next few years. This research used qualitative analysis method to understand the urgency of the development of food estate as a way for Indonesia to face the threat of food crisis by using the theory of threats, food security, and food estate. In this case, Jokowi responded to the threat of the food crisis by building national food estate in Central Kalimantan. The development of national food estate is considered to be able to meet Indonesia's food reserves in the next few years, especially after the pandemic period. The results of the research in this article show that the government sees the potential for the food crisis as a national threat, so it needs measurable steps that can overcome these problems and pay attention to the sustainability aspect in its implementation. Therefore, building a food estate is the right step to answer this challenge.

Keywords: non-traditional threat, food crises, food security, food estate, national security

Introduction

Food crisis is predicted to hit the world in the next 50 years. This is due to the post-Covid-19 and climate change condition. According to a report released by the Global Network

Against Food Crisis (GRFC) and the Food and Agriculture Organization (FAO) at the end of 2019, at least 135 million people in 55 countries are experiencing an acute food crisis. This resulted in 75 million child growth disrupted and 17 million others

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affected by malnutrition in 2019. This released data shows the highest number of impacts of food crisis and malnutrition since the first report in 2017.³

In his next release, the Secretary General of the United Nations, António Guterres stated that currently the global community is on the verge of an acute food crisis for at least the next 50 years. "It is quite clear that there is a global food emergency which, if not addressed promptly, will have long-term impacts on millions of children and parents. Action is needed now to avoid the worst-case scenario during a pandemic condition," said António in June 2020.⁴

The FAO warning about the threat of a food crisis in the coming years received considerable attention from Indonesia. As a country with fairly high population growth, Indonesia cannot be separated from the threat of the global food crisis. This is because the higher the population, the higher the level of food consumption needs, especially staples such as rice,

cassava and sorghum. Apart from being a tropical country, Indonesia must also deal with the threat of climate change, such as long dry season. Both of these conditions are exacerbated by the Covid-19 pandemic that causes the agricultural sector to lose any semblance of control. Therefore, the state is required to take concrete actions to maintain food security amidst this uncertain condition.⁵

Based on these considerations, President Joko Widodo (Jokowi) warned about a looming food emergency. President Jokowi officially appointed Indonesian Defense Minister Prabowo Subianto as the 'leading sector' in the national food estate project on 13 July 2020. In his meeting with the media crew, Jokowi also explained the position of the Indonesian Ministry of Agriculture (Kemtan) led by Syahrul Yasin Limpo who continues to contribute to this food estate project. Jokowi also emphasized that the national food estate program is a response

³FAO Reports, "Global Report on Food Crisis", (New York: Food Security Information Network, 2020), p. 2-11.

⁴Fiona Harvey, "World faces worst food crisis for at least 50 years: UN warns", in <https://www.theguardian.com/society/2020/jun/09/world-faces-worst-food-crisis-50-years-un->

[coronavirus](#), 9 June 2020, accessed on 16 September 2020.

⁵Alfin Febrian & Fadhil Haidar Sulaeman, "Meninjau Pengembangan Food Estate Sebagai Strategi Ketahanan Nasional Pada Era Pandemi Covid-19", *Jurnal Lemhannas*, Vol. 8, No. 2, 2020, p. 28-42.

to the potential threat of food crisis warned by the FAO.

The plan to build food estate has actually been carried out during the previous presidential administration, such as the Mega Rice Project (MRP) in the Soeharto era, the Merauke Integrated Rice Estate (MIRE) in the SBY era, to the Merauke Special Economic Zone (Merauke SEZ) in Jokowi's 1st tenure. However, some of these projects have stalled and even been removed from national strategic projects because it is deemed unable to meet the government's expectations. This indicates that a large project is prone to becoming a project with slow progress because there is too much cash flow and immature planning—hence, the expected output within a certain period of time cannot be achieved. This is also a big consideration and challenges that will be faced by the food estate project.

Indonesia is an agricultural country. Indonesia's agricultural sector contributed 14% of the total Gross Domestic Product (GDP) in 2007. Indonesia is also known as a producer and exporter of rice, palm oil,

coffee, rubber, cocoa, spices (cinnamon, nutmeg, cloves).⁶ Currently, the pandemic situation urges the government to meet the needs of people in addition to maintaining economic development and handling Covid-19. As a large agricultural country, Indonesia has a strategy to secure its food security by building a national food estate in two locations, namely Kapuas District and Pulau Pisang District, Central Kalimantan and will gradually be applied in other provinces. Food estate is a food development concept that is integrated in one particular area, including from the side of plantations, agriculture, to animal husbandry. What makes it different is the involvement of digital technology and the principles of sustainability that will be applied during the construction of the food estate.

Food estate development is expected to contribute most of Indonesia's food needs in the face of a food crisis in the coming year. The food crisis is one of the most worrying threats, because Indonesia has a large population and its impact has the potential to spread to other vital

⁶Richard Barichello & Arianto Patunru, "Agriculture in Indonesia: Lagging Performance and Difficult

Choices", *CHOICES*, (Agricultural & Applied Economics Associations, 2009).

sectors. As of the implementation of this research, the Ministry of Agriculture has guaranteed the availability of Indonesia's food reserves which were considered quite stable. The Ministry of Agriculture expects a surplus of 7.6 million tons of rice in December, bringing total rice reserves to 17.6 million tons while consumption levels will be around 10 million tons⁷. However, Indonesia cannot ignore the facts of uncertain global conditions, especially after the Covid-19 pandemic and warnings from the FAO. This large food estate project is considered quite ambitious given the large amount of funds and planning allocated. In fact, food estate is included as one of the 2020-2024 National Strategic Programs. However, the problem of the food crisis continues when food production conditions are high but most of the population is still short on food and cannot easily access food.

In light of the above problems, the authors attempt to explain the Indonesian government's strategy in dealing with the threat of global food crisis, specifically its

food estate development project. The author tries to find advantages and disadvantages in initiating this quite ambitious project.

Methodology

This study used qualitative research methods. Qualitative research is a type of research that uses an interpretive paradigm because it aims to understand an event. This research is a type of qualitative research because it aims to understand the urgency of the Indonesian government's strategy in developing a food estate in response to the threat of food crisis.

The food crisis is considered to be very detrimental to Indonesia, especially in terms of the economy because it has the potential to reduce economic growth, increase poverty and unemployment, as well as cause health problems or malnutrition for children and adults. This study views the food crisis as a non-traditional threat that will hit Indonesia in the next few years. This threat is considered very detrimental because it has

⁷Dzulfiqar Fathur Rahman, "Indonesia to develop food estates to secure rice stocks", in <https://www.thejakartapost.com/news/2020/11/16/govt-to-develop-food-barns-facilitate->

[collaboration-to-secure-rice-stocks.html](https://www.thejakartapost.com/news/2020/11/16/govt-to-develop-food-barns-facilitate-collaboration-to-secure-rice-stocks.html), 16 November 2020, accessed on 23 November 2020.

a direct impact on vital sectors of Indonesia. This threat is also considered very real when considering the current Covid-19 pandemic situation. This study also considers Indonesia's dependence on the import sector which makes it difficult for local agriculture produces to compete. Without direct government involvement in overcoming this threat, Indonesia has the potential to enter into a recession in the next few years so that the food estate step is considered the right strategy to face the threat of the food crisis.

This research is an explanative research. Explanative research aims to describe an event and explain its cause and effect. A study is called an explanative study if it explains the 'how' and 'why' in a particular social phenomenon or program and operates in a certain context⁸. This research is in an explanative research because it aims to explain the Indonesian government's strategy in dealing with the threat of global food crisis, specifically its food estate development project and why its existence is important in the country's efforts to deal with the threat of a food

crisis. Explanative research is also aimed at looking interaction patterns that are formed from an event in order to determine its cause and effect.

This research begins with source collection (heuristics). The source of this research is previous literatures, including books, journals, websites, and reports that are relevant to research studies. In order to obtain this source, the researcher visited and reviewed various reports or official websites that can be accessed online.

The data is sourced from the FAO report on the threat of food crisis based on data considerations in 2019 which stated that at least 55 countries experienced an acute/serious food crisis. Research and development reports from the FAO indicate Indonesia's potential in overcoming food safety and malnutrition problems. Then, further research was carried out to analyze the current state of Indonesia's agricultural strength which has changed due to economic conditions and changes in global conditions. After that, an analysis is made on the existence of food estates in the 2020-2024 National Strategic

⁸Haradhan Kumar Mohajan, "Qualitative Research Methodology in Social Sciences and Related Subjects", *Journal of Economic Development:*

Environment and People, Vol. 7, Iss. 01, 2018, p. 23-48.

Program as the government's response to the threat of food crisis after the pandemic. This analysis is done to see its relation with Indonesia's current position.

The threat of food crisis can be identified as a non-traditional threat. Non-traditional threats are defined as non-military threats that threaten the political and social integrity of the nation-state or the health of its inhabitants. This research is an explanative research because it tries to describe the food crisis phenomenon as a non-traditional threat. The author argues that the food crisis problem is very detrimental to Indonesia and has a direct impact on other vital sectors. Indonesia needs to implement quick measures to overcome this threat amidst a situation of global uncertainty. This also cannot be separated from the fact that Indonesia is one of the countries with the largest population in the world. A large population is characterized with high demand for primary needs, one of which is food. The government then responded to this phenomenon with a series of new policies to build a food estate. This policy is

expected to be able to overcome the threat of food crisis that will hit Indonesia in the next few years as well as secure the national food sector and it is important to understand the urgency of the food crisis threat as conveyed by FAO.

Discussion

The food crisis is a threat to the national security of a country. National security issues consist of traditional and non-traditional threats. Traditional security issues discuss threats to the essential values of a country, territorial integrity, and sovereignty. To achieve this, traditional security is usually perceived as state efforts by using the weaponry and military systems. However, it can also employ more diplomatic means such as building alliances in achieving national security.⁹

Meanwhile, non-traditional threats (NTS) are challenges to achieve the survival of individuals or countries that arise from non-military sources such as climate change, resource constraints, disease outbreaks, natural disasters, irregular migration, food shortages, people or drug

⁹Fulvio Attinà, "Traditional Security Issues dalam Wang J., Song W. (eds), *China, the European Union, and the International Politics of Global*

Governance, (New York: Palgrave Macmillan, 2016)

smuggling, to transnational crimes. Non-traditional threats that often occur in the transnational sphere, cannot be resolved unilaterally, and require a comprehensive political, economic and social response, as well as the use of military force for humanitarian problems¹⁰.

The emergence of non-state actors such as terrorists, drug cartels, pirate networks, or civil conflicts marks the beginning of a new era of non-traditional threats to various countries today. Apart from the existence of non-state and transnational actors, the emergence of threats of environmental damage such as climate change is seen as a global issue that has a serious impact on the national security of a country¹¹. The increase in population goes hand in hand with the increasing demand for energy. This results in a drastic reduction in natural resources, faster than the time needed to replace them in many developed and developing countries. This puts the issue of climate change as top priority in global security,

especially with its impact on agricultural production. Food shortages due to climate change are a crucial issue that will be faced by various countries in the future, especially for developing countries with large population.¹²

Food Crisis

Food crisis is one of the non-traditional threats caused by the impact of climate change. According to FAO (2018), climate change has a negative impact on the 4 pillars of food security, namely: availability, access, utilization, stability – and their combinations.¹³ Climate change has a direct impact on food systems, food security, and mitigation, thus potentially increasing competition for resource requirements required for agricultural activities¹⁴. Rapid productivity growth in the agricultural sector since 1976 has underpinned the current global food system which is the main driver of the climate change problem. In 2018, the FAO estimates that there are demands to produce 50% more food to

¹⁰Mely Caballero-Anthony (ed), *An Introduction to Non-Traditional Security Studies – A Transnational Approach*, (London: SAGE Publications, 2016)

¹¹Divya Srikanth, “Non-Traditional Security Threats in the 21st Century: A Review”, *International Journal of Development and Conflict*, Vol. 4, 2014, p. 60-68.

¹²*Ibid.*

¹³Cheikh Mbow, dkk, “Food Security dalam ‘Climate Change and Land: an IPCC Special Report on Climate Change, Desertification—’”, in <https://www.ipcc.ch/srccl/chapter/chapter-5/>, IPCC, 2019, accessed on 26 November 2020.

¹⁴*Ibid.*

keep up with the needs of the growing population by 2050.¹⁵

According to the FAO, food insecurity is a lack of safe access to adequate amounts of safe and nutritious food for normal human growth and development of an active and healthy life.¹⁶ Gundersen and Ziliak (2015) define food insecurity as limited availability of healthy and nutritious food or the inability to obtain food¹⁷. The food crisis also has the potential to cause malnutrition in adults and children. According to Scrimshaw (1968), malnutrition occurs due to a complex relationship to hunger which is influenced by other variables such as health status, energy expenditure, education level, community infrastructure, and micronutrient intake.¹⁸ However, malnutrition is not the main consequence of the food crisis, but it is very possible.¹⁹

Based on this, the food crisis is a non-traditional threat phenomenon that has the potential to hit the world. There is an urgency for each country to prepare

preventive steps to face the threat of food crisis in the midst of an uncertain global situation. This is because, there is no predictions about food shortages yet, they cannot be ruled out in the future as population numbers increase. The rapid increase in population will add pressure to the availability of land resources that are already limited.²⁰ In addition, another potential threat is the mass arrival of refugees or asylum seekers from affected countries due to environmental damage that causes food or water scarcity. This condition can cause new problems in the form of instability in the recipient country. In the end, protection of the environment is a critical issue as well as a global issue related to threats and state security. An unstable environment has the potential to lead to a tipping point so that the consequences of disasters either from nature or humans can threaten the survival of the country itself.²¹

¹⁵Cheikh Mbow, dkk, *op. cit.*

¹⁶FAO Reports, *op.cit*, p. 2-11.

¹⁷Nancy T. Browne, "Food Insecurity: Assessment and Intervention", *Journal of Pediatric Surgical Nursing*, Vol. 6, No. 1, 2017.

¹⁸Christopher B. Barrett, "Food Security and Food Assistance Programs", in B. Gardner dan G.

Rausser (ed.), *Handbook of Agricultural Economics*, (Amsterdam: Elsevier, 2002), p. 5.

¹⁹*Ibid.*

²⁰Divya Srikanth, *op. cit*, p. 60-68.

²¹*Ibid.*

Food Security

The threat of food crisis caused by climate change and pandemic conditions cannot be resolved by just one country because it is a transnational issue that transcends the boundaries of state sovereignty. Apart from the need for joint steps in the international community to deal with this problem, the government of each country must also take separate preventive policies to maintain national food security, including Indonesia.

Food security is the ease of access for various individuals to adequate food to provide the energy and nutrition needed for an active and healthy life.²² Food Safety starts to get attention when food insecurity occurs. According to Sandjaja (2009), food insecurity is a situation in a region, community or household where the level of food availability is not sufficient to meet the standard physiological needs for growth and health for the majority of society.²³

Article 1 point 3 of Law Number 18 of 2012 concerning Food stipulates about Food Security. Food Security is a condition where food needs is satisfied nationally up to each individual, which is reflected in the availability of sufficient food, whether in terms of quantity and quality. The food that is available must also be safe, diverse, nutritious, equitable and affordable and does not conflict with the religion, belief and culture of the community. A food secure community will be able to live healthy, active, and productive in a sustainable manner.²⁴ Meanwhile, according to FAO, food security is defined as a condition in which every person, at all times, physically and economically, has access to adequate, safe and nutritious food to meet their daily needs according to their preferences.²⁵ Food security is defined as adequate food, but it cannot be separated from the phenomenon of hunger. Food safety is defined as a condition where adequate nutrition can be sufficiently obtained.²⁶

²²Christopher B. Barrett, *op. cit.* p. 5.

²³Dodik Briawan, Purwiyatno Hariyadi, Eko Hari Purnomo dan Fahim M Taqi, "Protokol Penanggulangan dan Penyelamatan Krisis Pangan dan Gizi pada Kelompok Rawan", *Pangan*, Vol. 24, No. 2, 2015, p. 153.

²⁴BULOG, "Ketahanan Pangan", in <http://www.bulog.co.id/ketahananpangan.php>, 2018, accessed on 18 September 2020.

²⁵*Ibid.*

²⁶*Ibid.*

In previous research between 1997-1999, Indonesia's performance in overcoming malnutrition was relatively good among other countries in Southeast Asia and South Asia which was quite high²⁷. Of the 99 developing countries, Indonesia was the third best country capable of reducing the number of malnutrition between 1990-1992 and 1997-1999.²⁸ However, Indonesia is home to 250 million people with a growth rate of 1.49%, although it varies by province.²⁹ The high development of Indonesia's population has led to demands to meet domestic national food needs amid pandemic conditions.

In this case, Indonesia is a country that is trying to meet its food needs. Indonesia's efforts to fulfill its food security are manifested in several ways, one of which is the subsidy program which aims to protect farmers and food self-sufficiency as regulated in Law no. 18 of 2012 concerning Food Security and Law no. 19 of 2013 concerning Protection and Empowerment of Farmers. Furthermore, the Indonesian

government strives to protect the livelihoods of farmers by prioritizing local products to meet domestic needs and prohibiting the import of a commodity deemed sufficient by the government. This subsidy to farmers is also realized by providing seeds and fertilizers³⁰.

Currently, the world is facing the Covid-19 pandemic, which has an impact on the economic sector. The pandemic have caused poverty to increase, which is why food security is the government's concern. Through a video conference in a limited meeting on Wednesday, 23 September 2020, President Jokowi emphasized the importance of building a food estate to anticipate the food crisis amid the Covid-19 pandemic. The goal is to build a food estate that can boost the productivity of national food land so that it can become food reserves and storage in the face of a crisis due to the pandemic. Meanwhile, this food estate also aims to increase food

²⁷FAO, "Indonesia", in <http://www.fao.org/3/y4632e/y4632eol.htm>, accessed on 26 November 2020.

²⁸FAO, "Indonesia", *loc. cit.*

²⁹FAO, "Indonesia at a Glance", in <http://www.fao.org/indonesia/fao-in->

[indonesia/indonesia-at-a-glance/en/](http://www.fao.org/indonesia-at-a-glance/en/), accessed on 26 November 2020.

³⁰Arianto A. Patunru & Hizkia Respatiadi, *Protecting the Farmers: Improving the Quality of Social Protection Schemes for Agricultural Workers in Indonesia*, (Jakarta: Center for Indonesian Policy Studies, 2017).

production so as to reduce imports of food commodities.³¹

In addition, the food estate development plan was revealed by President Jokowi's wish, namely to anticipate the food crisis conditions due to the Covid-19 pandemic which the FAO has frequently warned against and to anticipate climate change and reduce dependence on food imports. Thus, the factors in the establishment of food estates were Covid-19, the food crisis, and climate change. These three things are the foundation of a food estate development.

Food Estate

The national food estate is a food development project carried out under the Ministry of Agriculture (Kementan) with the involvement of the Ministry of Public Works and Public Housing (PUPR) and the Ministry of Defense (Kemhan). This project will be implemented from 2020 to 2022 in Kapuas District and Pulau Pisang District, Central Kalimantan. Food Estate is a

concept for food development that is carried out with integrity covering agriculture and/or plantations in an area.³²

The food estate realization was carried out in a swamp area which is considered to have started producing but the yield is still low. There are several sectors that will be improved by the Minister of Agriculture Syahrul Yasin Limpo, namely agricultural facilities and infrastructure, use of superior seeds and suitable fertilizers, and plant medicines.³³ Furthermore, the food estate program will involve modern and digital technology and is expected to absorb the workforce and large migration flows to Central Kalimantan. Food estate development is carried out using 190 thousand hectares in Central Kalimantan, 120 thousand hectares in West Kalimantan, 10 thousand hectares in East Kalimantan, 190 thousand hectares in Maluku, and 1.9 million hectares in Papua.³⁴ Defense Minister Prabowo explained that until now, there were 4 countries that were interested to invest,

³¹Jazila Nailatunni'mah, "'Master Plan' Presiden Jokowi Untuk Lumbung Pangan Nasional", in <https://jurnalpresisi.pikiran-rakyat.com/nasional/pr-15766059/master-plan-presiden-jokowi-untuk-lumbung-pangan->

[nasional](#), 23 September 2020, accessed on 19 October 2020.

³²*Ibid.*

³³Jazila Nailatunni'mah, *loc. cit.*

³⁴Alfin Febrian & Fadhil Haidar Sulaeman, *op. cit.*, pp. 28-42.

namely the United Arab Emirates, China, South Korea, and Qatar. This can be seen as a potential for foreign cooperation in the food and technology sector. During its development, Defense Minister Prabowo also explained that there would be two focus on planting, namely rice, which will be carried out by the Ministry of Agriculture and cassava, which will be carried out by the Ministry of Defense in early 2021.

Based on this, it can be concluded that the food estate project is a government program that seeks to integrate agricultural, livestock, and plantation activities in one area. The food estate project is included in the 2020-2024 National Strategic Program (PSN) under the legal umbrella of Perpres No. 58 of 2018. PSN is defined as a strategic infrastructure development program during the Jokowi administration with a total of 89 new projects worth IDR 1.422 trillion.³⁵ Food estate takes up a fairly large portion of the PSN budget. The

government allocates at least IDR 104.2 trillion in 2021 for the food security sector, including food estate development.³⁶ This budget is aimed at the food security sector, especially in the development of facilities and technology as well as the revitalization of the national food system³⁷.

The food estate will develop an alluvial area of 165,000 ha for rice cultivation and 60,000 ha for cassava cultivation. This process is carried out in stages, starting with 32,000 ha of rice planting, improving accessibility to the area, and improving irrigation channels in October 2020. The entire initial process is targeted to be completed in 2021 so that the full planting process can be carried out in 2021. The Minister of Agriculture is optimistic that rice productivity in the food estate area can reach 4-5 tons per ha³⁸.

Based on these facts, it can be argued that the Indonesian government responded to the threat of a food crisis after the Covid-19 pandemic conditions by

³⁵Rakhmat Nur Hakim, "Pemerintah Rekomendasikan 89 Proyek Baru Senilai Rp1.422 Triliun", in <https://nasional.kompas.com/read/2020/05/29/15053551/pemerintah-rekomendasikan-89-proyek-strategis-nasional-baru-senilai-rp-1422>, 29 Mei 2020, accessed on 26 November 2020.

³⁶CNN Indonesia, "Food Estate, Jalan Jokowi Kenyangkan Rakyat Indonesia", in <https://www.cnnindonesia.com/ekonomi/20201020094038-92-560361/food-estate-jalan-jokowi-kenyangkan-rakyat-indonesia>, 20 October 2020, accessed on 23 November 2020.

³⁷Rakhmat Nur Hakim, *op. cit.*

³⁸Rakhmat Nur Hakim, *op. cit.*

building a national food estate. Indonesia takes preventive policies to deal with the threat of food crisis and recognizes that the food crisis as a real national threat, which necessitates synergy between relevant vital ministries, namely the Ministry of Agriculture, the Ministry of Defense and the Ministry of Public Works and Housing. The development of a food estate is aimed at integrating national food sectors consisting of agriculture, plantations and livestock in Central Kalimantan by maximizing the use of digital technology and the principles of sustainability. Indonesia sees the threat of food crisis as a phenomenon that will occur in the next few years. As a large agricultural country with a high population, food security is a priority of the government for its people as regulated in Article 1 point 3 of Law Number 18 of 2012 concerning Food which explains Food Security.

The concept of national food estate has actually been proclaimed by Indonesia several times in the last few periods, such as the Mega Rice Project (MRP) in the

Soeharto era, Merauke Integrated Rice Estate (MIRE) in the SBY era, to Merauke Special Economic Zone/Merauke SEZ in Jokowi's 1st tenure. However, the majority of these projects stalled and were even removed from the National Strategic Program. Several factors were responsible, ranging from inadequate planning, large funds, to implementation and output results that do not match the expectations and are considered detrimental.

Food estate is an area designated as a new food granary in Indonesia. Meanwhile, this new granary is also part of the National Strategic Program (PSN) for 2020 to 2024. It is hoped that the food production results from this food estate will not only meet domestic needs, but also meet international market needs.³⁹ As a concept, the food estate is more about storing food reserves for use in emergency situations. At the community level, food reserves are stored to face the threat of drought and natural disasters. The effectiveness of food storage is often intervened by the government through BULOG and other

³⁹Vina Fadhrotul Mukaromah, "Menilik Proyek Food Estate di Indonesia yang Disebut Jokowi dalam Pidato Kenegaraan", in <https://www.kompas.com/tren/read/2020/08/14/>

[200300265/menilik-proyek-food-estate-di-indonesia-yang-disebut-jokowi-dalam-pidato?page=all](https://www.kompas.com/tren/read/2020/08/14/200300265/menilik-proyek-food-estate-di-indonesia-yang-disebut-jokowi-dalam-pidato?page=all), 14 August 2020, accessed on 19 October 2020.

cheap food policies⁴⁰. In this case, the government uses the concept of food estate as a system for planting integrated food products in an area which is expected to meet national food needs and security as well as storing reserves in food estates for emergencies and export needs.

In July 2020, The World Food Program (WFP) released a report stating that at least 25 countries are in danger of experiencing serious hunger problems in the months due to the pandemic. WFP predicts that at least 130 million people will face acute hunger due to the crisis.⁴¹ Its distribution is dominated in Africa, Latin America, Caribbea, Middle East and Asia, especially in developing countries because of the difficult access to adequate and nutritious foodstuffs. Based on these conditions, it would be difficult for these countries to achieve food security because they do not meet the criteria and public accessibility. In addition, climate change also affects the

physical availability of food, whose conditions change all the time.

On the other hand, the Indonesian government guarantees the availability of food for all its people. According to data from the Central Statistics Agency (BPS), rice production in 2018 was equivalent to 33.94 million tons of rice, while in 2019 it decreased by 31.31 million tons. This means a decrease of 2.63 million tons or around 7.75% compared to 2018.⁴² Meanwhile, the national rice consumption is estimated to reach 29.57 million tons of rice, so that the surplus is around 2.85 million tons in 2018. The Ministry of Agriculture also expects a rice surplus amounting to 7.45 million tons in December 2020⁴³. The rice surplus in 2020 was due to an abundance of remaining supply in 2019 of 5.9 million tons of rice and the overall results of the planting season for the first and second periods of 2020. The total rice consumption in 2020 reached 30.08 million tons so it is

⁴⁰Erlyna Wida Riptanti, dkk, "The Development of Sustainable Community Food estate in Wonogiri District", *The Asian Journal of Applied Sciences*, Vol. 05, 2017.

⁴¹UN WFP, "New Report Shows Hunger is due to soar as Coronavirus Obliterates Lives and Livelihoods", in [https://www.wfp.org/news/new-report-shows-hunger-due-soar-coronavirus-obliterates-lives-](https://www.wfp.org/news/new-report-shows-hunger-due-soar-coronavirus-obliterates-lives-and-livelihoods)

[and-livelihoods](https://www.wfp.org/news/new-report-shows-hunger-due-soar-coronavirus-obliterates-lives-and-livelihoods), 17 July 2020, accessed on 26 November 2020.

⁴²Badan Pusat Statistik, *Luas Panen dan Produksi Padi di Indonesia*, (Badan Pusat Statistik, 2019), p. 16.

⁴³Yohana Artha Uly, "Mentan Yakin Stok Beras Akhir Tahun Surplus 7.45 Juta ton", in <https://money.kompas.com/read/2020/10/26/175440926/mentan-yakin-stok-beras-akhir-tahun-surplus-745-juta-ton?page=all>, 26 October 2020, accessed on 26 November 2020.

hoped that there will be rice reserves of 7.45 million tons.⁴⁴

Based on these data, it can be indicated that Indonesia's food reserves this year is quite safe from the threat of crisis. However, Indonesia has not been able to let go of its reliance on the import sector to meet domestic needs in commodities such as rice even though the government has guaranteed an import ban on an agricultural commodity when its supply meets domestic needs, as stipulated in Article 30 of Law 19 No. 13.

Rice is one of the leading commodities in the food estate and is the main staple ingredient for Indonesians. In overcoming its dependence on rice and meeting the demand, the government has taken several steps, namely increasing rice production in all regions through self-sufficiency programs and promoting food diversification programs (looking for food sources other than rice that have the potential to be used as a substitute staple). These measures bore fruit with an increase

in rice surplus in 2015-2017 by 81.38 million tons, which rose by 14.9% to 79.35 million tons in 2017⁴⁵.

Data shows that Indonesia's national rice production is at a fairly stable figure, even a surplus in recent years. However, on the other hand, there are still many people who do not have easy access to food, thus showing a lack of priority for food distribution. This is also the factor behind price instability between eastern and western Indonesia⁴⁶. Based on this, Indonesia's food reserves, especially rice, are quite stable thanks to the programs and policies that have been implemented by the previous government.

The next thing that needs to be considered is the potential for shifting the focus of people's livelihoods from agriculture to non-agriculture. The difficulties of life in rural areas make the younger generation prefer to work in factories rather than farming or looking for other opportunities in big cities. This problem causes the population in urban

⁴⁴ *Ibid.*

⁴⁵ Lusiana Handayani & Munawar K. Nahrawi, "Bela Negara Melalui Kampanye Pangan Lokal di Media Internet", *Jurnal Pertahanan & Bela Negara*, 2018, Vol. 8, No. 2.

⁴⁶ Effendi Andoko & Aurellia Candida Doretha, "Analysis of Indonesian Government Strategies to Food Security: Harnessing the Potential of Natural and Human Resources", in <https://ap.fftc.org.tw/article/1588>, 20 September 2019, accessed on 23 November 2020.

areas to increase rapidly, around 50% in 2010 and 54% in 2015. At least nearly 16 million or more than 60% of head of household farmers are between 45 and over 60 years old. The aging population of rural farmers will also affect their physical abilities, lack of innovation and strategic vision.⁴⁷

Based on the above description, Indonesia has a domestic policy that is preventive in facing the food crisis by building a food estate project and including it in the 2020-2024 PSN budget. According to Kwasek, a country's food security can be achieved upon the fulfillment of:

1. Physical food supply.
2. Food economy availability.
3. Healthy food products.

The food estate program is aimed at realizing the three points to achieve national food security. This is because this project is expected to produce large and nutritious food reserves nationally to meet domestic needs when facing crisis conditions. This shows that Indonesia's food security is still safe from the threat of crisis. However, this condition can rapidly change in the midst of a pandemic

situation, so it is necessary to take anticipatory steps in the form of food estate development.

Conclusion

The food crisis is one of the non-traditional threats, because it is the impact of climate change on the global community. The food crisis is a threat in line with the damage to the environment due to the increasing population. As such, there is pressure on the need for large resources amidst its dwindling availability, and it is necessary to have primary need that must be met at any time. This condition was also affected by the Covid-19 pandemic which affected human life and caused setbacks in various sectors. Based on this, various countries in the world are threatened with food crises, some of which are at a serious or acute level. It takes a commitment in the international community in facing the threat of the global food crisis in the next few years, especially in post-pandemic conditions. Nevertheless, the state must have its own preventive steps in dealing with this threat as part of national security defense efforts. In this case, the threat of a

⁴⁷Arianto A. Patunru & Hizkia Respatiadi, *op. cit.*

food crisis, based on the warning from FAO, has been responded by Indonesia by implementing the construction of a national food estate in Central Kalimantan.

The steps taken by President Jokowi in the midst of the Covid-19 pandemic situation are aimed at meeting the needs of people who occupy government priorities and facing emergency conditions due to the threat of a food crisis. As the holder of power, the government should ensure the safety and availability of food for all its people. The government's quick response shows that food availability is a vital sector that should be considered for its sustainability. This is because, although Indonesia's food security is still stable, the potential for a food crisis in the future cannot be ruled out, so the country must be prepared to face an acute food crisis that may occur in the next 50 years by building a food estate based on to boost the productivity of national food lands so that they can become food reserves and storage in the face of a crisis due to a pandemic. Meanwhile, this food estate also seeks to increase food production so as to reduce imports of food commodities.

The existence of food estate as a response to the government certainly cannot be realized in a short time. The food estate project is a long-term program that takes into account the aspect of sustainability. Each country has its own adaptation pattern in facing the threat of crisis. On the other hand, Indonesia has the potential to become a major food producing country in the world. All agricultural programs launched by the government actually have almost the same output, namely achieving national food security. However, big projects also have a big responsibility to the people. There is still a chance that the food estate project will be changed or abandoned like previous projects. This is due to the lack of planning and the influence of other external and internal factors such as changes in economic conditions due to recession or other conditions. Meanwhile, the aspects of sustainability and the use of technology are considered to be the biggest challenges in achieving the desired goals in the food estate itself. This is because maintaining the continuity of a policy requires a serious synergy between the government and the people.

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