

## Raw Material Management Strategy To Improve Program Performance Free Nutritional Meal

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**Abstract.** *Parents' enthusiasm in welcoming the free nutritious meal program is very "joyful" because it eases the burden of shopping and children's pocket money, especially if parents have more than one child in school, so that the quality of children's nutrition is guaranteed, and stunting in children is prevented. The goal is that the community must also be in harmony, in line with the government's program to provide food, raw materials and local ingredients. This will enable farmers, breeders, and fishermen to provide the necessary ingredients for the cuisine. The methods employed are qualitative, incorporating literature studies and analytical descriptive approaches. As a result, with free nutritious meals, local people use the land to provide the raw materials they need, considering the geography of Bulungan Regency consisting of 10 sub-districts that are far from the center of food raw material suppliers, so strong and highly talented local farmers, breeders, and fishermen must take advantage of this opportunity. Its population consists of 500 traders, with a sample of 120 traders at the Bulungan Regency Main Market. From this article, it is recommended to improve the management of raw materials through suppliers and vendors to support free nutritious meals in Bulungan Regency.*

**Keywords:** *Business; Intelligent; Farmers; Talented.*

### 1. Introduction

Reliable human resources begin with intelligent, healthy individuals with high productivity. The prerequisite is the provision of nutritious food for its citizens, especially for the nation's future generations. Reliable human resources serve as a benchmark for success and the foundation for achieving a better Indonesia. We still face obstacles, opportunities, and challenges that require special consideration from all components of society to solve existing problems, especially the provision of food for citizens. The problems faced are overnutrition and malnutrition, which face significant challenges for society. The Indonesian population is malnourished at 21.6%, despite improvements in nutrition in the past. The government is targeting a 14% improvement in nutrition by 2024. The malnutrition faced by the country in certain community centers will affect human resources. With stunting, children's growth and development conditions affect knowledge, body structure, and decline in student learning,

thus decreasing expected results in the future. The existence of students who are malnourished requires swift and targeted steps to be addressed immediately through nutritional improvements through the provision of free meals by the government.

The free nutritional meal program aims to provide quality lunches to students, free nutritional meals in Bulungan Regency for students and residents. Community do not have adequate access to nutritious food. Providing nutritious and healthy food free of charge is expected to improve the welfare and health of the groups served, thereby creating better conditions for student development and growth. Free nutritional meals are a process of improving nutritional fulfillment, thus producing a strong generation in terms of knowledge, psychological, and physical, through nutritious food so that residents are more qualified and competitive. The quality of the raw materials for the food served must be of high quality as a basis for success in producing.

Quality competitiveness. Free nutritious meals create resilient individuals. The nutritious meal plan is a flagship program for a more dignified future society, producing individuals who are able to benefit the country. The nutritious meal program has a strategic impact on education, the economy, health, and the provision of raw food materials. Furthermore, the program's impact is expected in the economic sector: Nutritious meals provide opportunities for small businesses, livestock breeders, fishermen, and farmers as raw material providers that drive the local economy. The role of suppliers in the distribution to the production of quality food. Health: The free nutritious meal program is expected to minimize the spread of stunted student growth or malnutrition or overnutrition, especially among vulnerable groups. Education: The availability of nutritious food for students, enabling them to focus on gaining knowledge. By consuming a balanced diet, students are able to follow lessons well so that parents encourage their children to attend school, an effort to improve the quality of Indonesian education. Food Security: The aim is to prevent suppliers from importing food and strengthen local food production. Through increasing quality local food products, by strengthening food supplies so that they are not dependent on foreign producers.

Program free nutritious meals There are still shortcomings, especially in the existence of Nutrition Fulfillment Service Units (SPPG) or free nutrition kitchens that will be built in stages in each village point considering that Bulungan Regency is geographically scattered population even in the depths of the forest. It is known that free nutrition kitchens provide food supplies that provide raw materials until the distribution of free nutrition to the beneficiaries, the construction of kitchens must comply with hygiene standards. The importance of complying with food safety standards to ensure the quality of nutrition until it reaches the beneficiaries, although implemented, this activity faces obstacles, especially related to distribution to remote areas. The distribution of free nutrition food is currently not evenly distributed across the region because the construction of SPPG or free nutrition kitchens in one area requires several requirements to be met by prospective partners or foundations. The government continues to strive to ensure the distribution of free nutrition food even to remote areas. Collaborating with local suppliers to prepare free nutritious

meals.

The success of the free nutrition meal program in Bulungan Regency depends not only on policies from the central and regional governments, but also on the involvement of local talent. Reliable local talent with a deep understanding of the social, cultural, and economic conditions of the local community is a major force in supporting the successful implementation of this program. The involvement of health workers, nutritionists, educators, and the local community can create solutions that are more targeted, based on local needs, and sustainable. Although the potential for local talent involvement in supporting the free nutrition meal program is quite large, research that specifically examines their role in the context of nutrition fulfillment service units in Bulungan Regency is still limited. The study aims to develop strategies to improve the performance of the free nutrition meal program so that it contributes directly to beneficiaries, and how the involvement of suppliers and vendors can strengthen the effectiveness and sustainability of the program in Bulungan Regency.

Widespread access for local communities to support free nutritious meals directly involved in the provision of basic raw materials, will certainly open up business opportunities with the hope of being fulfilled independently without relying on outsiders, and can even help other villages meet the need for basic raw materials that are not available in the village. If necessary, bartering between villages for basic raw materials that are mutually needed due to geography and means of transportation to road infrastructure that still relies on rivers is the only alternative distribution for the reason of maintaining the quality of raw materials to remain fresh so that they are immediately processed into food ingredients ready for consumption by the beneficiaries. In addition, processed food must meet the criteria for animal suitability for consumption, avoiding animal foods that are not included in the menu listed as suitable and nutritious.

## 2. Research Methods

This research is descriptive qualitative. Given the focus of this study on the performance strategies of the free nutrition meal program, a qualitative approach was appropriate because it allowed for a deeper dive into the experiences, perceptions, and roles of local actors in the program's implementation. Using a case study to focus research on the implementation of the free nutrition meal program in Bulungan Regency, this study allows for an in-depth examination of the role of local talent in nutrition service delivery. A phenomenological approach explores the experiences of individuals or groups directly involved in the free nutrition meal program. This approach helps explore the lived experiences of those involved (e.g., medical personnel, nutritionists, or beneficiaries). Conducting interviews with key actors such as logistics agencies, small and medium enterprise agencies, community leaders, and beneficiaries of the free nutritional meal program to gain perspectives on the effectiveness of free nutritional meal raw material providers and the role of local talent including suppliers and vendors.

### 3. Results and Discussion

North Kalimantan Province, Bulungan Regency is the 34th province resulting from the expansion of East Kalimantan Province based on Law Number 20 of 2012 concerning the formation of North Kalimantan Province dated November 16, 2012 North Kalimantan was enacted on November 17, 2012 in the State Gazette 2012/No.229, TLN No. 5362, LL SETNEG: 16 PAGES. During this 13-year period, North Kalimantan, which consists of 4 regencies and 1 city, including Malinau, Nunukan, Tana Tidung, Bulungan and 1 city, Tarakan, simultaneously developed its territory with the parent regency of Bulungan, working together to build facilities and infrastructure to support improving public services, especially office buildings, public facilities, open parks so that they look beautiful, one of which is Bulungan Regency, which is also improving itself. The geography of Bulungan Regency is very challenging in the form of the beautiful Kayan River stretching out to unite this region to the interior, mountains, virgin forests, swamps, mining materials in the form of coal, petroleum, gold managed by the state for the prosperity of the community, as well as the potential of the coast and rivers which are very profitable as supporters in the economic, agricultural, plantation, livestock, and fisheries sectors.

Fertile land is very suitable for planting and cultivating various food sources, both plant and animal, to meet the basic needs of the community. However, with human resources that are still minimal, new communities are needed through a transmigration program to bring in people to manage the land that has been carried out since 1975 until now to manage unused land to support increasing food sources for daily needs. It can even supply the surrounding area to meet basic needs. In addition, transmigration increases the population of Bulungan Regency, which has a large area but a small population.

A very friendly and welcoming local community accelerates economic prosperity, especially in the area of fulfilling much-needed food needs. The elaboration of local residents with transmigrants strengthens the production of reliable food sources to meet their own needs through the support of fertile natural resources and local governments by providing superior seeds, fertilizers, and providing productive land. The involvement of local talents of farmers, fishermen, and livestock breeders from their work certainly requires profitable marketing, so suppliers are needed. Maintaining the quality of food produced by vendors requires a place to accommodate maintaining food security to keep it fresh requires the participation of village cooperatives as stockists or suppliers of the food which is then marketed to consumers who need it, especially as raw materials for free nutritious food in the village so that only certain raw materials are needed to be supplied from other areas.

Food raw materials produced in the village need a barn or storage warehouse and its management to maintain the nutritional quality with the hope that the food will become a reserve in the village. Considering the geographical conditions in 10 sub-districts, 74 villages and 7 sub-districts in Bulungan Regency are different and can only be reached by river transportation, a storage warehouse is needed in each village managed by the village, to maintain the quality of food raw materials, cooperation with related parties is needed to

provide supplies or training to keep food fresh and maintain its nutrition. Qualified human resources must be prepared to be trained in each village as the spearhead of the success of the free nutritional meal program specifically in Bulungan Regency. The role of Village-Owned Enterprises, cooperatives are empowered or local talent suppliers and vendors are actively involved so that the village economy improves and residents have jobs which ultimately reduces unemployment in the local village. Another support that needs to be prepared in each village is the free nutritional meal village kitchen center (PDDMBG) as the main point of success of the free nutritional meal program that cooks, prepares, distributes, maintains the quality of food so that the effectiveness and efficiency of food distribution without stale, scattered, contaminated with bacteria and on target, timely delivery to the beneficiaries, so that it can help improve the welfare, health, academic performance of students so that human resources in Bulungan Regency are able to compete and can be relied upon in various areas of life to build a more competitive and dignified Bulungan.

This data describes the initial conditions or problems that existed in the raw material supply system before the new strategy was implemented. This data serves as a benchmark for measuring success. Generally, this data will indicate inefficiencies, waste, and uncertainty. Based on supplier data, purchasing prices for certain types of raw materials tend to fluctuate and are high due to the lack of structured contracts or negotiations. The number of suppliers is too large, resulting in unverified suppliers or dependence on a single supplier, making them vulnerable to supply disruptions. Delivery Lead Time (DLT) is quite high, and the lead time from order to receipt is inconsistent.

Raw material supplies sometimes run out (stockout rate), where certain raw materials run out when they are ready to be used, resulting in sudden menu changes. Conversely, excess inventory (overstock), especially fresh raw vegetables and side dishes, is feared to spoil (food waste percentage) due to damage during shipping, and expiration tends to increase. Desired supplies tend to be unavailable, inventory recording accuracy is still manual and suppliers are not disciplined. Program performance is often characterized by frequent menu changes due to the unavailability of key basic ingredients. Not meeting nutritional standards due to the program's inability to provide the specified raw materials.

The supplier selection process lacks clear criteria, and raw materials are sourced solely based on custom, personal relationships, and direct offers. The quality of raw materials received by suppliers is inconsistent, sometimes good, sometimes not fresh, sometimes inconsistent in size, and even has an expiration date. Complaints from chefs regarding raw materials have been raised.

Difficulty obtaining raw materials, poor quality, or inconsistent quantities. The inventory recording system is still manual, prone to errors, and difficult to track.

From the collection of various information in the form of interviews, observations and document reviews of raw material management strategies starting from procurement, food collection in the warehouse, cooking, to distribution to the beneficiaries. The free nutritional



meal program is a central government program delegated to the regions to implement free lunches in every school with the aim of fulfilling student nutrition, reducing school dropouts, to malnutrition in children in the village, from this free nutritional meal it is hoped that the 4 healthy 5 perfect foods will be fulfilled. The implementation found problems in the form of slow distribution of raw materials, fluctuations in goods, and the supply of fresh ingredients. Bulungan Regency has several markets that support supplies for free nutritional meals, namely, the central or main market as the main supplier of basic food needs, the dawn market is an activity of buying and selling basic food ingredients and vegetables and other needs that are opened limited from 05.00 am to 08.00 am, the afternoon market is active from 16.00 to 21.00, then supported by the bongkar market whose activities are from 05.00 am to 08.00 am which must be immediately cleaned because the futsal field area is for community sports activities, in addition, Bulungan residents also provide a Dayak market which is held once a week on Saturdays from 06.00 am to noon at 12.00. The data obtained from researchers in the form of interviews with suppliers in a sample to obtain existing initial data, can be seen in the results of this interview with chicken suppliers, rice suppliers, beef suppliers, fish suppliers, vegetable suppliers, and egg suppliers.

The most striking phenomenon of all these interviews was the answers that uniform across the 20 respondents. Almost every answer to every question was exactly the same. There are several possible interpretations for this:

- a. Uniform market conditions: rice sellers in the region may operate in very similar ecosystems, use the same distributors, and face identical challenges.
- b. Centralized information: it is possible that these suppliers are members of one association or receive direction from the free nutrition meal program coordinator, so that the information provided is uniform.

The rice supply for the free nutrition meal program is supported by a flexible supplier network. Key highlights include: A diverse range of suppliers offers a mix of national and local brands for variety and to meet demand. Supply is stable yet dynamic, despite claims of constant availability.

While sufficient, supply is prone to occasional shortages, the solution of which relies heavily on local farmers. Prices are flexible, not fixed, and are heavily influenced by the availability of supplies from the farm level. Dual reliance on local and outside supply is key to maintaining the program's smooth operation.

Based on the results of interviews with 20 beef supplier respondents, the following is a detailed explanation of the role and conditions of beef suppliers in supporting the free nutritional meal provision program:

All respondents stated that they supplied the following ingredients for the free nutritious meals: fresh beef, beef offal, beef offal (liver, lungs, tripe, etc.), and beef bones. These products are the primary source of animal protein, essential for supporting the nutritional

needs of beneficiaries.

All respondents stated that meat supplies were always available and sufficient daily. This indicates a stable supply chain, although some challenges remain.

#### 1) Constraints in Provision

Although stocks are generally adequate, all respondents acknowledged a major challenge: occasional beef shortages, particularly when demand increases or external supplies are disrupted. Nevertheless, they are still able to meet demand by increasing supplies from local farmers and importing supplies from outside the region when necessary. This strategy demonstrates flexibility and collaboration between suppliers and local farmers to ensure the continuity of the free nutrition program.

#### 2) Origin of cows

All suppliers stated that the cattle they sell come from two sources: local breeders (the majority) and outside sources if local supply is insufficient. This confirms that the program supports the local economy while maintaining stability with external reserves.

#### 3) Daily number of cattle slaughtered

Each respondent stated that in their daily operations, at least 1 cow is slaughtered per day, and sometimes more, depending on demand.

Roughly calculated, 20 suppliers  $\times$  1 head of cattle per day = a minimum of 20 head of cattle per day to support the free nutrition program. This reflects the program's massive scale and significant logistical and distribution requirements. Beef suppliers play a vital role in the free nutrition program, as detailed below:

Taking into account interviews with 20 respondents who are fish suppliers for the provision of free nutritional meals in Bulungan, the following is a detailed explanation regarding fish suppliers, including the types of fish supplied, daily availability, constraints, fish conditions, and daily volume:

#### 1) Types of fish supplied

There are two large groups of fish species supplied by suppliers:

a. Sea fish (supplied by 10 people) were supplied by Anto, M. Rayyanza Ramadhan, Hendra Cipta, Wadone Prigilleya Dambaan, Ashar, Shanum Aliza, Puji Aji, Evantinus, Yossi, Delvianus Dedy Bata (some). While the types of sea fish supplied: snapper, red fish, senangin fish, shrimp, scad, mackerel, tuna, mackerel, bitter gourami, sembilang fish, yellowtail fish, scad.

b. Freshwater fish (supplied by 10 people) were supplied by Rafly Manmau, Jumadil, Andika Rizki Perdana, Ifan Lutian, Syarif, Rafifah, M. Soegeng, Jakaria, Agus Prans, Delvianus Dedy Bata (some). While the types of freshwater fish are catfish, snakehead fish, tilapia, gourami.

## 2) Daily fish availability

Saltwater fish suppliers (10 people) generally stated that supplies were always available and sufficient, although there were some days when supplies were low. Freshwater fish suppliers (10 people) mostly reported that supplies were sometimes low or even non-existent, as they depended on the availability of local farms.

## 3) Obstacles Faced

There are several commonly reported problem patterns:

- a. Sea fish suppliers sometimes have limited supplies, bad weather affects the catch, sometimes the fish stays at sea too long, so the quality decreases.
- b. Freshwater fish sellers have limited cultivation space, production from local fishermen is low, and fish quality is declining due to late distribution.

## 4) Condition of fish when received from fishermen

The majority of respondents stated that the fish they received were fresh, but some were damaged, caused by being at sea for too long (saltwater fish), traveling for too long or being stored (freshwater fish).

## 5) Volume of fish supplied per day

The average daily supply of sea fish is 70–90 kg, some respondents mentioned 80 kg in the name of Anto, M. Rayyanza, Ashar, Shanum, 90 kg in the name of Evantinus, Yossi, 70 kg in the name of Puji Aji, Wadone, 60 kg in the name of Hendra. While the average daily supply of freshwater fish is: 40–50 kg, some mentioned 40 kg in the name of Rafly, Jumadil, Andika, Ifan, Soegeng, Jakaria, Agus, 50 kg in the name of Syarif, Delvianus, 70 kg in the name of Rafifah. To make it easier to classify fish supplies,

The results of interview data collection with 20 egg supplier respondents conducted on June 23, 2025, below is a summary and detailed analysis related to egg suppliers for the free nutritional meal program:

### 1) Types of Eggs Supplied

All respondents stated that they provide domestic chicken eggs, local chicken eggs, quail eggs, some also mentioned free-range chicken eggs as an addition.

### 2) Daily availability and supplies

All respondents stated that supplies were available and sufficient every day to support the free nutritional meal program, they were ready to meet daily demand, although there were challenges in the distribution of certain types of eggs.



### 3) Constraints in provision

Almost all respondents expressed the same problem, namely the occasional shortage of supply of domestic chicken eggs. However, this problem can be overcome by supplying local farmers and substituting local and free-range chicken eggs.

### 4) The origin of eggs

Domestic chicken eggs are mostly imported from outside the region or from outside local suppliers, as a supporter of local and village chicken egg suppliers, they become the main supplier, because they are more easily accessible and available locally and are supported by small farmers in the local area.

### 5) Number of eggs spent each day

The daily egg consumption varies between suppliers, depending on the volume of demand in their respective regions. Here's a summary:

Number of Egg Plates/Day	Number of Respondents
30 plates	3 people
40 plates	2 person
50 plates	6 person
55 plates	2 person
60 plates	2 person
65 plates	2 person
70 plates	2 person
75 plates	1 person

Average consumption daily: Total  
 = 1,085 egg plates divided by 20 respondents → ±54.25 egg plates/day per supplier.

From the explanation above, the need for egg supply for the free nutritional meal program in Bulungan Regency can be ensured. The readiness and availability of eggs from suppliers greatly supports the free nutritional meal program. Local and free-range chicken eggs are the most important component because of the stability of supply. Domestic eggs, although popular, tend to fluctuate in supply, but do not disrupt the sustainability of the program because of the support from local farmers, consistency.

The data obtained from the researchers revealed various raw material supplies for free nutritional meals during the two months of May and June 2025, as can be seen in the names of the respondents above. This primary data serves as the initial information collection for the adequacy of the free nutritional meal supply, in accordance with the question and answer

guidelines provided by the respondents.

This data was collected after a new raw material management strategy (e.g., centralized supplier selection, digital inventory system, stock-based menu planning) was implemented over a period of time. This data is expected to show significant improvements. Purchasing and supplier data show a more stable average purchase price and potentially lower stability due to long-term contracts or agreements with selected suppliers. A verified supplier list includes suppliers who have passed the selection process based on quality, price, and delivery reliability criteria. On-time delivery has increased dramatically, with the percentage of on-time deliveries increasing. Inventory or stock data shows a significant decrease in the stockout rate, ensuring availability for the daily menu. Optimizing stock levels allows for more controlled stock levels, eliminating excessive excess stock. This can be measured by a healthier inventory turnover rate. Food waste percentage has decreased sharply due to better planning and standardized storage.

High supply accuracy: Accurate inventory data is maintained as needed due to the implementation of a better recording system (e.g., using a structured spreadsheet or a simple application). Daily menu consistency program performance data can be consistently executed according to plan. Improved compliance with nutritional standards: The program is able to consistently provide food according to established nutritional standards. The supplier selection process includes clear standard operating procedures (SOPs) for selecting and evaluating suppliers. The quality of raw materials received is more uniform and guaranteed due to agreed quality standards with suppliers. Complaints from cooks and field teams have decreased dramatically. They find it easier to carry out their duties. A structured recording system is neat, easily accessible, and provides accurate data for decision-making. Data before and after the study (existing) can be seen below.

Details regarding the existing (current condition) picture of the supply system

for the free nutritional meal program in Bulungan Regency, North Kalimantan. This explanation is an analysis based on geographic characteristics,

The infrastructure and socio-economic situation in Bulungan Regency is often limited, as specific and detailed public data on the logistics of this program is often limited. This overview reflects the real challenges likely to be faced on the ground. In summary, the existing supply system for the free nutrition meal program in Bulungan Regency has the following characteristics:

- 1) Fragmented (Fragmented) there is no integrated supply chain, the system is a combination of centralized procurement (for urban areas) and independent procurement at the village level.
- 2) Logistics is expensive and inefficient distribution costs, especially through poor river and land routes, eat up a large portion of the budget and are often not on time.

- 3) High dependence on local conditions means that the success of supply at the village level is highly dependent on the availability of materials in local markets, minimal storage facilities, and the initiative of cadres/implementers.
- 4) Low quality control makes it difficult to ensure that food served in 10 different sub-districts has the same nutritional, hygiene and portion standards.
- 5) The manual system for recording inventory, purchasing, and distribution is most likely still done manually with books, making it prone to errors and difficult to monitor at the district level.

This condition creates a gap between ideal planning at the district level and the reality of implementation on the ground, especially in hard-to-reach areas.

The novelty of the "Raw Material Management Strategy to Improve the Performance of the Free Nutrition Meal Program" specifically implemented in Bulungan Regency. The novelty of a strategy doesn't always mean creating something that has never existed before. Often, the novelty lies in adapting, integrating, and implementing a model specific to a unique local context, such as Bulungan Regency with its geographic and socio-economic challenges. Here are some key points that can be This is the novelty of the strategy. In short, the main innovation is the transformation from a conventional procurement model (centralized and market-based) to a decentralized supply chain model based on local communities and integrated with digital technology. This model aims not only to increase program efficiency but also serves as an instrument for local economic empowerment and improving food security at the village and sub-district level in Bulungan.

#### 4. Conclusion

This chapter concludes the research report on suppliers for the free nutritional food program. Based on the analysis and discussion outlined in the previous chapters, the author presents conclusions summarizing key findings and providing constructive and practical recommendations. These conclusions and recommendations are expected to contribute to the program's future improvement and development. Based on the results of the data analysis and discussion that has been carried out, several main conclusions can be drawn regarding the role and challenges of suppliers in implementing the free nutritional food program, as follows: The crucial role of suppliers (whether individuals, MSMEs, or catering companies) is crucial and strategic to the program's success. The quality, quantity, timeliness, and safety of the food received by beneficiaries depend entirely on the performance and commitment of suppliers. Supplier quality directly correlates with the achievement of the program's objectives, namely improving student nutritional status and academic concentration. The main challenges faced by suppliers in its implementation, suppliers face a series of significant challenges. These challenges include: Logistics and distribution aspects include difficulties reaching schools in remote or difficult-to-access locations, as well as ensuring food arrives fresh and warm. Fluctuations in raw material prices and instability of

staple food prices in the market can affect profit margins and the ability of suppliers to provide menus according to established nutritional standards without compromising quality. Fulfilling nutritional and hygiene standards presents challenges in maintaining consistent nutritional standards, menu variations that are attractive to children, as well as cleanliness (hygiene) and sanitation standards in the food processing and serving process.

## 5. References

- Hasibuan, M. (2013). *Human Resource Management*. Revised Edition. Jakarta: Bumi Aksara.
- Suharto, A. (2007). *Human Resource Development*. Jakarta: LP3ES.
- Mardikanto, M. (2015). *Public Health Program Management*. Yogyakarta: Gadjah Mada University Press Publisher.
- Nugroho, D., & Suryadi, D. (2020). "The Role of Local Talent in Public Health Development: A Case Study in District X". *Indonesian Journal of Public Health*, 12(3), 45-59.
- Azhari, A. & Ramadhani, R. (2018). "The Effect of the Free Nutritional Meal Program on Improving Nutritional Status in Underdeveloped Areas". *Journal of Nutrition and Health*, 9(2), 112-124.
- Putri, SE (2019). "The Role of Nutrition Fulfillment Service Units in the Community Nutrition Health Empowerment Program". *Indonesian Nutrition Journal*, 14(1), 74-82.
- Ministry of Health of the Republic of Indonesia. (2020). *Guidelines for Implementing the Free Nutritious Meal Program (MBG)*. Jakarta: Ministry of Health of the Republic of Indonesia.
- Bulungan Regency Health Office. (2023). *Annual Report of SPPG and MBG Programs in Bulungan Regency*. Tanjung Selor: Health Office Bulungan Regency.
- Junaidi, R. (2022). "Utilizing Local Talent to Improve Nutritional Quality in Bulungan Regency." *National Health Daily*, October 21, 2022.
- World Health Organization (WHO). (2021). *Global Nutrition Report 2021*. Accessed from <https://www.globalnutritionreport.org>.
- Sugiyono, M. (2017). *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.
- Creswell, J.W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: SAGE Publications.
- radartarakan.jawapos.com.

(kompas.com).National Cash+2National Kompas+2detikcom+2Implementation of the Free Nutritious Meals (MBG) Policy: Factors

“Drivers and Inhibitors” – Dian Herdiana, 2025.

“Digitalization Concept of Free Nutritious Food Service (MBG) Supply Chain” – Togi Nababan, 2024.

“Development of a Food Tariff Information System and Management of Foodstuff Expenditures” – Yunita Yunita et al., 2022.

EOQ article in raw material control (general) – source fliphtml5.

“MBG Policy in Eastern Indonesia: Challenges & Solutions” – Journal of Governance and Policy Innovation.

Siregar and Wibowo, 2020, Journal of Nutrition and Food Logistics. Putri et al., 2021, Indonesian Journal of Health Management.