



## Digitalization of Public Policy: Addressing Stunting in North Bolaang Mongondow District

Sarfan Tabo<sup>1</sup>, Haedar Akib<sup>2</sup>, Muh. Nur Yamin<sup>3</sup>, Wahira<sup>4</sup>, Andi Kasmawati<sup>5</sup>, Manan Sailan<sup>6</sup>

<sup>1,2,3,4,5,6</sup> *Makassar State University, Indonesia.*

\*Email: [sarfandjtabo@gmail.com](mailto:sarfandjtabo@gmail.com)

**Abstract:-** This research aims to analyze strategies for handling stunting through digitizing public policies and local wisdom approaches in North Bolaang Mongondow Regency. Although local government data shows a decreasing trend in stunting prevalence, significant differences were found compared to Indonesian Health Survey data which showed an increase. The aim of this research is to evaluate the implementation of stunting management policies and identify factors that influence their effectiveness, especially in integration with *Integrated Regional Welfare System (SERDADU)*. The approach used is qualitative, with data collection through in-depth interviews, field observations and document analysis. The research results show that the success of policy implementation is influenced by four main factors: top-down communication, availability of human resources with a ratio of health workers of 1.26%, disposition or commitment of implementing actors through innovative programs, and a coordinated bureaucratic structure through a Decree from the Team for the Acceleration of Stunting Reduction. One of the digital innovations that supports policy effectiveness is program integration *Quit Stunting* with SERDADU, which enables real-time, data-based cross-sector monitoring. This program has been proven to be able to reduce the prevalence of stunting by 4.5% in one year—from 26.40% in 2021 to 21.90% in 2022. This research contributes to the development of digital and local wisdom-based health policy implementation models. This research highlights the importance of investing in digital technology and infrastructure as a strategic step to overcome stunting in the modern era.

**Keywords:** *Stunting, Digitalization, SERDADU, Health Policy, Local Wisdom.*

### 1. Introduction

Stunting has become a crucial public health problem in Indonesia, with a national prevalence reaching 24.4 percent (1). Implementation of policies in handling stunting is the main focus of the government from central to regional levels in an effort to reduce stunting rates. Implementation of policies in handling stunting is the main focus of the government from central to regional levels, especially in efforts to achieve the 2020–2024 RPJMN target of 14 percent. Handling stunting requires a multi-sector approach and cross-stakeholder involvement, as well as strategies that are adaptive to regional social and geographic dynamics.



One of the innovations currently being pursued is the integration of digitalization into health program governance through the Integrated Regional Welfare System (SERDADU), which consolidates data, services and real-time monitoring between sectors.(2)

In North Bolaang Mongondow Regency, the prevalence of stunting shows fluctuating dynamics. Based on data from the Health Service, the stunting rate fell to 1.61 percent in 2021, but increased again to 2.21 percent in 2022, with 115 cases spread across several regions (3). Ollot Community Health Center recorded the highest number (46 cases), followed by Bolangitang Community Health Center (38 cases), and Tuntung Community Health Center (36 cases). Even though the RPJMD target of 10 percent has been achieved, there are still pockets of areas prone to stunting that require data-based strategic interventions and more efficient cross-agency coordination (4).

Implementation of stunting management policies is a crucial stage that determines the effectiveness of government intervention (5). In this context, factors such as bureaucratic behavior, organizational culture, and local leadership have a major influence. digitalization through SERDADU can be a solution to coordination obstacles and limitations of traditional monitoring systems (6). However, its implementation still faces challenges, including unequal distribution of health workers, limited digital infrastructure in remote areas, and low community digital literacy (7).

As stated by Banjarnahor (2022), digitalization is a change effort implemented by an organization or government institution to adopt digital technology in its operations. This digitalization can have an impact on various aspects of life, including the administrative system in providing education and information regarding stunting data. In this context, digitalization is focused on innovation in government administration systems in an effort to deal with stunting in a sustainable manner. This innovation aims to increase efficiency, effectiveness and transparency in the implementation of stunting management (8).

Digitalization in the era of industrial revolution 4.0 opens up new opportunities in tackling stunting. The use of technology such as big data, artificial intelligence (AI), health applications and telemedicine offers a more efficient and targeted approach. Digital technology makes it possible to collect and analyze real-time nutritional data, monitor children's growth, and deliver nutritional education to the public through various platforms. According to research by Lee et al. (2021), digital-based interventions can increase the efficiency of nutrition programs by up to 40% by minimizing manual errors and speeding up the dissemination of information (9).

In Indonesia, several digital initiatives such as the "e-PPGBM" (Electronic Community-Based Nutrition Recording and Reporting) application have begun to be implemented to help monitor children's nutrition. However, the implementation of this technology still faces major challenges, such as limited internet access in remote areas, lack of digital literacy among the



community, and the need for significant technology investment. Therefore, digitalization must be implemented holistically, involving all stakeholders, from the government, private sector, to society (10).

Apart from that, digitalization also opens up opportunities to create better cross-sector collaboration between government, health workers and society. For example, application-based programs such as "e-PPGBM" (Electronic Community-Based Nutrition Recording and Reporting) have demonstrated effectiveness in integrating nutritional data in Indonesia. Thus, digitalization is not only a supporting tool, but also the main pillar in the transformation of the stunting management system in the modern era (11).

Other problems include less than optimal community participation due to low understanding of the importance of child nutrition and parenting patterns which are still influenced by local culture. On the other hand, local wisdom such as the value of mutual cooperation and community-based programs such as Quit Stunting In fact, it becomes potential social capital to support successful policy implementation, especially if integrated with digital technology and information systems such as SERDADU (12).

From a macro perspective, the high rate of stunting has implications for the quality of human resources and regional productivity. Children who experience stunting are at risk of experiencing long-term cognitive and health development disorders, which ultimately have an impact on regional competitiveness and economic growth. Therefore, investment in a digital-based stunting management system that is integrated and responsive to the local context is very urgent (13).

At a macro level, the high prevalence of stunting has an impact on regional development (16). The resulting economic burden includes higher health costs and decreased work productivity. Regional competitiveness can be hampered due to suboptimal quality of human resources. The potential for regional economic growth cannot be maximized due to limited workforce capacity. Investment in stunting management programs is crucial to prevent long-term economic losses (17).

Even though various studies have been conducted, there are still gaps in understanding the implementation of stunting management policies at the district level. Previous studies have not specifically analyzed how the geographic and sociocultural characteristics of North Bolaang Mongondow Regency influence the effectiveness of policy implementation. Local factors influencing program success have not been explored in depth (23).

In addition, previous research has not paid special attention to the role of community social capital in supporting the implementation of stunting management policies. Aspects of local leadership and traditional wisdom that can be integrated into digitalization strategies for implementation have not been widely studied. The dynamics of coordination between



stakeholders at the district level require further analysis. Program adaptation strategies to specific regional conditions still require in-depth study.

This research aims to analyze the implementation of government policies in handling stunting in North Bolaang Mongondow Regency, identify factors that influence its effectiveness, and formulate strategies for improving program performance. Specifically, this research explores the integration of SERDADU as a cross-sector digital system, the role of social capital and local wisdom in supporting the success of the program, as well as the dynamics of coordination between regional stakeholders (24).

This research presents novelty through several approaches. First, this research proposes a cross-sector collaboration model between government, the private sector and society to maximize the potential of digital technology in handling stunting. An inclusive approach was developed by considering geographic and socio-economic conditions to bridge the technology access gap in remote areas. In addition, this research offers a sustainable solution that can be adapted in the long term, taking into account investment needs and increasing society's digital literacy. Another novelty is the use of real-time data analysis for faster and more accurate decision making in overcoming stunting.

## 2. Literature Review

Lee et al. (2021) in their research found that digital-based applications designed to monitor children's nutritional intake can increase monitoring efficiency by up to 40%. This study highlights that digital technology, such as big data and artificial intelligence (AI), can help governments and health workers identify groups at risk of stunting more quickly and accurately. In addition, digital-based interventions have been proven to be able to expand the reach of health education to people living in remote areas (14).

Research by Noy et al. (2020) also emphasized the importance of digitalization in increasing access to health services. They noted that telemedicine-based programs allow families living in remote areas to still receive consultation services and monitoring children's growth and development. This study shows that telemedicine can reduce geographic barriers that often become obstacles in stunting interventions. In Indonesia, the implementation of the "e-PPGBM" (Community-Based Electronic Recording and Reporting of Nutrition) program is an example of the success of using digitalization to overcome stunting. According to a report from the Indonesian Ministry of Health (2022), this application allows the collection of children's nutritional data in a more structured manner, making it easier for the government to make data-based decisions. However, challenges such as limited technological infrastructure and low digital literacy among the community are still the main obstacles in implementing digital technology on a national scale (15).



Previous research by Sunaryo et al., (2022) revealed that the successful implementation of stunting management policies depends on strategies that are comprehensive and adaptive to local conditions. (19) This study emphasizes the importance of analyzing target groups and the social environment in program planning. A multi-sector approach and active community involvement were found to be key success factors. An effective monitoring system and regular evaluation are needed to improve the program. The capacity of implementers at the field level needs to continue to be increased (20).

Agustino & Eko, (2022) in their research found that the implementation of public policies requires clear management strategies and structured procedures. This research identified that collaborative networks between stakeholders greatly determine the effectiveness of implementation. The context and content of policies must be adapted to the characteristics of the target area. The active role of government officials in building collaboration is the key to success. Continuous evaluation is needed to identify areas of improvement (22).

### 3. Methods

This type of research uses a descriptive qualitative approach, which aims to explore in depth the implementation model for stunting management policies in North Bolaang Mongondow Regency, especially in the context of digitalization and the use of the Integrated Regional Welfare System (SERDADU) as an instrument for strengthening cross-sector coordination.

This research focuses on how stunting management policies are implemented at the regional level, as well as how aspects of digitalization and local values are integrated into these strategies. This approach allows researchers to understand the social, cultural and bureaucratic context that influences the implementation of policies as a whole. Data collection techniques are carried out through in-depth interviews with key informants, including local government officials, health workers, SERDADU data managers, and community leaders who are directly involved in the stunting management program. In addition, field observations were used to see implementation practices at the location, as well as document analysis of regional policies, activity reports, and digital reporting systems.

Data analysis was carried out using a thematic approach, where the data obtained was analyzed inductively to find patterns, main themes, and meanings related to policy implementation strategies, use of digital systems (SERDADU), and integration of local wisdom such as Will stop. The analysis process is carried out continuously through the stages of categorization, interpretation of meaning, and drawing conclusions that are reflective and contextual. This qualitative descriptive approach was chosen because it is able to produce a holistic and in-depth picture of the dynamics of policy implementation in the field, including obstacles, adaptation strategies and digital innovations implemented. It is hoped that the results of this research can



contribute to the development of stunting policy implementation models based on digitalization, cross-sector collaboration and local empowerment (25).

## 4. Results

### Stunting Management Policy.

The Indonesian government's efforts to handle national stunting are reflected in the priority programs in the 2020-2024 RPJMN (National Medium Term Development Plan), with the prevalence of stunting falling by 14%. This target has not been met, where in 2023 the stunting rate will still be at 21.5% (*healthy my country*, 2024). However, since 2018 the national stunting rate has decreased, although not much and has reached the target. (26)

Stunting is a serious problem for human resource development. According to Khairani (2020), stunting is not only a problem of impaired physical growth, but also causes children to become sick easily, apart from that, there is also interference with brain and intelligence development, so that stunting is a big threat to the quality of human resources in Indonesia. (27)

Handling stunting in Indonesia is a comprehensive effort involving various parties and sectors, from the central government to villages. These efforts include specific interventions related to health and nutrition, as well as sensitive interventions related to environmental, social and economic factors. Despite the challenges, various policies and programs that have been implemented have shown positive results, and continue to be improved to achieve the target of lower stunting prevalence in the future. multisectoral approach and involving central, regional and community governments. This policy sets a target to reduce the prevalence of stunting in Indonesia to 14% by 2024. (28)

Implementation of stunting management policies and programs in Indonesia is not only carried out at the central level, but also at the regional level through regional action plans. Local governments at the provincial, district and village levels play an important role in adapting national programs to local conditions. They are also tasked with forming a Stunting Reduction Acceleration Team whose function is to coordinate programs at the local level and optimize resource utilization (3).

Various kinds of derivative policy products are implemented in various districts/cities throughout Indonesia to reduce or even eliminate stunting rates. In North Sulawesi province down to the district level, various innovations regarding the prevention and management of stunting can be seen in existing programs. Indonesia's target to reduce the stunting rate by 2022 is around 14%, in fact it is inversely proportional to the conditions in the province of North Sulawesi (29).

For example, this can be seen in the following table:

Table 1.1 Prevalence of Stunting in North Sulawesi 2023, (SKI, 2023)

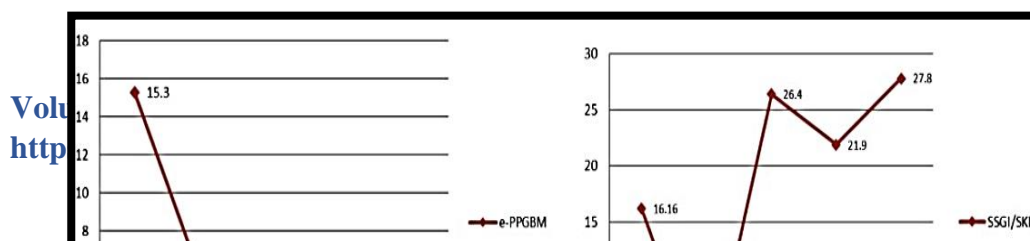


No.	Age	Stunting (%)
1.	0-23 Months	14.6
2.	0-59 Months	14.8
3.	5-12 Years	12.2
4.	13-15 Years	16.6
5.	16-18 Years	20.1

Conditions according to the national target in North Sulawesi can only be reflected in children aged 5-12 years with a presentation of 12.2, while vulnerable ages 0-23 months, and 0-59 months as ages 1,000 HPK are above 14.00%. On the other hand, according to the North Sulawesi Indonesian Nutrition Status Survey (SSGI) in 2023, overall stunting has been successful, with a prevalence of 12.37%. North Bolaang Mongondow Regency, as part of North Sulawesi province, in 2022 contributed 2.21% to the accumulated stunting in the province (North Sulawesi Province, 2022) (16).

The Indonesian government's commitment to handling stunting is a strategic and integrated step that reflects serious efforts to overcome chronic nutritional problems that affect children's growth and development. The government has set a target to reduce stunting prevalence to 14% by 2024 as part of its national health development vision. This target is the basis for policies in various sectors, both at the central and regional levels. (30) Regional governments are instructed to include stunting management programs in regional development planning and budgeting, as well as allocate budgets specifically for related activities. This includes the integration of stunting management programs in the RPJMD and the involvement of village officials in efforts to prevent and handle stunting (31).

North Bolaang Mongondow has seriously made efforts to deal with stunting since 2019 with the issuance of Regent Regulation number 18 concerning *Efforts to Prevent and Reduce Stunting*. Since this serious effort began, the regional government claims to have succeeded in reducing the amount of stunting. Based on e-PPGBM data, in 2019, the prevalence of stunting which reached 15.30% has decreased in 2022 to 2.21% (32). This illustrates that there has been an 85.54% reduction in the number of stunting that has been overcome, if we take a 100% reduction in the benchmark of a reduction of 15.30% to 2.21%. On the other hand, SKI (Indonesian Health Survey) data reveals that stunting in North Bolaang Mongondow Regency has increased, namely as follows:





### *Figure 1.1 Prevalence of Stunting in 2019-2023*

Based on the research findings above, it shows that the existing implementation aspects of stunting management carried out by local governments have a strategic role in efforts to handle stunting at the local level. They are responsible for implementing national policies into concrete actions on the ground, taking into account the specific conditions and needs of each region.(33)

Various efforts were also continued with the issuance of Regent's Decree number 447 of 2022 concerning the Determination of Mairu Molihut Stunting Innovations in Handling and Accelerating Stunting Reduction in the District. North Bolaang Mongondow. Mairu Molihuto stunting is a form of innovation by the district regional government. North Bolaang Mongondow for handling stunting. Mairu molihuto itself comes from the Kaidipang language which means 'let's work together'. Based on this understanding, Mairu Molihuto stunting aims at a joint movement to accelerate the reduction of stunting. This innovation is then often referred to with just two words 'molihuto stunting. Molihuto stunting in this research uses 4 indicators based on Edward III's theory, namely: Communication, Resources, disposition and bureaucratic structure (34).

Overall, the success of implementing the stunting policy model is very dependent on how these four factors: communication, resources, apparatus attitude, and bureaucratic structure are managed and integrated in the policy implementation process (35). A deep understanding of these factors will help identify areas that need improvement and ensure that stunting management policies can achieve the desired results. Policy implementation according to Edward III's theory emphasizes four important variables that influence the successful implementation of stunting management policies in North Bolaang Mongondow district. These four variables are:

#### **a. Communication**



Policy information regarding stunting has been disseminated through various media, such as posters, radio and social media. However, there are still obstacles in public understanding, especially in remote areas. Many families do not understand the importance of nutrition in the First 1,000 Days of Life (HPK), which is a critical period in preventing stunting (36).

Findings in the field show that the implementation of the Molihuto stunting model in North Bolaang Mongondow has communication characteristics that place the village government as the main link between the local government and the community. This creates a communication pattern that tends to move from top to bottom, or what is known as top-down. In this model, instructions and information from the regional government are passed on to the community through village or sub-district government intermediaries. The main features used in conveying this information include joint meetings and circulars issued by the regional government. The communication pattern above as shown by the results of the interview with the Head of East Bolangitan District, Mr. YB, is that:

*"The communication pattern is through interviews with cadres and communities whose families suffer from stunting. Because cadres are the officers closest to the community, and families are the people who interact directly in handling stunting, information is also disseminated through the Integrated Regional Welfare System Application (Soldiers provide information related to stunting data.)"*

YB's opinion is in line with what was expressed by KTU Biontong Community Health Center, YM's mother regarding communication patterns, who said that:

*"...From the regional government to the Working Group, they program stunting activities at posyandu in the form of letter notifications, the regional government receives monthly reports through the health service, the health service receives reports from the puskesmas through posyandu activities, "Because so far the implementation of activities is running well in accordance with the stunting intervention plan that has been carried out by officers and across sectors."*

Based on the results of the interview above, it shows that the elements involved in this top-down communication model include Regional Government Organizations, Village/District Governments, and the community. The regional government acts as the main authority that makes decisions and establishes policies, while the village/district government acts as an intermediary that conveys information and instructions to the community (37). In this framework, society is positioned more as a target group that receives direction rather than as an active participant in the decision-making process.

The Molihuto stunting communication is as follows:

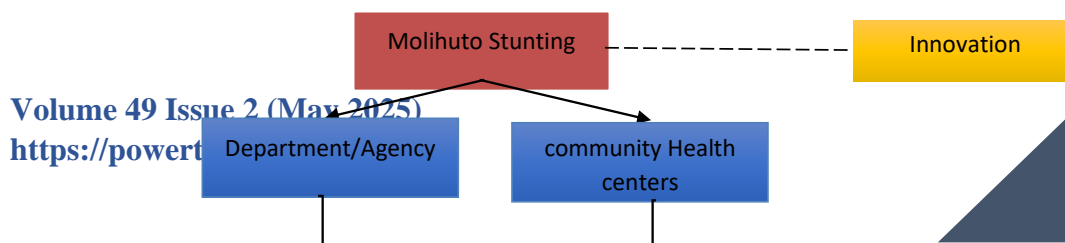


Figure 1.2 Molihuto Stunting Communication Pattern.

The top-down communication model in handling stunting is a communication approach where policies, directions and instructions are prepared by the central government and then passed on in stages to lower levels of government until they reach the community. This model prioritizes a centralized and systematic communication structure, aimed at ensuring uniform understanding and implementation of programs throughout the region. (38)

Digital technology has made a significant contribution in overcoming classic challenges related to stunting prevention, such as limited health workers and difficult access to health services. The use of health applications, such as SERDADU, makes it easier to record children's height and weight data, thereby enabling evidence-based interventions. Studies show that this application improves data accuracy by up to 40%, in line with the findings of Lee et al. (2021), which emphasizes that digital technology is able to expand the reach of health services to remote areas.

The communication pattern through the Integrated Regional Welfare System (SERDADU) is a digital innovation developed to integrate data and services between sectors in order to increase the effectiveness of social welfare programs, including handling stunting. SERDADU is designed as a data-based platform that is able to bring together information from various agencies such as the health service, social service, women's empowerment and child protection service, and village government. The following applications are related to the SERDADU system:





Figure 1.3. Soldier Application

## b. Resource

North Bolaang Mongondow Regency faces limited budget and health personnel. In several villages, health facilities such as Posyandu are inadequate. In addition, the distribution of health workers is uneven, with a greater focus on urban areas compared to remote villages.

Resources as a factor have four indicators, namely: 1) Human Resources (HR); 2) Financial Resources (SDF); 3) Equipment Resources (SDP); 4) Information Resources (SDI), and, 5) Authority Resources (SDK). Human resources in implementing molihuto stunting in Kab. North Bolaang Mongondow is a determining factor along with the SDF. These two elements can be said to have been fulfilled. Meanwhile, Kab. North Bolaang Mongondow has allocated APBD and APBDes to accelerate stunting reduction, from 2022-2024. (6)

Resources are one of the factors that have an important role in achieving organizational goals. According to Edward III, several resources are important factors in implementing policies. Implementation orders may be passed carefully, clearly and consistently, but if implementers lack the resources needed to implement existing policies, then policy implementation tends to be ineffective. Resources selected based on the principles of effectiveness and efficiency can be a driving force so that policy implementation can run well. (21)

Resources are an indicator of the success of a work program. Where individual quality is prioritized in the process of implementing an activity. The human resources prepared must be trained and have high dedication. Related data can be seen from the following table.

Table 1.2 number of district health workers. North Bolaang Mongondow (BPS North Sulawesi Province, 2023)

Nurse	Pharmacy	Nutritionist
38	324	182



Table 1.3 Stunting budget allocation (PPT North Bolaang Mongodow District Government 30 May 2024)

No.	Year	APBD	APBDes
1.	2022	32.49 billion	15.53 billion
2.	2023	21.89 billion	15.67 billion
3.	2024	14.36 billion	15.37 billion

The purpose of resources is to achieve success in achieving goals. all resources are mobilized to reduce stunting starting from human resources, equipment and others such as mobilizing health and nutrition workers. Resources in handling toddler stunting include human resources, equipment, authority and budget. Resources in handling toddler stunting need to be provided because without resource support, success will not be achieved.

Based on the results of an interview with Mrs. MT as Head of the North Bolmong Health Service, that:

*"The placement of human resources is the key to the success of handling stunting. According to Mrs. MT, the placement of human resources is in accordance with standards and specifications, which are spread across various OPDs and related institutions in handling stunting. These human resources are also given training before they implement and educate the community regarding handling stunting in North Bolmong district."*

MT's opinion is in line with what was stated by YM who said that:

*"...resources for health personnel are adequate, but there are still overlapping activities between the relevant agencies, so there needs to be a standard SOP for the division of tasks, then there also needs to be additional nutrition officers who provide education at all times regarding stunting management in remote areas. Posiyandu cadres are very adequate, because they are taken from every village. However, these cadres still need regular training, because the pattern of stunting management is very serious and needs to be addressed together and thoroughly."*

Based on the results of the interview above, furthermore, the increase in the ratio of health workers in North Bolaang Mongondow Regency in the last four years shows encouraging progress. In 2018, this ratio was still at 0.49%, which reflects the limited health personnel available to serve the population. (39). However, efforts to improve and strengthen the health sector began to appear in 2019, where the ratio of health workers rose to 0.60%. This increase shows a significant increase in the number of health workers, although challenges in meeting ideal needs still exist. (40)



This improvement continued with an even bigger spike in 2021, where the ratio of health workers reached 1.25%. This increase indicates improvements in access and distribution of health workers, which is very important in ensuring better health services for the community. In 2022, this ratio will increase slightly again to 1.26%, showing the stability and commitment of local governments in strengthening the health sector. This increase reflects the success of various initiatives and programs that have been implemented to increase the number and distribution of health workers in this area, as well as showing that North Bolaang Mongondow is getting closer to adequate health service standards. (41)

Thus, based on the results of research through interview techniques and data collection, it can be explained that the resource indicators according to George C. Edward III's theory are working well because all parties, including the North Bolmong Health Service (DINKES) and the related OPDs, are each involved in handling stunting and participating and directing all available resources to support stunting reduction. Because resource indicators are very important in implementing a policy and this is very important to implement. Human resources in implementing a policy require more attention, this then ensures that the policy implementation process will run in accordance with the targets to be achieved. Human resources (HR) play an important role in implementing stunting management policies, especially at the local and national level.

Figure 1.4 Presentation of Education and Health Facilities in North Bolaang Mongondow Regency (North Bolaang Mongondow Regency 20219-2025)

No	Subdistrict	Hospital	Polyclinic	Clinic	Posyandu	Health Center	Pustu	Pharmacy
1	Pinogaluman	0	0	0	28	2	2	1
2	Kaidipang	0	1	1	18	1	5	3
3	Bolangitang Barat	1	0	0	20	2	8	3
4	Bolangitan Timur	0	0	0	20	3	5	0
5	Bintauna	1	0	1	16	2	1	2
6	Sangkup	0	0	1	16	2	3	0

### c. Bureaucratic Disposition/Attitude

The commitment of health workers and village officials in implementing stunting management programs is quite high. However, excessive workload and lack of incentives are the main obstacles. On the other hand, several community empowerment programs are starting to show positive results in increasing community participation.



The regional government of North Bolaang Mongondow Regency has demonstrated a proactive and responsive bureaucratic attitude in implementing stunting management policies, trying to ensure that these policies are effective and on target. Referring to Edward III's theory, the disposition or attitude of policy implementers is one of the main factors that determines the success of policy implementation. In this context, the bureaucratic attitude shown by local governments reflects a strong commitment and full awareness of their responsibilities as implementers of stunting management policies. (18)

This is realized through several concrete actions, including the willingness to innovate and adopt a more inclusive and participatory approach in developing intervention programs. One concrete example of this innovation is the "Molihuto Stunting" program, which is designed to strengthen communication between policy implementers and the public, thereby creating better synergy in implementing stunting management policies. (42)

In general, the government's attitude in dealing with stunting can be grouped into two broad categories: first, as preventing stunting; and second, as a handling of existing stunting cases. This grouping is based on the type of performance of each local government organization (OPD) involved. Prevention groups, for example, focus on outreach and advocacy activities to prevent stunting. This is reflected in a statement from the Department of Women's Empowerment, Child Protection, Population Control and Family Planning (Dinas PPKBPPPA), which states that:

*"We, the PPKBPPPA Service, have the main task of preventing stunting through outreach and advocacy activities to the community. We focus on providing education regarding the importance of parenting, balanced nutrition, reproductive health, and an environment that supports children's growth and development. Counseling is carried out regularly at the village and sub-district levels, in collaboration with posyandu cadres, community leaders and other related parties. We also advocate to local governments to ensure that stunting prevention programs run according to plan and receive adequate budget support. Meanwhile, to "Handling stunting cases that have been detected, the main responsibility lies with the Health Service, which has the authority and resources to carry out medical intervention, provide additional food, and refer to health facilities if necessary."*

On the other hand, OPDs such as the Health Service are more specifically tasked with directly handling stunting cases, although they are also involved in prevention outreach activities. This shows that although the type of OPD performance can vary, some agencies such as the Health Service are able to play a role in both work groups simultaneously, both as prevention and management of stunting. The following two interview excerpts illustrate the involvement of the Health Service in both roles:



Handling of Stunting by the Health Service as per the results of an interview with Mrs. MT:

*"The Health Service has clear technical instructions (juknis) and follows established procedures. The initial step is to collect data through weighing children's weights to identify stunting based on MPPGBM data. Children who are detected as stunting will receive specific interventions, such as providing additional food, and will be directed to the community health center for further examination. If necessary, children will be referred to a hospital for a pediatrician's diagnosis, for example to detect hormonal disorders. Children diagnosed with stunting will be given special milk according to a doctor's prescription, which is not available on the market, and their development will be monitored weekly. For example, five children went through this process and now their weight and height are back within the normal range."*

Involvement of the Health Service in Stunting Prevention:

*"We will screen each teenager from school, village to door to door. There is also kabuling (escorting pregnant women, escorting women giving birth and giving birth), katinting (escorting stunted children)."*

From the results of research interviews, the first one describes in detail how the Health Service handles stunting cases directly. With existing technical guidance, this agency carries out comprehensive nutritional weighing and monitoring to identify children who are indicated to be stunted. Furthermore, children who are detected as having stunting are directed for further examination at the health center or hospital to ensure the correct diagnosis and receive the necessary intervention, such as providing special milk according to the doctor's prescription. These steps are carried out systematically and measurably, with close monitoring of the child's development every week. (5)

The second excerpt shows the involvement of the Health Service in prevention efforts, which are carried out through screening programs for teenagers in schools, villages and house to house. This program includes activities such as "kabuling" (escorting pregnant, laboring, and birthing mothers) and "katinting" (escorting stunted children), which reflect a comprehensive approach to stunting prevention, involving not only children, but also pregnant and breastfeeding mothers (43).

#### **d. Bureaucratic Structure**

Coordination between agencies, such as the Health Service, Education Service and village government, is not yet optimal. Lack of data integration between sectors hinders program monitoring and evaluation. In addition, overlapping programs often cause inefficiencies in policy implementation. (36)



The bureaucratic structure is basically not much different from the determining factors in the communication model used. The tendency is for local governments, in this case, agencies and departments to be at the highest level in implementing policies. Villages and Community Health Centers are units that connect with policy targets, namely the community. (44)

The bureaucratic structure has a significant influence on policy implementation. The aspect of the bureaucratic structure is the standard operating procedure (SOP). (45) The purpose of the bureaucratic structure is so that the policies made are carried out well in accordance with the provisions so that red-tape does not arise, namely complicated bureaucracy. In North Bolmong Decree No. 18 of 2019 concerning Stunting Prevention Efforts, it is explained that those involved in handling stunting start from the government, academics and others, and their duties are explained in the decree and what is done to handle stunting regarding the bureaucratic structure.

Head of PMD, Mr. ABD stated that:

*"The bureaucratic structure can be seen from the decree of the team for accelerating the handling of stunting because everything from that decree carries out activities, as well as giving birth to a chat-like policy (an integrated joint movement to prevent stunting). Planned activities are carried out jointly by all village governments and all components of society."*

In the field of HR analysis for apparatus in the field of socio-cultural planning and human resources at Bapelitbang, Mr. AP stated that;

*"...We are always guided by the regent's regulations, so the structure can be seen in the Decree of the North Bolmong Stunting Reduction Acceleration Team (TPPS), as well as formulating integrated policies between OPDs by providing a budget for each relevant OPD to carry out obligations that are directly related to stunting management."*

In this structure, local governments through agencies and departments function as policy holders who are responsible for coordinating strategic programs, such as handling stunting. (46) They have the task of designing policies, setting implementation standards, and ensuring the availability of necessary resources. Agencies and agencies at the district level usually have greater capacity in terms of resources, both in terms of budget, workforce and infrastructure, which allows them to regulate the course of policies in accordance with the stated objectives.

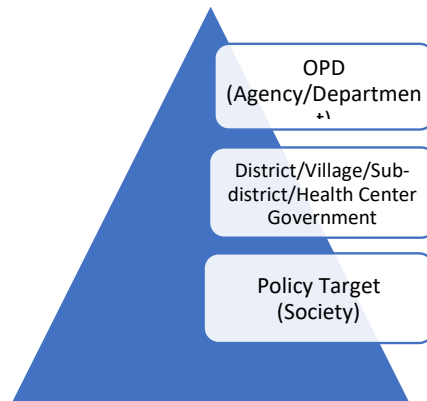


Figure 1.5 Stunting Management Structure.

Overall, this bureaucratic structure aims to create synergy between policy formulation at the regional level and implementation in the field. Even though each level has its own roles and responsibilities, they work in an interrelated system to achieve the same goal, namely improving community welfare, including handling the problem of stunting. The creation of a good achievement is the right formulation in determining the structure. (26)

Handling stunting in North Bolaang Mongondow Regency reflects the importance of strengthening the policy implementation system at the local level. Effective communication between government and society is the key to increasing awareness and participation. Providing adequate resources, including a larger budget allocation for the health sector, is essential to support the success of the program (28). In addition, cross-sector coordination can reduce policy overlap and increase the efficiency of program implementation (27).

## 5. Discussion

The implementation of the stunting handling policy in North Bolaang Mongondow Regency shows that there are serious efforts from the local government through the Molihuto Stunting program which started in 2019. Data shows a significant reduction in the stunting rate from 15.30% in 2019 to 2.21% in 2022 based on e-PPGBM data, indicating the success of the program was 85.54% (32). However, there are differences in data with the Indonesian Health Survey (SKI) which actually shows an increase in stunting rates, raising questions about the accuracy of measurements and effectiveness of the program. (47)

The regional government has issued various policies to support this program, including Regent's Regulation number 18 concerning Stunting Prevention and Reduction Efforts and Regent's Decree number 447 of 2022 concerning the Determination of Mairu Molihut Stunting Innovation (48). This program adopts a mutual cooperation approach which is reflected in the name "Mairu molihuto" which comes from the Kaidipang language, indicating an effort to integrate local values in policy implementation. Implementation of this policy involves various



stakeholders from district to village level, creating a comprehensive structure for handling stunting (23).

In terms of communication, policy implementation uses a top-down model with the village government as the main link between local government and the community (49). The research results show that policy information has been disseminated through various media, one of which is the use of the SERDADU application, but there are still obstacles in public understanding, especially in remote areas (36). This communication pattern has strengths in terms of message uniformity but also has limitations in terms of active community participation in decision making (38). Policy communication is carried out through joint meetings and circulars, with posyandu cadres playing an important role as the spearhead of communication with the community.

The resource aspect shows a positive increase in the ratio of health workers, from 0.49% in 2018 to 1.26% in 2022 (40). North Bolaang Mongondow Regency has allocated APBD and APBDes to accelerate stunting reduction for the 2022-2024 period (6). Even though there has been an increase in resources, there are still challenges in terms of unequal distribution of health workers and overlapping duties between related agencies (50). Data shows that the number of health workers is quite significant with 38 nurses, 324 pharmacy workers and 182 nutrition workers, but still requires capacity building through regular training (51).

The disposition and structure of the bureaucracy shows a strong commitment from local governments, reflected in the clear division of roles between preventing and handling stunting (18). Innovative programs such as "kabuling" and "katinting" demonstrate a comprehensive approach to stunting management (5). The existing bureaucratic structure has regulated the division of tasks and responsibilities through the Decree of the Team for the Acceleration of Stunting Reduction, although there are still challenges in inter-agency coordination and data integration (44).

The findings of this research have important implications for the development of stunting management policies at the regional level. The success of the Molihuto Stunting program in reducing stunting rates shows that an approach that integrates local values with formal policies as well as digitizing stunting policies can be an effective model for implementing public health policies (52). The top-down communication model applied, although effective in disseminating information, shows the need to develop more participatory communication strategies to increase community involvement in stunting management programs (53).

The increase in the ratio of health workers and special budget allocation for stunting programs shows the regional government's commitment to dealing with this problem (54). However, findings regarding unequal distribution of health workers and overlapping tasks indicate the need for improvements in resource management and coordination between agencies (55). This



has implications for the need to develop a more integrated and efficient management system in implementing stunting programs in the future (28).

This research shows several similarities with previous research in terms of the importance of cross-sector coordination and the role of local governments in implementing stunting policies in providing digitalization of stunting management. As found by (3), the role of local governments is crucial in adapting national programs to local conditions. This research also confirms findings (31) regarding the importance of integrating stunting management programs in regional development planning and budgeting.

Significant differences are seen in the approach to policy implementation, where this study found a more dominant top-down communication model, while previous research by (35) emphasized a more participatory approach. This research also reveals local innovations such as the Molihuto Stunting program which have not been found in previous studies. The mutual cooperation approach in implementing stunting policies is a unique finding that differentiates this research from previous studies (56).

The "kabuling" and "katinting" programs found in this study show a more comprehensive approach compared to previous research. (42) in their research focused more on the technical aspects of policy implementation, while this research revealed the importance of integrating local values and community empowerment in handling stunting. This difference shows the evolution in approaches to handling stunting at the regional level (57).

This study has several limitations that need to be noted. First, the significant differences between e-PPGBM and SKI data indicate limitations in terms of the validity of the data used (29). Second, this research focuses more on aspects of policy implementation from the government's perspective and does not explore the views of the community as program beneficiaries. Third, the relatively short research period limits understanding of the long-term impacts of the Molihuto Stunting program (58).

Overall, digitalization offers innovative and efficient solutions in dealing with various resource limitations that have been an obstacle in handling stunting. Technology such as the SERDADU health application enables more accurate and evidence-based data recording, while digital-based services provide direct access to health workers for communities in remote areas. The use of big data analytics can also help identify areas with high stunting prevalence, so that interventions can be carried out in a more targeted manner.

As stated by Lee et al. (2021), digital technology can expand the reach of health services and increase data accuracy by up to 40 percent, which is an important basis for better decision making. With an inclusive, evidence-based and sustainable approach, digitalization has great potential to create a generation that is healthier and free from stunting. As a concrete step, cross-sector collaboration and strengthening policies are key to ensuring that the benefits of



digitalization can be felt by all levels of society, including those in remote areas. This innovation is not only relevant for Indonesia, but can also be a model for other developing countries that face similar challenges in dealing with stunting.

### Acknowledgement

The author would like to express my deepest gratitude to the Education Fund Management Institution (LPDP), the Education Financing Service Center (PUSLAPDIK), the Higher Education Financing Center (BPPT), and the Indonesian Education Scholarship (BPI), for sponsoring our doctoral studies and supporting the publication of this article.

### References

1. Ilham Nur Hanifan Maulana, Sukardi S, Ahmad Luthfi, Durratun Nashihah, Tasya Fiane Wardah. Pengendalian Dalam Upaya Pencegahan Stunting saat Pandemi COVID-19 di Kabupaten Malang. *J Gov Innov* [Internet]. 2023;5(1):144–60. Available from: <https://ejournal.uniramalang.ac.id/index.php/JOGIV/article/download/2273/1670>
2. Tangel LH, Sartika I, Hutasoit I. Effectiveness of the policy to accelerate stunting reduction through convergence action for handling stunting In north sulawesi province. *J Sci* [Internet]. 2024;13(01):101–16. Available from: <http://seaninstitute.org/infor/index.php/pendidikan/article/download/2198/1895>
3. Herawati DMD, Sunjaya DK. Implementation Outcomes of National Convergence Action Policy to Accelerate Stunting Prevention and Reduction at the Local Level in Indonesia: A Qualitative Study. *Int J Environ Res Public Health* [Internet]. 2022;19(20). Available from: <https://www.mdpi.com/1660-4601/19/20/13591/pdf>
4. Noor MS, Syarwani M, Putri RM. Healthy Environment As A Human Right: Law Enforcement To Overcome Stunting In Children. *At-Tadbir J Ilm Manaj* [Internet]. 2024;10–20. Available from: <https://ojs.uniska-bjm.ac.id/index.php/PIUOK/article/download/15389/6514>
5. Pormes YL, Rahawarin MA, Pattimuka HVR. Implementasi Kebijakan Pencegahan Dan Penanggulangan Stunting Di Negeri Trana Kecamatan Teon Nila Serua Kabupaten Maluku Tengah. *Prof J Komun dan Adm Publik* [Internet]. 2023;10(2):461–70. Available from: <https://jurnal.unived.ac.id/index.php/prof/article/download/4369/3880>
6. Sahroji QN, Hidayat R, Nababan R. Implementasi Kebijakan Dinas Kesehatan Dalam Penanganan Stunting Di Kabupaten Karawang. *J Pemerintah dan Polit* [Internet]. 2022;7(1):34–9. Available from: <https://ejournal.uigm.ac.id/index.php/PDP/article/download/1983/1489>
7. Maya Puspitasari F, Viprindrartin S, Zainuri Z. Strategy Analysis for Reducing Stunting in Acceleration of Achievement of Sustainable Development Goals Case Study in Jember District, East Java. *Int J Reg Innov* [Internet]. 2024;4(3):1–15. Available from: <https://journal.ijori.org/ijori/article/download/119/61>



8. Wardhana MA, Syafiq AN. PENERAPAN HIDROPONIK SEBAGAI SALAH SATU UPAYA PENANGANAN STUNTING DI TINJAU DARI SEGI EKONOMI. *J Abdimas Indones.* 2023;5(1):38–46.
9. Herlambang T, Hasina SN, Katias P, Sahri M, Ajizah S, Riansyah DFA, et al. DIGITALISASI SISTEM MANAJEMEN POSYANDU “BOCAHCARE” SEBAGAI UPAYA PEMANTAUAN DAN PENCEGAHAN STUNTING DI DESA PONGANGAN KECAMATAN MANYAR KABUPATEN GRESIK. *Community Dev J J Pengabd Masy.* 2024;5(4):8019–24.
10. Saputra R, Sari DN, Anissa SA, Dewinta I, Mildayani M, Dini NR, et al. Transformasi Desa Jetis: Inovasi dalam Penanganan Stunting dan Pendampingan UMKM melalui Kolaborasi Masyarakat. *Pros Webinar Pengabd Masy.* 2024;
11. Alhari MI, Febriyani W, Jonson WT, Fajrillah AAN. Perancangan Smart Village Platform aplikasi edukatif untuk pengentasan stunting serta monitoring kesehatan ibu hamil. *J Ilm Teknol Inf Asia.* 2021;15(1):51–60.
12. Lobho KET, Tanu LSN, Ika H, Luni D, Sula YI. Peran Digitalisasi dalam Penanggulangan Stunting: Solusi Inovatif untuk Generasi Sehat. *Indones Res J Educ.* 2024;4(2):1152–61.
13. Syafana FA, Purnomo H, Fauzi AA, Dzakwan A, Zenn D, Mawaddah D, et al. Village Transformation through SDGs Concept: Tackling Digital Crime, Stunting, Improving Religiousness through Education and Waste Management: Community Service. *ASEAN J Empower Community.* 2024;4(2):23–39.
14. Muliawan A, Fauziah DA, Nurdianyah A, Sukmawati ASD, Sholihin MR. Handling Stunting as a Management Community Service. *Rec J Loyal Community Dev.* 2024;1(1):27–32.
15. Apriani AN, Rouzi KS, Putri MA, Paratmanitya Y, Maula DI, Rohaendy E, et al. Strengthening Community Character and Literature in Handling Stunting Through Village Digitalization in Guwosari Sub-District. *J War Desa.* 2023;5(2):77–85.
16. Aminah S, Mahmudiono T, Nadhiroh SR. Policy, intervention, and management in addressing stunting in children: A systematic review. *Afr J Reprod Health [Internet].* 2024;28(10s):348–57. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/39641245>
17. Lestari D, Rochaida E, Suharto RB, Mixila S, Sutapa IN. In the era of digitization, government’s role in alleviating stunting. *Webology.* 2022;19(1):4925–41.
18. Sunaryo DR, Candradewini C, Arifianti R. Implementasi Kebijakan Percepatan Pencegahan Dan Penanggulangan Stunting Di Kabupaten Bandung. *Responsive [Internet].* 2022;4(4):205. Available from: <https://pdfs.semanticscholar.org/3c54/eba658bf9c54f139c491375bacfa0ef9032f.pdf>
19. Valeriani D, Wibawa DP, Safitri R, Apriyadi R. Menuju Zero Stunting Tahun 2023 Gerakan Pencegahan Dini Stunting Melalui Edukasi pada Remaja di Kabupaten Bangka. *J Pustaka Mitra (Pusat Akses Kaji Mengabd Terhadap Masyarakat).* 2022;2(2):84–8.



20. Ekonomi J, Program MS, Terbuka U, Info A, Performance V. Strengthening Strategy Village Performance Management In Effort Reducing Stunting Through Multistakeholder Involvement In The Village. 2024;13(04):380–8. Available from: <https://www.ejournal.seaninstitute.or.id/index.php/Ekonomi/article/download/5483/4435>
21. Agustino H, Eko RPW. Analisis Implementasi Kebijakan Sosial Pencegahan Stunting. J Sos Polit [Internet]. 2022;8(2):241–52. Available from: <https://ejournal.umm.ac.id/index.php/sospol/article/download/22558/11795>
22. Sevilla J, Nugroho A, Turymsheyeva A. The Effectiveness of Accelerating Stunting Reduction Policy. J Sustain Dev Regul Issues [Internet]. 2024;2(2):132–47. Available from: <https://pdfs.semanticscholar.org/2feb/fff16c96d44160f8c4f2a7e7ee3ef24036d3.pdf>
23. Maloho AN, Aneta A, Wolok E, Ilato R, Aneta Y. Stunting Management Policies in Improving Public Health Levels in North Bolaang Mongondow Regency. J Popul Ther Clin Pharmacol. 2023;30:e25–34.
24. Mandu J, Mulyanti D. Faktor Permasalahan Stunting Di Kabupaten Bolaang Mongondow Utara Serta Cara Pencegahannya. J Ilm Kedokt dan Kesehat. 2023;2(2):40–4.
25. Agustianti R, Nussifera L, Wahyudi, Angelianawati L, Meliana I, Sidik EA ni, et al. Metode penelitian kuantitatif & kualitatif [Internet]. Tohar Media. 2022. 1–57 p. Available from: <http://repository.uki.ac.id/10956/1/MetodePenelitianKuantitatifdanKualitatif.pdf>
26. Purwanti AR, Widyastuti TM, Suminar YA. Kebijakan dan Strategi Pencegahan dan Penanganan Stunting. J Kewarganegaraan [Internet]. 2022;6(1):1–48. Available from: [https://repository.upy.ac.id/6733/1/Jurnal\\_stunting.pdf](https://repository.upy.ac.id/6733/1/Jurnal_stunting.pdf)
27. Nuramalia S, Dedi A, Yuliani D. Implementasi Kebijakan Pencegahan Stunting Kecamatan Kie. Prodi Ilmu Adm Univ Nusa Cendana Kupang [Internet]. 2020;2091–103. Available from: <http://repository.unigal.ac.id:8080/bitstream/handle/123456789/1089/104.SintaNuramalia.pdf?sequence=1>
28. Wididiati P, Nurcahyanto H, Marom A. Implementasi Kebijakan Penanganan Stunting Di Kabupaten Lombok Timur (Studi Kasus Di Desa Lenek Duren Kecamatan Lenek). J Public Policy Manag Rev [Internet]. 2022;11(4):10. Available from: <https://ejournal3.undip.ac.id/index.php/jppmr/article/viewFile/36183/27796>
29. Gitasavitri R, Daraba D, Azikin A, Masrich A. Implementation of the Stunting Handling Policy in Sumedang Regency , West Java Province. 2024;13(03):276–90. Available from: <http://seaninstitute.org/infor/index.php/pendidikan/article/download/2498/2217>
30. Miswan M. Implementation of Stunting Policy in Bandung. J Res Dev Public Policy [Internet]. 2022;1(3):104–14. Available from: <http://journal.lppsp Semarang.org/index.php/Jarvic/article/download/57/80>
31. Melisa M, Kasmawati K, Sitompul SAFF, Monalisa M, Monalisa R, Novianti MN. The Government Policy for Stunting Countermeasure Strategy in Indonesia be preparing for



- Golden Generation 2045. Sch Int J Law, Crime Justice [Internet]. 2022;5(12):554–63. Available from: [https://saudijournals.com/media/articles/SIJLCJ\\_512\\_554-563\\_FT.pdf](https://saudijournals.com/media/articles/SIJLCJ_512_554-563_FT.pdf)
32. Prasetyo A, Noviana N, Rosdiana W, Anwar MA, Hartiningsih, Hendrixon, et al. Stunting Convergence Management Framework through System Integration Based on Regional Service Governance. Sustain [Internet]. 2023;15(3). Available from: <https://www.mdpi.com/2071-1050/15/3/1821/pdf>
  33. Taofik J, Samudra AA, Satsipi E. IMPLEMENTATION OF STUNTING REDUCTION REGULATIONS AND POLICIES IN EAST LOMBOK REGENCY , INDONESIA a Muhammad Juaini Taofik , b Azhari Aziz Samudra , c Evi Satsipi. 2024;1–33. Available from: <https://ojs.journalsdg.org/jlss/article/download/3233/1618>
  34. Azis ASFW, Darmawansyah, Razak A, Arifin A, Syafar M, Mallongi A. Analysis of Policy Implementation of The First 1000 Days of Life Program in Overcoming Stunting in Maros District. Pharmacogn J [Internet]. 2023;15(3):405–10. Available from: <https://phcogj.com/sites/default/files/PharmacognJ-15-3-405.pdf>
  35. Oktarina S, Saiban K, Wahyudi C. Innovation for Handling Stunting Based on Community Empowerment in Gampong Ara, Kembang Tanjong Sub-District, Pidie District, Aceh Province of Indonesia (Study of Policy Implementation Based on Pidie Regent Regulation Number 77 of 2017 about Reduction in Stu. Int J Res Soc Sci Humanit [Internet]. 2022;03(03):12–24. Available from: <https://www.ijrss.org/index.php/ijrss/article/download/147/79>
  36. Yusnita M, Kurniawan I, Hakim A. Public Policy Analysis in Stunting Reduction: A Review of National Programs and Strategies. J Indones Sos Sains [Internet]. 2024;5(05):1182–8. Available from: <https://jiss.publikasiindonesia.id/index.php/jiss/article/download/1109/1901>
  37. KONAY DR, PANDIE DBW, DJANI W. Policy Implementation Of Stunting Prevention In Kupang Tengah District, Kupang Regency. J Tour Econ Policy [Internet]. 2022;3(2):147–57. Available from: <https://www.journalkeberlanjutan.com/index.php/jtep/article/download/639/612>
  38. Nurva L, Maharani C. Analisis Pelaksanaan Kebijakan Penanggulangan Stunting: Studi Kasus di Kabupaten Brebes Analysis of Stunting Management Policy Implementation: A Case Study in Brebes Regency. • J Kebijak Kesehat Indones JKKI [Internet]. 2023;12(02):74–83. Available from: <https://core.ac.uk/download/pdf/572862115.pdf>
  39. Arieffiani D, Ekowanti MRL. Evaluating Local Government Policy Innovations: A Case Study of Surabaya’s Efforts in Combating Stunting and Enhancing Public Health Services Quality. J Bina Praja [Internet]. 2024;16(1):1–20. Available from: <https://jurnal.kemendagri.go.id/index.php/jbp/article/download/2089/661>
  40. Anggara Setya Saputra, Suryoto S, Chamid Sutikno. Implementasi Kebijakan Penanggulangan Stunting di Kabupaten Purbalingga. Publikauma J Adm Publik Univ



- Medan Area. 2022;10(2):162–70.
41. Kusnadi D, Nge HJ. Actor Collaboration in Implementing Stunting Handling Policy in Landak District. *Indones J Adv Res* [Internet]. 2024;3(1):81–94. Available from: <https://journal.formosapublisher.org/index.php/ijar/article/download/7834/7683>
  42. Hermawati H, Sastrawan S. Analisis Implementasi Kebijakan Program Penanggulangan Stunting Terintegrasi Di Kabupaten Lombok Utara. *J Kesehat Qamarul Huda* [Internet]. 2020;8(2):48–54. Available from: <https://www.jkqh.uniqlhba.ac.id/index.php/kesehatan/article/download/223/131>
  43. Suri S, Hamdi M, Nurdin I, Lukman S, Sidiq FF. Analyzing Supporting and Inhibiting Factors in the Implementation of Stunting Reduction Acceleration Policy in Depok City. *Int J Sci Soc* [Internet]. 2024;6(2):218–37. Available from: <https://pdfs.semanticscholar.org/0dc9/8c6ba1c591261d0faac3fcee154c100a1d8.pdf>
  44. Folensino S, Asmidin A, Islamy S. Implementasi Kebijakan Pemerintah dalam Penanggulangan Stunting di Kabupaten Buton. *Adm J Ilm Ilmu Adm Negara* [Internet]. 2023;12(2):73–83. Available from: <https://ejournal.lppmunidayan.ac.id/index.php/administratio/article/view/1500>
  45. Beal T, Tumilowicz A, Sutrisna A, Izwardy D, Neufeld LM. A review of child stunting determinants in Indonesia. *Matern Child Nutr*. 2018;14(4):e12617.
  46. Bundervoet T, Dávalos ME, Garcia N. The short-term impacts of COVID-19 on households in developing countries: An overview based on a harmonized dataset of high-frequency surveys. *World Dev*. 2022;153:105844.
  47. Ain H, Arief YS, Krisnana I, Astuti ES. Efforts to Prevent Stunting in Children Aged 0-24 Months: An Integrative Review. *Malaysian J Med Heal Sci*. 2024;20(5).
  48. Noerjoedianto D, Ibnu IN, Wisudariani E. Analysis of The Role of Stakeholders in Efforts to Reduce the Acceleration of Stunting: A Case Study in a Quality Family Planning Village Locus. *Contag Sci Period J Public Heal Coast Heal* [Internet]. 2024;6(1):372. Available from: <https://jurnal.uinsu.ac.id/index.php/contagion/article/download/19500/8062>
  49. Sabarisman M, Sulubere MB. Peran Pendampingan Program Keluarga Harapan dan Program BPNT Dalam Penanganan Stunting: Studi Kasus di Kabupaten Bolaang Mongondow Utara. *Sosio Konsepsia J Penelit dan Pengemb Kesejaht Sos*. 2023;13(1).
  50. Prianto B, Molyo PD, Widayati S, Setiyaningsih LA, Nuswantari SA. Reducing Stigma Toward Mothers in Stunting Incidence by Increasing Fathers' Participation in Raising Children. *J Popul Soc Stud* [Internet]. 2025;33:159–74. Available from: <https://so03.tcithaijo.org/index.php/jpss/article/download/273631/184288>
  51. Sentika R, Setiawan T, Rattu DJ, Yunita I, Masita BM, Basrowi RW. The Importance of Interprofessional Collaboration (IPC) Guidelines in Stunting Management in Indonesia: A Systematic Review. In: *Healthcare*. MDPI; 2024. p. 2226.
  52. Sari AR. Implementation of The Stunting Reduction Policy. *J Law, Soc Sci Humanit*.



- 2024;1(2):134–8.
53. Bonur R, Pardosi T, Bratakusumah DS, Ilmu M, Publik A, Unggul UE. ANALISIS PENERAPAN COLLABORATIVE GOVERNANCE PADA PENURUNAN TENGKES / STUNTING : SYSTEMATIC. 2024;10:228–46. Available from: <https://journal.uta45jakarta.ac.id/index.php/admpublik/article/viewFile/7757/2995>
  54. Bhutta ZA, Akseer N, Keats EC, Vaivada T, Baker S, Horton SE, et al. How countries can reduce child stunting at scale: lessons from exemplar countries. *Am J Clin Nutr.* 2020;112:894S-904S.
  55. Srimulyani Y, Kania I, Rismayanti E. Implementation of Stunting Reduction Policy in Garut Regency. *J Polisci* [Internet]. 2024;1(4):198–208. Available from: <https://annpublisher.org/ojs/index.php/polisci/article/download/227/232>
  56. Gharpure R, Mor SM, Viney M, Hodobo T, Lello J, Siwila J, et al. A one health approach to child stunting: Evidence and research agenda. *Am J Trop Med Hyg.* 2021;104(5):1620.
  57. Armawi A, Effendhy S, Subejo, Apriliyanti K, Novitasari SD. Penguatan ketahanan pangan: Strategi integratif dalam paradoks darurat stunting di desa agraris pada masa post-pandemic. *J Inov Has Pengabd Masy* [Internet]. 2024;7(2):283–304. Available from: <https://riset.unisma.ac.id/index.php/jipemas/article/download/21590/16235>
  58. Ramadhani QN, Rosdiana W. Implementasi Kebijakan Program Penanggulangan Stunting Di Dinas Kesehatan Lamongan. *Inovant* [Internet]. 2023;1(2):217–28. Available from: [http://repository.unhas.ac.id/id/eprint/29283/%0Ahttp://repository.unhas.ac.id/id/eprint/29283/2/K012211048\\_tesis\\_15-08-2023\\_bab\\_1-2.pdf](http://repository.unhas.ac.id/id/eprint/29283/%0Ahttp://repository.unhas.ac.id/id/eprint/29283/2/K012211048_tesis_15-08-2023_bab_1-2.pdf).