ESIC2024 Posted: 16/04/2024 DOI: 10.70082/esic/8.1.075

Public Perception of the Food Estate Program of Cassava Cultivation as a Strategic Logistic Reserve in Realizing Regional Food Security in Gunung Mas Regency, Central Kalimantan

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Abstract

This research examines the implementation challenges of Indonesia's Strategic Logistics Reserve Development Program (CLS), specifically focusing on cassava cultivation in Gunung Mas Regency. Launched as part of the 2020-2024 National Strategic Program (PSN), the initiative aims to address potential food security issues exacerbated by the COVID-19 pandemic, land degradation, and climate change. The program's primary goal is to develop food estates to enhance national food security. The study employs a mixed-methods approach, including interviews with key stakeholders, analysis of program documentation, and community surveys to assess the program's effectiveness and impact. Key findings reveal significant obstacles, including policy misalignment, unsuitable land conditions for cassava, inadequate infrastructure, and a top-down implementation strategy that lacks local community involvement. Results indicate that while the program has led to some positive outcomes, such as job creation and increased food independence, it has also faced severe criticism. Issues such as suboptimal cassava growth, environmental damage, and socio-cultural impacts have led to negative public perceptions. The failure to issue a crucial Presidential Decree, poor inter-governmental coordination, and inadequate understanding of the program by local communities have compounded these challenges. Analysis suggests that the program's shortcomings are due to a combination of regulatory delays, environmental mismatches, and insufficient stakeholder engagement. To address these issues, the research recommends a comprehensive evaluation of the program, restoration of damaged lands, enhanced community participation, and stronger environmental safeguards. Improved collaboration between central and regional governments and better alignment of policies and infrastructure are essential for the program's success in achieving its food security objectives.

Keywords: Perception, Food estate, strategic logistic reserve, Food security.

Law Number 18 of 2012 mandates that "National Food Security Must Be Built Based on Food Sovereignty and Food Independence." This principle is central to Indonesia, a nation abundant in natural resources, which offers vast opportunities for achieving food sufficiency and

national food security (Ahmad, 2022). As an agricultural and maritime country with over 17,000 islands, Indonesia's optimal management of its natural resources can lead to significant benefits for its population. President Joko Widodo emphasized food policy as a priority, aiming to achieve food independence that contributes to regional resilience (Yuniar, 2020). This policy is expected to reduce poverty, improve farmers' welfare, and ensure self-sufficiency in food stocks.

Given the strategic importance of food independence, President Jokowi assigned three ministers—Defense, State-Owned Enterprises (BUMN), and Public Works and Public Housing (PUPR)—to realize food security programs (Sofia, 2020). According to the Minister of Defense, food security is as crucial as military strength, serving as a deterrent against threats such as war, disease outbreaks, and natural disasters (Kemhan.go.id, 2020). In the context of national defense, cassava is seen as a crop with potential to guarantee food security in future crises (Pitaloka et al., 2021).

Cassava grows well throughout Indonesia, and as food consumption patterns change, cassava is gaining importance as an alternative carbohydrate source (Nasir Saleh et al., 2016; Sutrisno and Edris, 2009). Indonesia imports substantial amounts of wheat flour, which cannot be grown domestically, while cassava thrives in the tropical climate (Sunarminto and Rozaq, 2010). However, cassava production has been in decline. From 2014 to 2018, Indonesia's cassava output dropped from 23.4 million tons to 19.05 million tons, and the area of harvested cassava land shrank from 1 million hectares to 793 thousand hectares (Central Statistics Agency, 2018).

The government's cassava cultivation development program aims to reverse this decline by boosting cassava productivity and ensuring its role in national food security. By focusing on both upstream and downstream aspects of cassava production, the government aims to improve food production and create new opportunities for community welfare. In this context, Presidential Regulation No. 125 of 2022 on the Implementation of Government Food Reserves reflects the commitment to strengthening food reserves (Rahmawati, 2024). The cassava cultivation development policy seeks to increase the sector's sustainability while improving the welfare of local communities.

A key initiative within the broader food security framework is the Food Estate program. Launched in various regions of Indonesia, including North Sumatra, Central Java, and Central Kalimantan, the program aims to use modern agricultural technology and management to boost food production. Food Estates are large-scale agricultural operations intended to address threats of food crises and contribute to national economic recovery (Widiastuti et al., 2022). One specific program focused on cassava cultivation began in Gunung Mas, Central Kalimantan, in 2021, where 600 hectares of production forest were allocated for cassava farming. However, the program faced significant setbacks, with cassava yields falling short of expectations (Kompas.id, 2023; Liputan6.com, 2024).

In Gunung Mas, cassava crops failed to grow optimally, and by 2024, only 3 hectares of cassava were harvested from the 600 hectares allocated (Kompas.id, 2024). The failure of the cassava plantation led to divided public perception. Some members of the community viewed the Food Estate program as a potential boost to local food production and national food security. They saw it as an opportunity to reduce reliance on food imports. Others expressed concerns about environmental degradation, deforestation, and land use conflicts, particularly in sensitive ecological areas like Gunung Mas (Jurnalborneo.co.id, 2020).

Public skepticism towards the Food Estate program is partly rooted in the region's history with failed agricultural initiatives, such as the Million Hectare Land Program. Concerns over poor management, lack of implementation, and insufficient local participation have further

undermined confidence in the cassava Food Estate (Jurnalborneo.co.id, 2020). The skepticism has also been fueled by the lack of tangible results, as highlighted by the minimal cassava harvest in Gunung Mas after two years of effort (Liputan6.com, 2024).

Given these challenges, research on the cassava Food Estate program is critical to understanding its role as a strategic logistics reserve and its potential to contribute to regional food security. The case of Gunung Mas offers an opportunity to assess the effectiveness of the program and explore ways to enhance its sustainability and impact. This research would also evaluate the level of community involvement in the planning, implementation, and oversight of the Food Estate program, which is crucial for its long-term success.

The main goals of this research are to examine the policies and strategies involved in developing cassava cultivation as a strategic logistics reserve, analyze public perceptions of the program in Gunung Mas, and develop a perspective model to assess how cassava cultivation can contribute to regional food security. By addressing these objectives, the research aims to provide valuable insights into the potential of cassava as a viable food security strategy in Gunung Mas and other regions, while highlighting the importance of community participation and effective program management in achieving sustainable outcomes.

Related Works

Food Estate

A number of experts and practitioners conveyed to the government that the problems and challenges in the field of agriculture and food security faced by the Indonesian community, nation, state and government are disruptions in food supplies, decreased demand for agricultural products, the threat of a food crisis and restrictions in production fields. Regarding these problems and challenges, the government has prepared anticipatory plans in the 2020-2024 RPJMN, one of which is the National Food Granary Program (Food Estate).

Food Estate is a form of business in the integrated agri-food sector, between food, livestock, plantations and food industrial villages. Food Estate is a popular term for plant cultivation business activities carried out with the concept of agriculture as an industrial system based on science and technology (science and technology), capital, as well as modern organization and management on a scale of 785 hectares. Food Estate is directed towards an agribusiness system that is firmly rooted in rural areas based on the empowerment of indigenous/local communities which is the basis for regional development. The priority commodities that will be developed in this food estate are rice, corn, potatoes, cassava, sweet potatoes, peanuts, onions, garlic, and cattle or chickens.

The basic concept of Food Estate is based on the integration of sectors and subsectors in an agribusiness system. Utilizing resources optimally and sustainably, managed procedurally, supported by quality human resources, using appropriate technology, environmentally friendly and with strong institutions. Food estate is directed at an agribusiness system that is firmly rooted in rural areas and based on the empowerment of indigenous communities or local residents which is the basis for regional development (Astika, 2019).

Public Policy

Policy studies often focus on how policies are made, rather than on their content or causes and consequences. The study of how policy is made generally considers the set of activities, or processes, that occur within a political system. The policy process focuses on how policies are made, not on the substance or content of policies (Baumer et al., 2013). This process identifies various activities that occur in the political system, including problem identification and agenda setting, formulation of policy proposals, policy legitimacy, policy implementation, and

evaluation of its effectiveness (Baumer et al., 2013). Agenda setting is deciding what will be decided; that is, what issues will be covered by the media, brought to the attention of decision makers, and identified as problems requiring government solutions (Dye, 2017). The depiction of "bottom-up" policy making emphasizes the role of public opinion in determining the agenda of policy makers. Events, and media coverage of these events, can focus public opinion on issues, problems and crises. But it is not always clear whether opinion shapes policy or policy creates opinion. The "top-down" model of policy making emphasizes the role of national leadership in creating problems and formulating policies (Dye, 2017). The general public has no opinion on many specific policy questions. In opinion polls, Americans express doubt that the government understands that their thinking or actions are in the best interests of everyone.

Food Security (Food Security)

Food security is the availability of food and a person's ability to access it, so that the person concerned is not in a state of hunger or feels threatened by starvation (Akhadi, 2022). Various social and political upheavals can occur if food security is disrupted. This condition could also endanger national stability and even bring down the government in power (Bulog.go.id, 2014). If the Government always strives to increase food security for the community, both from domestic production and additional imports, then disruptions to food security and social insecurity which endanger economic stability and national stability can be reduced or even avoided (Bulog.go.id, 2014).

The Indonesian government through the Food Security Council in collaboration with the World Food Program (WFP) created a district level Food Insecurity Atlas (FIA). The Food Insecurity Atlas was first launched in 2005, then updated again by creating the Food Security and Vulnerability Atlas (FSVA) in 2009 which was based on the approach: food availability, food access and food utilization (Food Security Council, 2009).

Food availability is the physical availability of food in a region, obtained either from domestic production, imports/trade or food aid. Food availability is determined by domestic production, the entry of food through market mechanisms, food stocks held by traders and the government, as well as food assistance from both the government and food aid agencies. Food availability can be calculated at the national, provincial, district or community level (Food Security Council, 2009)

National Strategic Food Reserves

Strategic food supplies that are managed or controlled by the state are the definition of national strategic food reserves. National strategic food reserves must be able to be stored for a certain period of time, have good quality, and be suitable for consumption. The Central Government, Regional Government, and society are the basis for the formation of national food reserves. Apart from being able to be consumed directly, cassava can be processed into raw materials for the food industry so that it is suitable to be used as a national strategic food reserve. Cassava can also be used as a means to accelerate the diversification of food consumption as stated and become an important direction in Presidential Regulation Number 22 of 2009 concerning the Acceleration of Food Diversity. Cassava can be used as a means to implement Ministerial Regulation No. 65/Permentan/Ot.140/12/2010 concerning Minimum Service Standards for Provincial and Regency/City Food Security, providing minimum provincial food reserves of 200 tons of rice equivalent, and Regency/City food reserves minimum 100 tons of rice equivalent.

Food ingredients are produced as strategic food reserves to expand the availability of national staple food stocks for 120 days in 2024/2025. With an estimated population of 280 million people and a standard carbohydrate nutritional intake (AKG) of 300 grams/day/head, 10 million tons of carbohydrates equivalent to 40

million tons of cassava can be used to increase the availability of a country's staple food for 120 days, which is the goal of the Food Reserve Program. National Strategic. Cassava-based food ingredients in the form of tapioca flour and MOCAF flour, which function as a substitute for imported tapioca and as a flour mixed with wheat, are the products produced from this program. Procurement of strategic food stocks is carried out in accordance with company principles under the responsibility of the Strategic Logistics Reserve Center (PCLS) which is managed militarily by the Reserve Forces (KOMCAD).

Perception

According to Triana (2015:36), perception is a process that occurs within individuals when responding to their environment through thought and feeling processes which then become the basis for considering their behavior. Perception can also be interpreted as a person's view of their environment which is influenced by the personality and characteristics of a person in their environment. If the object of a person's perception of the environment has a positive value, it can influence the perceiver's values, both physically and psychologically. So, in turn it can provide motivation for positive community behavior towards the environment.

According to Martono (2010:27) perception is a way of looking at a problem, and a certain point of view used in observing a phenomenon. Perception is a conceptual framework, a set of assumptions, a set of values, and a set of ideas that ultimately influence an action in a situation. Perception first arises as a result of sensory stimuli and is assisted by experience. Because each person has different experiences, of course there will be various perceptions and messages regarding something that is observed. According to Khaliq Syukhairi, perception can be defined as a person's view of interpreting objects around them. In this case, this view is defined as a person's assessment of the objects they see and feel (Robbins, 2015: 8).

From the opinions of the experts above, it can be concluded that in perception, even though the stimulus is the same, due to different experiences, a person's ability to think is also different, the frame of reference is different, there is a possibility that the results of perception between individuals and others are not the same. . There are two main theories studied about how to understand perception. First, the theory of constructive perception, states that humans "construct" perception by actively selecting stimuli and combining sensations with memory. Second, namely the theory of direct perception, states that perception is formed from obtaining information directly from the environment (Solso, 2017: 120).

Methodology

This researcher used a case study research method carried out with a descriptive approach. Case study research consists of contextual analysis of conditions or several events and their interrelationships (Cooper and Schindler, 2017). Descriptive research is carried out by collecting data in a structured and systematic manner, existing facts and the latest information according to the conditions or description at the time the research was carried out. This research was conducted in Gunung Mas Regency, Central Kalimantan. While the approach used depends on the type of data, this research is considered qualitative research (Moleong, 2006). The object studied in this research is the public's perception of the cassava cultivation development program as a strategic logistics reserve to realize regional food security in the district. Gunung Mas, Central Kalimantan.

This research was conducted in Gunung Mas Regency, Central Kalimantan. The Cassava Program as a National Strategic Food Reserve is planned on potential land for cassava land that has not been optimized. One of the locations planned and in accordance with these criteria is in Gunung Mas Regency, Central Kalimantan, with an area of 30,536.61 ha, of which 536.61 Ha

will be implemented in 2020 and 30,000 Ha will be implemented in 2022 which has land fertility and potential conditions as a cassava plantation. . Next, the author took research sources and data from the Ministry of Defense (PCLS), PUPR, KLHK, the Regional Government of Gunung Mas Regency and the Community of Gunung Mas Regency, Central Kalimantan. Researchers use AHP (Analytical Hierarchy Process) as a research instrument.

Results and Discussion

Data Processing Results

The Tolerance Validity value limit for AHP weighting is ≤ 10% (0.1) (Mustakim, 2018).

From the strategy inconsistency results above, it was found that the strategy results were valid because ≤ 10% (0.1). So that a ranking can be made for the strategies above. The next step is to calculate the ranking weights for the selected alternatives using super decisions. So, the list of strategies based on the weight of the resource person is as follows:

1. Analyzing Efforts and Obstacles in the Cassava Cultivation program (0.371691)
2. Analyzing the socio-economic impacts of society (0.278055)
3. Analyzing financial feasibility by comparing results in cassava cultivation by the local Ministry of Defense (0.181876)
4. Analyzing the impact caused by food security (0.168379).

So that all strategies to achieve food security for cassava commodities in Gunung Mas Regency, Central Kalimantan are valid because all the values are ≤ 0.1. General Description of Policy and Planning for the Cassava Cultivation Development Program as a Strategic Logistics Reserve in the District. Gunung Mas, Central Kalimantan

Cassava is another food crop that is being developed by the Government in Gunung Mas. In the process, several stakeholders are involved in the framework of becoming a strategic logistics reserve food crop. Yuliati et al., (2019) explained that cassava or cassava plants have a large role in trade and consumption both domestically and abroad. Zuhry et al., (2012) stated that cassava is the third staple food in Indonesia after rice and corn and is needed to support animal feed, industry and pharmaceuticals.

Cassava is a tuber plant that can grow in the lowlands with not too high rainfall. Usually, this plant is harvested after it is around 10 months old. Indonesia's cassava production ranks fifth in the world. Indonesian cassava production in 2018 reached 19.34 million tonnes with a planting area of 0.79 million ha (Pusdatin Ministry of Agriculture, 2020). This number has made Indonesia one of the largest producers of cassava in the world. However, if we look at the development of harvested area and cassava production in Indonesia, in the 2013-2018 period there was a decrease in harvested area from 1.07 million ha (2013) to 0.79 million ha (2018) and a decrease in cassava production from 23.94 million tones (2013) to 19.34 million tones (2018).

Various tubers such as cassava and yam have quite broad prospects for being developed as substitutes for rice and for being processed into prestigious foods. This activity requires support for the development of process and processing technology as well as good marketing strategies to change the image of inferior food to normal or even superior food. Efforts to increase added value through agro-industry, apart from increasing income, also play a role in providing diverse and quality food.

Aspects of safety, quality and diversity are conditions that must be met to fulfill the population's food needs adequately, evenly and affordably (Rachman and Ariani, 2002). Agro-industrial activities which are an integral part of the agricultural sector have an important contribution to the industrialization process, especially in rural areas. The effect of agro-industry is not only transforming primary products into processed products but also the work culture from traditional agriculture which

creates low added value to a modern industrial work culture which creates high added value (Suryana, 2004). Agro-industry development policies, including investment policies, technology and location of agro-industry, must receive primary consideration (Yusdja and Iqbal, 2002).

Strategic Logistics Reserve Program Policy (Food Estate)

The Strategic Logistics Reserve (CLS) is a critical aspect of Indonesia's national defense as outlined in Law Number 3 of 2002, which emphasizes the development of a unified defense system to safeguard the country. This system aims to protect Indonesia's population, promote general welfare, and contribute to global peace and justice. One component of this defense strategy is ensuring food security, a task that became even more pressing with the COVID-19 pandemic, climate change, and potential land degradation.

To tackle these challenges, the Indonesian government, under President Joko Widodo, introduced the National Strategic Program (PSN) for 2020-2024. This program includes the development of food estates to strengthen national food reserves. The collaboration between various ministries—such as the Ministry of Environment and Forestry, the Ministry of Agriculture, and the Ministry of Defense—was essential in implementing these food estates. In this context, the Ministry of Defense plays a pivotal role, particularly through the CLS, as food reserves are recognized as a strategic defense asset in times of crisis, such as wars or natural disasters.

Indonesia's legal framework, including Law No. 18 of 2012 on Food, Law No. 11 of 2020 on Job Creation, and Presidential Decrees like No. 66 of 2021 and No. 125 of 2022, underscores the importance of food security. However, despite these regulations, challenges in policy coordination and external conditions have impeded the success of the food estate program, particularly in Gunung Mas Regency, Central Kalimantan.

The cassava cultivation project in Gunung Mas, a key part of the food estate initiative, faced significant obstacles. Using Hogwood and Gunn's (1986) policy analysis approach, it becomes clear that unsynchronized policies and external factors, such as unsuitable land, contributed to the failure. Cassava was not included in the official list of government food reserves, and the legal foundation for the program remained weak. Moreover, the soil in the area—70% sandy and rocky—was unsuitable for cassava cultivation, leading to harvest failures. These issues highlight the lack of coordination between central and local governments.

Public Perception of the Cassava Cultivation Development Program as a Strategic Logistics Reserve in Gunung Mas Regency, Central Kalimantan

Gunung Mas Regency Community Perception Regarding the Impact of Food Estates

Gunung Mas' agricultural profile has been mapped since 2016. The Central Statistics Agency has announced a moratorium on harvest area and food production because the calculation method is being revised. In 2018 it became clear that. The Central Statistics Agency is able to provide logging and production figures based on the results of the Area Sample Framework (KSA) method. Based on KSF results, Gunung Mas Regency GKG rice production in 2020 was 1,494 tons and the harvest area was 889 hectares.

Referring to the 2020 Policy Text for the Cassava Program as a National Strategic Food Reserve of the Ministry of Defense, the development of cassava cultivation is one of the programs implemented with the aim of becoming an alternative in terms of food reserves. This program is implemented in several areas, one of which is Gunung Mas Regency. One of the interesting things is how the local community perceives the Cassava Cultivation Development Program as a Strategic Logistics Reserve program. Of course there will be dynamics in society according to individual perceptions.

Field Supervisor for the Cassava Cultivation Program in Gunung Mas Regency, said that the Cassava Cultivation program by the Ministry of Defense is a food security/food estate program initiated by the Ministry of Defense on direct orders from the President where the Minister of Defense is the leading sector, and the selection of cassava plants as plants to be developed, must go through a process study at the Ministry of Defense involving a team of experts/professionals from outside. As is known, the concept of developing a cassava cultivation program is an activity that starts from on-farm to product processing.

Most of the people of Gunung Mas Regency, through distributed questionnaires and brief interviews, know for certain about the Cassava Cultivation Program initiated by the Ministry of Defense. They clearly hope that the existence of a food estate will increase the economic welfare of local residents, although some residents reject the existence of a food estate. However, some communities or stakeholders do not fully understand the programs and concepts that will be developed. Even though as a field supervisor, said that at the beginning before the activity, there was outreach to the surrounding community regarding the Ministry of Defense's plan to develop cassava cultivation, including what the impacts and benefits would be if the program was running in the future. This is in accordance with the statement made by the Head of Sepang District, Gunung Mas Regency. From the results of the interviews conducted, he did not fully know about the Cassava Cultivation Program initiated by the Ministry of Defense.

"I don't know much about the program, what I know is that there is a plan from the Ministry of Defense in the context of Food Security, wanting to develop cassava cultivation in Gunung Mas Regency."

He said that several officials/representatives from the Ministry of Defense had met him and explained plans to develop cassava cultivation in Gunung Mas Regency, especially in Sepang sub-district. Next, they asked for permission to carry out outreach to the community around the land they planned to develop. Another goal is to get support from the community.

In contrast, Manager of PLN UP3 Palangkaraya, Central Kalimantan, he knows clearly about the food estate in Gunung Mas Regency. “Food Estate is an integrated food development program between agriculture, plantations and animal husbandry in an area. This program was launched by the Government as an effort to prepare for national food security in response to Food and Agriculture Organization (FAO) data regarding early warning of the negative impact of the Covid-19 pandemic on food security. "The Cassava Cultivation Program by the Ministry of Defense is one part of the food estate program.

Analysis of public perceptions of the policy plan for the Cassava Cultivation Development Program as a Strategic Logistics Reserve will vary greatly depending on various factors, including the level of information received by the community, the direct impact of the program, and the socio-economic conditions of the community in Gunung Mas Regency, Central Kalimantan.

Perception is a person's ability to organize observations, this ability includes: the ability to differentiate the ability to group and the ability to focus (Sarwono, 1983). Meanwhile, Leavit (in Sobur, 2003: 445) says that perception in the narrow sense is vision, how someone sees something, while in the broad sense it is view or understanding, namely about how someone looks or sees. One of the factors that influences the perception of the people of Gunung Mas Regency towards the cassava cultivation development program in the region depends on the impact they receive, both positive and negative impacts.

Perception of the Impact on Community Socio-Economics

The food estate project which has been running since 2020 is considered to be in line with applicable ethical principles and meets moral standards accepted in society, especially

indigenous communities. Farmers who join are encouraged by the government to adopt an agricultural system involving hybrid seeds, fertilizers and pesticides (Patel, 2012; Fahira et al., 2022; Tempo, 2019) until there are indications of procuring free tools referring to the global market sector. Traditionally, farmers have a wide range of moral values and beliefs; However, their willingness to participate in agricultural industrialization shows that the role of farmers as entrepreneurs and technicians must take priority over as stakeholders who handle important aspects of agriculture in the public domain (Chelsy et al., 2023). Economically, if seen from public perception, there are three positive impacts, namely contributing to income, economic diversification, and increasing people's purchasing power.

"At the start of land clearing at the end of 2020 until March 2022, when people took part in work either as workers or as food sellers, economic and social changes were quite felt. However, after that the community no longer felt it, and we have high hopes for the cassava cultivation program carried out by the Ministry of Defense, so that it can have a positive impact on the economic and social aspects of the surrounding community. "Significant changes to the social and economic aspects of the community have of course not been felt by the community, but I am sure that if the program runs, it will have a very positive impact on the social and economic aspects of the people of Gunung Mas Regency, Central Kalimantan"

If viewed from the aspect of contributing to income, the successful development of cassava cultivation can be a contributor to income for the community so that it is hoped that it will be able to reduce dependence on other economic sectors. This program can also encourage economic diversification in the region by introducing or improving non-related agricultural sectors that support cassava cultivation. Another thing related to the positive economic impact is related to increasing people's purchasing power. If the cassava market is stable and prices are high, farmers and related business actors can experience an increase in purchasing power.

With the development of cassava cultivation as a strategic logistics reserve, it is hoped that there will be an increase in the income of farmers and society as a whole. This can improve economic prosperity and reduce poverty levels in the area. Public perception of this program will be more positive if they see real economic benefits.

From the results of the outreach, it is felt that this Ministry of Defense program is very helpful to the community, especially when the inflation rate is quite high and in general the community's economy is increasingly difficult. Confidence in the positive impact of this program was also conveyed by the field supervisor.

"If this cassava cultivation program runs, I am sure and confident that it will have a positive impact on the economic and social aspects of the surrounding community, and even have a wider impact on Central Kalimantan Province." (Field Supervisor)

The cassava cultivation development program can open up job opportunities for the local community. With the large area of cassava cultivation land that has been provided, it is not impossible that labor absorption will also be greater. This is linear with the concept of poverty alleviation. By increasing the economic potential of cassava cultivation, it is hoped that it will be able to reduce poverty levels in the region. The third point that is a positive social impact of this program is increasing food independence. This program can increase regional food independence, because cassava is an important food source and can be used as a strategic logistics reserve in emergency situations.

Economic growth, especially in areas that receive a direct impact from this program, will be able to increase people's purchasing power. This increase in purchasing power can then also have a positive effect on tax revenues for regional income and from a social perspective, it will improve education for local communities. By accepting 67,388 people as reserve

components (KOMCAD), this program means increasing the provision of employment opportunities and reducing the number of unemployed in local communities. Likewise with the impact of the industry being developed, namely by producing intermediate products in the form of tapioca and MOCAF as well as derivative products which are very widely used both as precursors or components needed in various industries and as composite flour with wheat, this will have a positive influence on increasing reserves. foreign exchange through reduced imports of IDR 26 trillion.

However, public perceptions regarding policies also apparently have a negative impact, both from social and economic aspects. As is the opinion of the Head of Gunung Mas District and also several local residents. Residents said that after activities started to become inactive, the community's condition, both economic and social, no longer felt so good. The community has repeatedly said that they have high hopes for the resumption of the Cassava Cultivation Program spearheaded by the Ministry of Defense, with the hope that it will have a positive impact on the economy and social life of the surrounding community, as stated by the Head of Gunung Mas District.

The factors above need to be considered in conveying information, dialogue with the community, and developing programs so that Food Estate can provide optimal benefits for all parties (Jaafar et al., 2021). Regional governments and related parties need to pay attention to influencing factors in designing effective communication policies and inclusive community participation efforts (Rangkuti and Maksum, 2019). Thus, increasing the public's positive perception of the policy plan for the Cassava Cultivation Development Program as a Strategic Logistics Reserve in the social and economic fields of the community.

From the results of interviews and analysis of Wilson's perception theory (2012), there are several conclusions that can be drawn, including that the food estate program in Gunung Mas Regency has had positive social and economic impacts, such as providing job opportunities, alleviating poverty, and increasing food independence. Apart from that, this program is also expected to increase the income of the local community and overall improve their economic standard of living. However, this program is also faced with various challenges and negative impacts, such as the potential for ongoing land conflicts and dependence on one commodity. Economic disparities can also be a potential problem, if programs are uneven in their benefits and risk increasing economic disparities in local communities. Overall, the food estate program in Gunung Mas Regency has the potential to provide positive social and economic impacts, but is also faced with challenges and negative impacts that need to be managed well.

Perceptions of the Impact of Financial Feasibility with Comparison of Results in Cassava Cultivation

The Food Estate Program in Indonesia has led to significant environmental consequences, including deforestation, land use changes, and excessive water usage (Chelsy et al., 2023). These impacts contradict the ethical principles of environmental sustainability. The notion that nature exists solely for human benefit, as expressed by Sólon (2018), highlights the tension between development and environmental preservation. In Gunung Mas, Central Kalimantan, the effects of the program are visible, and local officials, such as Mr. Sayusdi, S.Pd., M.Pd., Head of Sepang District, have voiced concerns about the land clearing practices by the Ministry of Defense. Piles of waste from land clearing have been left on community lands, making it impossible for locals to clean the area without external assistance. Sayusdi emphasizes the need for better coordination between the Ministry and local communities to address these issues effectively.

One significant environmental concern relates to the loss of peatland ecosystems, which affects water retention in the soil, contributing to flooding in the region. Local respondents to a

questionnaire noted that rainwater now flows more quickly through the cleared land, especially where sandy soil is present. The debris from land clearing, including coarse sediment and wood, has clogged wetlands and waterways, resulting in flooding along the Tambun, Tambakung, and Kahayan rivers. According to the Gunung Mas Farmers Association, since the forest was cleared, there have been three major floods that have damaged local property and homes.

A report from the Provincial Regional Disaster Management Agency (BPBD) indicated that 3,642 housing units were affected by the floods, and the flood emergency response was extended through September 2021. Regulations such as the Minister of Environment and Forestry Regulation P.24/MENLHK/SETJEN/KUM.1/10/2020 explicitly acknowledge that large-scale food estates can lead to deforestation, exacerbating environmental damage, particularly to the peatland ecosystem (Saputra, 2021).

The Food Estate Program uses a cluster-based farming system with various commodities and modern mechanization, aiming to integrate production value chains. However, the program's design has led to unintended environmental consequences, including damage to over 600 hectares of peatland forests in Gunung Mas. These areas are vital for carbon storage, and their destruction releases substantial amounts of CO2, exacerbating climate change concerns. Furthermore, NGOs such as WALHI, Greenpeace, and Save Our Borneo have raised alarms about the program's environmental impact, particularly concerning the climate crisis.

A joint investigation by BBC Indonesia and Pantau Gambut revealed that over 1,500 hectares of forest had been cleared for food estate projects in Central Kalimantan, including peat-rich areas essential for climate change mitigation. Peatlands store 20 times more carbon than mineral soil tropical rainforests. Despite these findings, much of the cleared land in Gunung Mas remains unused, with cassava crops neglected and local community members left questioning the program's viability. As a result, there is growing skepticism among local residents about the benefits of the program. The sentiment among locals is that the program has caused more harm than good, damaging the environment without delivering promised economic benefits.

Interviews with officials like Mr. Sayusdi revealed that cassava crops planted in cleared areas are failing, and the public is losing trust in the Food Estate Program. Community disappointment stems from the lack of communication and transparency from the Ministry of Defense regarding the project's goals and progress. These findings align with Wilson's (2012) perception theory, which suggests that negative public perceptions of government programs can stem from unfulfilled promises, ultimately eroding public trust.

An evaluation of the program is critical to determine the causes of its failure and to guide future actions. Restoring damaged lands to their natural state, as outlined in the Decree of the Minister of National Development Planning, is a necessary step to mitigate the program's negative impacts. This process involves restoring peatlands and forests to support biodiversity and ecosystem functionality. In addition, active community participation is essential in the decision-making process to rebuild trust and ensure that future projects benefit both the environment and local livelihoods.

Perceptions of the Impact of Cassava Food Estates on National Food Security

Food security is a critical issue for developing countries, as it serves as the foundation for human well-being and economic development. Achieving food security is particularly reliant on the agricultural sector, which is the primary provider of food (Sumastuti, 2010). For countries like Indonesia, agriculture is not only a key target for development but also a powerful instrument for economic growth. Food security helps ensure access to sufficient, nutritious food, driving

innovation in science, technology, and labor productivity. It also plays a crucial role in maintaining a stable economic environment conducive to sustainable development.

In Indonesia, food security is a development priority, reflecting the importance of having a robust system to safeguard access to food for its citizens. According to Law Number 18 of 2012 concerning Food, the country's national food security strategy is built on the pillars of food sovereignty and independence. As a nation rich in agricultural and marine resources, Indonesia has the potential to manage its natural resources efficiently for the benefit of all its people. Furthermore, food security in Indonesia is closely tied to national defense, as outlined in Law No. 3 of 2002 concerning National Defense. The law emphasizes that food and nutrition are critical to maintaining a healthy and resilient population, which in turn supports the broader goals of national security.

With a rapidly growing population, projected to reach around 271 million people in 2020, Indonesia faces an increasing need for an independent national food reserve system. This system is necessary to mitigate the nation's dependence on imported staple foods, which are subject to price and supply fluctuations in the international market. The rising threat of a global food crisis, exacerbated by natural disasters and economic instability, makes it essential for Indonesia to build robust national food reserves to ensure the food security of its citizens.

However, despite its agricultural potential, Indonesia continues to face significant challenges in food availability. The country's rural development issues and the agricultural sector's limitations hinder progress. Similar to Slovakia, where agriculture plays a vital role, Indonesia must promote commercial activities and sustainable employment in rural areas to improve the quality of life and maintain population density (Nagyová et al., 2016). In response, the government has initiated the development of corporate-based food estates, aiming to integrate investment from upstream to downstream and boost food production (Basundoro and Sulaeman, 2020). Food estates are designed to synergize the efforts of central and regional governments, facilitating an increase in production capacity and diversification of food commodities.

The food estate program includes the development of various food commodities, not limited to rice and corn. The program encompasses the construction of essential infrastructure, such as reservoirs, irrigation systems, and modern post-harvest facilities, to support agricultural productivity. As part of this initiative, the government also provides agricultural tools and machinery (alsintan) to bolster food estate development (Wulandani and Anggraini, 2020). The program aims not only to strengthen national food security but also to stimulate regional economic growth through the involvement of investors and local communities (Asti et al., 2016).

In Central Kalimantan, an area spanning 154,267 km² with a combination of dry land and wetlands, the potential for agricultural development is substantial. Key commodities include rice, cassava, corn, palm oil, rubber, and various fruits (BPTP Central Kalimantan, 2019). For instance, Gunung Mas Regency has shown considerable potential in rice and cassava production, with rice yields reaching 3,817.57 tons in 2019 and cassava production of 705 tons across 59 hectares of land. Cassava, a versatile crop, serves multiple purposes, including food consumption, industrial use, and export. High-productivity varieties like UJ-5 can yield up to 60 tons per hectare, making cassava a valuable crop for both domestic consumption and the starch industry (Director General of Food Crops, Ministry of Agriculture, 2012).

Cassava is a particularly strategic commodity for Indonesia, given its adaptability and multiple uses. It plays a crucial role in addressing the country's food security challenges by serving as a key source of carbohydrates and providing raw materials for industrial products. The cassava cultivation process in Gunung Mas involves

integrating farming practices with livestock and other sectors, which aligns with the government's goal of establishing a strong and sustainable logistics reserve for food security.

The government's cassava-based food estate program is part of a broader effort to build a National Strategic Food Reserve. The program aims to develop 1 million hectares of cassava plantations and build processing facilities to produce tapioca and mocaf (modified cassava flour) on an industrial scale. This initiative, managed under the Ministry of Defense's Strategic Logistics Reserve Agency, also includes cattle farming, creating a diversified agricultural ecosystem that enhances food production capacity.

Human resources for the food estate are organized using military principles, with workers becoming part of the Reserve Component (KOMCAD) or Supporting Component (KOMDUK), ensuring efficient operations throughout the supply chain. The program's management emphasizes discipline, coordination, and productivity, leveraging expertise and leadership to ensure smooth operations and effective resource utilization.

The development of cassava cultivation as a strategic food reserve presents numerous opportunities for Indonesia's food security. Cassava's short growing period and ability to thrive on sub-optimal land make it an ideal crop for expanding food reserves. Furthermore, cassava's versatility as both a food source and industrial raw material means it can support the nation's food security goals while contributing to economic development.

The cassava cultivation program has received support from key stakeholders, including the Ministry of Agriculture and local government leaders. The Ministry of Agriculture, in collaboration with the Ministry of Defense, plans to develop additional cassava land outside the Ministry's property, potentially covering 300 hectares of fertile land for cassava production.

In conclusion, cassava holds great potential as a key component of Indonesia's food security strategy. The government's cassava-based food estate program, coupled with an integrated farming approach, offers a sustainable solution to the country's food security challenges. By building a National Strategic Food Reserve centered on cassava cultivation, Indonesia can reduce its dependence on imported food commodities, mitigate the risks of food supply instability, and ensure the availability of food for its growing population.

Obstacles and Perspective Model for the Cassava Cultivation Development Program as a Strategic Logistics Reserve in Gunung Mas Regency, Central Kalimantan

Based on the Decree of the Minister of National Development Planning/Head of the National Development Planning Agency Number Kep. 18/MPpn/Hk/03/2023 Concerning the Master Plan for the Development of Food Estates/Food Production Center Areas in Central Kalimantan Province, apart from the SOP strategy already owned by the Ministry of Defense, the Ministry of Defense is also obliged to carry out the following efforts:

Table 1. Policy Direction and Effort Strategy

Policy direction	Strategy of Efforts Made
Development of Geospatial Aspects: Developing Food Estate Areas/Food Production Centre Areas	1. Land Planning and Preparation 2. Connectivity Development 3. Support/Support Food State and Port access 4. Provision of agricultural inputs 5. Development of Food Estate Land/Food Production Center Areas 6. Development of water sources and flood control 7. Conservation and Restoration of Forest and Peat Ecosystems 8. Pest and OPT control 9. Increasing HR Capacity 10. Monitoring Institutional Assistance for Farmers

	11. Supervision of Farmer Assistance by Students and Lecturers 12. Supervision of the circulation of agricultural facilities 13. Arrangement of Agricultural Infrastructure 14. Provision of livestock seeds/seedlings and forage sourced from other areas 15. Quality control, supply and distribution of plant seeds
Development of Off-Farm Aspects: Increasing the Welfare of Farmers in Food Estate Areas/Food Production Center Areas	1. Provision of Post-Harvest, Processing and Marketing Infrastructure and Facilities 2. Market Development 3. Increasing HR Capacity 4. Development of Farmer Economic Institutions 5. Institutional Oversight of Farmers 6. Developing MSMEs to become strong and independent businesses so that they can increase job creation, income distribution, economic growth and poverty alleviation

Source: Decree of the Minister of National Development Planning/Head of the National Development Planning Agency Number Kep. 18/MPpn/Hk/03/2023

The Ministry of Defense's efforts to manage cassava cultivation in Gunung Mas, Central Kalimantan, have faced significant internal and external challenges. Despite allocating a budget of 500 billion IDR in 2022 for the project, the funds remain blocked due to the absence of a Presidential Decree for the formation of the Ministry of Defense's Strategic Logistics Reserve Agency (BCLS). According to Colonel Czi Dwi Hariyono, Head of Plant Management for the PCLS Ministry of Defense, the lack of a legal framework has hindered the use of these funds, obstructing cassava cultivation efforts. The delay in issuing the decree has created uncertainty about program implementation, including for cassava development.

A coordination meeting held on January 18, 2023, revealed that three related Presidential Regulations had been submitted but remained unstipulated by the President. These include the Presidential Decree on the Program for Increasing National Food Supply through the Development of Food Estate Areas, proposed by the Coordinating Ministry for Economic Affairs, the Presidential Decree on the Agency for the Management of North Sumatra Food Estate Areas, and the Presidential Decree on the Strategic Logistics Reserve Agency, proposed by the Ministry of Defense. An internal meeting led to the decision to merge these into one Presidential Regulation. This decision to streamline regulations, however, has caused further delays in project execution, particularly in the cassava cultivation initiative in Gunung Mas.

Apart from the blocked budget, communication and coordination between central and regional governments have been poor, especially regarding infrastructure development needs and program prerequisites. Resources, including natural and human factors, also present obstacles. The natural conditions in Gunung Mas, with 70% sandy soil, are not suitable for cassava farming. Additionally, although there is an organizational structure for managing the project, strong regulations governing performance are lacking, and human resource assignments are unclear.

Further hindering progress is the absence of clear land-use permits from the Ministry of Environment and Forestry, stemming from the lack of a Presidential Decree. This has delayed infrastructure development and blocked funding. The limited involvement of only one ministry as the coordinator has exacerbated the situation, and it has been suggested that a task force involving the Ministry of Agriculture and Ministry of Environment and Forestry be established for better coordination.

There are also regulatory complications regarding the use of forest areas for food estates. Critics argue that regulations under the Forestry Law, particularly KHDTK (Forest Areas with Special Purposes), conflict with the objectives of the Food Estate program, raising environmental concerns, especially from indigenous communities. These issues, alongside the bureaucratic and technical challenges identified by Pasolong (2010), underscore the complexity of implementing the cassava cultivation project in Gunung Mas.

Conclusions

The research highlights challenges in implementing Indonesia's Strategic Logistics Reserve Development Program (CLS), focused on cassava cultivation as part of the 2020-2024 National Strategic Program (PSN) to enhance food security amid the COVID-19 pandemic, land degradation, and climate change. Despite government efforts, the program faces issues like unsynchronized policies, poor land suitability for cassava, and a top-down approach that excludes local community input.

Criticism of the cassava food estate program in Gunung Mas includes mismatches between plant types and land conditions, inadequate infrastructure, and risks of farmer exploitation. While some positive outcomes, like job creation and food independence, were noted, the community mainly perceives negative impacts, such as potential land conflicts, socio-cultural shifts, and environmental damage. Factors influencing these perceptions include mass media coverage and program development failures.

Interviews and analysis reflect disappointment, with cassava growth suboptimal, limited harvest areas, and environmental degradation such as peatland damage. NGOs and institutions criticize the disproportionate costs and environmental risks. Overall, public sentiment is largely negative due to these failures.

To improve the program, recommendations include thorough evaluation, land restoration, community involvement in decision-making, and a focus on environmental sustainability. The program's success depends on overcoming key obstacles like the unissued Presidential Decree, poor coordination between ministries, unfavorable weather and soil conditions, and weak community understanding of the program. Cooperation between central and regional governments and the community is essential for achieving national food security goals.

WORKS CITED

ADA. (2014). Standards of medical care in diabetes-2014. Diabetes Care, 37(SUPPL.1), 14–80. https://doi.org/10.2337/dc14-S014

Adejoh, S. O. (2014). Diabetes knowledge, health belief, and diabetes management among the Igala, Nigeria. SAGE Open, 4(2). https://doi.org/10.1177/2158244014539966

Alharthi, A. S., Althobaiti, K. A., & Alswat, K. A. (2018). Gestational diabetes mellitus knowledge assessment among saudi women. Open Access Macedonian Journal of Medical Sciences, 6(8), 1522–1526. https://doi.org/10.3889/oamjms.2018.284

Apriani, A., Daryanti, M. S., & Karanganyar, K. (2021). Qualitative Study: Needs of Pregnant Women with Gestational Diabetes Mellitus in the District Gestational Diabetes Mellitus (DMG) has the potential to cause serious complications and short and long term health risks for both mother and baby. The diagnosis of. Kusuma Husada Health Journal, (October 2019), 17–26.

Ari Kurniarum. (2016). Midwifery Care, Childbirth and Newborns. Jakarta: Ministry of Health.

Asri. (2020). Educational Psychology Multidisciplinary Approach. Purwokerto: CV, Pena Persada.

Ayun Sriatmi, Sutopo Patria Jati, & Budiyanti, R. T. (2020). Support and Perceptions of Pregnancy Complication Prevention Behavior. Higeia Journal of Public Health Research and Development, 1(3), 84–94.

Bayuana, A., Anjani, A. D., Nurul, D. L., Selawati, S., Sai'dah, N., Susianti, R., & Anggraini, R. (2023). Complications in Pregnancy, Childbirth, Postpartum and Newborns: Literature Review. Journal of Health Discourse, 8(1), 26. https://doi.org/10.52822/jwk.v8i1.517

Brody, S. C. (2005). Gestational Diabetes Mellitus. When to Screen in Obstetrics and Gynecology, 303–319. https://doi.org/10.1016/B978-1-4160-0300-7.50033-8

Buckley, B. S., Harreiter, J., Damm, P., Corcoy, R., Chico, A., Simmons, D., … Dunne, F. (2012). Gestational diabetes mellitus in Europe: Prevalence, current screening practice and barriers to screening. A review. Diabetic Medicine, 29(7), 844–854. https://doi.org/10.1111/j.1464-5491.2011.03541.x

Cullinan, J., Gillespie, P., Owens, L., Dunne, F., & ATLANTIC DIP Collaborators. (2012). Accessibility and screening uptake rates for gestational diabetes mellitus in Ireland. Health & place, 18(2), 339-348.

Dehghani-Tafti, A., Mazloomy Mahmoodabad, S. S. aei., Morowatisharifabad, M. A. l., Afkhami Ardakani, M., Rezaeipandari, H., & Lotfi, M. H. assa. (2015). Determinants of Self-Care in Diabetic Patients Based on Health Belief Model. Global Journal of Health Science, 7(5), 33–42. https://doi.org/10.5539/gjhs.v7n5p33

Dłuski, D. F., Ruszała, M., Rudziński, G., Pożarowska, K., Brzuszkiewicz, K., & Leszczyńska-Gorzelak, B. (2022). Evolution of Gestational Diabetes Mellitus across Continents in the 21st Century. International Journal of Environmental Research and Public Health. https://doi.org/10.3390/ijerph192315804

Firdaus, Rimbawan, Anna Marliyati, S., & Roosita, K. (2016). Streptozotocin-Sucrose-Induced Diabetic Rat Model for Gestational Diabetes Mellitus Research Approach. MKMI Journal, 12(1), 29–34.

Grispen, J. E. J., Ronda, G., Dinant, G. J., De Vries, N. K., & Van Der Weijden, T. (2011). To test or not to test: A cross-sectional survey of the psychosocial determinants of self-testing for cholesterol, glucose, and HIV. BMC Public Health, 11(1), 112. https://doi.org/10.1186/1471-2458-11-112\

Hartzler, M. L., Chen, A. M. H., Murphy, B. L., & Rodewald, S. J. (2014). Evaluation of Jamaican Knowledge of Diabetes and Health Beliefs. Christian Journal for Global Health, 1(2), 19–28. https://doi.org/10.15566/cjgh.v1i2.13

Hastono. (2016). Data analysis in the health sector. PT. Rajagrafindo Persada. Retrieved from http://perpustakaan.bppsdmk.kemkes.go.id//index.php?p=show_detail&id=4546

Hayden, J. A. (2009). Introduction to Health Behavior Theory. London: Jones & Bartlett Publisher.

Indramayu health department. (2020). Health-Profile-2020.pdf.crdownload.

Khiyali, Z., Manoochri, M., Jeihooni, A. K., Heydarabadi, A. B., & Mobasheri, F. (2017). Educational intervention on preventive behaviors on gestational diabetes in pregnant women: Application of health belief model. International Journal of Pediatrics, 5(5), 4821–4831. https://doi.org/10.22038/ijp.2016.7750

Lestari, R. A., Sari, C. W. M., & Kurniawan, T. (2018). Description of Student Perceptions of Diabetes Mellitus Prevention Behavior at the Faculty of Nursing, Padjadjaran University. Indonesian Journal of Nursing Education, 4(1), 60. https://doi.org/10.17509/jpki.v4i1.12345

Liu, Z. Y., Zhao, J. J., Gao, L. L., & Wang, A. Y. (2019). Glucose screening within six months postpartum among Chinese mothers with a history of gestational diabetes mellitus: A prospective cohort study. BMC Pregnancy and Childbirth, 19(1), 1–10. https://doi.org/10.1186/s12884-019-2276-9

Masruroh. (2016). Maternal & neonatal emergency textbook. yugyakarta: Parama publishing.

MIF Baihaqi, Sunardi, Riksma N. Ridalti Akhlan, E. H. (2007). Psychiatry: Basic concepts and disorders. Bandung: Refika Aditama.

Mohammed, N. Y., Mahmoud, N. M., Yousef Mohammed, N., & Essa, M. (2018). The Relationship between Health Belief Model and Compliance with Therapeutic Regimen Among Diabetic Pregnant Women. International Journal For Research In Health Sciences And Nursing, 4(2), 40–63.

Mohebbi, B., Tol, A., Sadeghi, R., Mohtarami, S. F., & Shamshiri, A. (2019). Self-management intervention program based on the health belief model (Hbm) among women with gestational diabetes mellitus: A quazi-experimental study. Archives of Iranian Medicine, 22(4), 168–173.

Nengsih Yulianingsih. (2023). Basic Concepts of Maternity Nursing. Jakarta: Trans Info Media.

Nengsih Yulianingsih. (2024). Maternity Nursing Care: Equipped with Competency Test Questions. Jakarta: Trans Info Media.

Notoatmodjo. (2012). Health Research. perpus.poltekkesjkt
Novita Anggraini, & Margareta Haiti. (2024). Early Detection of Gestational Diabetes Mellitus. Journal of Health And Development, 14(27), 88–93. https://doi.org/10.52047/jkp.v14i27.302
Pakasi, K. L. (2019). The relationship between perceptions of pregnant women and behavior in early detection of gestational diabetes mellitus at Pamulang Community Health Center, South Tangerang in 2019. Syarif Hidayatullah State Islamic University, Jakarta.
Pattiasina, J. A., Polpoke, S. U. M., & De Lima, F. V. I. (2019). The Relationship between Regular Antenatal Care and High Risk Pregnancy Rates in Pregnant Women in Kampung Baru Hamlet - Kawa Village. Molucca Medica, 12(April), 39–48. https://doi.org/10.30598/molmed.2019.v12.i1.39
PERKENI. (2015). Consensus on the Management and Prevention of Type 2 Diabetes Mellitus in Indonesia 2015 (July 2015). PB. PERKENI. Retrieved from https://pbperkeni.or.id/wpcontent/uploads/2019/01/4.-Konsensus Pengelolaan-dan-Pemcepatan-Diabetesmelitus-tipe-2-di-Indonesia-PERKENI2015.pdf
Perkeni. (2019). Guidelines for the Management and Prevention of Adult Type 2 Diabetes Mellitus in Indonesia 2021. Jakarta: PB Perkenni.
Prayitno. (2017). Group guidance and counseling services (basic and profile). Jakarta: Ghalia Indonesia.
Priyoto. 2014. Konsep Manajemen Stres. Yogyakarta: Nuha Medika.
Rahmawati, F., Natosba, J., Studi, P., Nursing, I., Medicine, F., & Sriwijaya, U. (2016). Gestational Diabetes Mellitus Screening and Risk Factors IKO E-mail: fuji_rahmawati89@yahoo.co.id Introduction The incidence of Diabetes Mellitus (DM) in the world continues to increase from year to year, the latest data from the World Health Organization (WHO) shows. Sriwijaya Nursing Journal, 3(2355), 33–43.
Rahmi, H., Malini, H., & Huriani, E. (2020). The Role of Family Support in Reducing Diabetes Distress in Type II Diabetes Mellitus Patients. Andalas Health Journal, 8(4), 127–133. https://doi.org/10.25077/jka.v8i4.1129
Saputro, B. C., Delima, R., Purwadi, J., & Factor, C. (2007). Diabetes Mellitus Diagnosis System, (1).
SDGs. (2017). Indonesian SDGs Health Indicators.
Soegondo, S., Soewondo, P, & Subekti, I. (2011). Integrated management of diabetes mellitus. Jakarta: Faculty of Medicine, University of Indonesia.
Sugiyono. (2017). Quantitative, Qualitative, and R&D Research Methods. Bandung: Alfabeta, CV.
Sunaryo. (2002). Psychology for nursing. Jakarta: EGC.
Suranto, J., Syah, M. F., Kristiana, D. N., & Puspita, R. W. (2020). Analysis of social networks utilization in student learning patterns. Int. J. Innov. Creat. Chang, 11, 87-99.
Suzanne C. Smeltzer, B. G. B. (2002). Brunner and Suddarth's textbook of medical-surgical nursing. Jakarta: EGC.
Teh, K., Quek, I. P., & Tang, W. E. (2021). Postpartum dietary and physical activity-related beliefs and behaviors among women with recent gestational diabetes mellitus: a qualitative study from Singapore. BMC Pregnancy and Childbirth, 21, 1-12.
Triwibowo, C. M. E. P. (2015). Introduction to Basic Public Health Sciences for public health, nursing and midwifery students. Yogyakarta: Nuha Medika.
Vazini, H., & Barati, M. (2015). The Health Belief Model and Self-Care Behaviors among. Iranian Journalof Diabetes and Obesity, 6(2), 107–113.
Wafa, M. H., Ayoub, A. I., Bukhari, T. A., Amer Bugnah, A. A., Alabawy, A. A. H., Alsaiari, A. H., … Refai, H. M. (2023). Knowledge and Attitude Regarding Gestational Diabetes Mellitus Among Pregnant Women in Tabuk City, Saudi Arabia: An Exploratory Study. Cureus, 15(11). https://doi.org/10.7759/cureus.48151
WHO. (2015). World Health Statistic Report 2015. Ganeva.