Proceeding International Conference Of Innovation Science, Technology, Education, Children And Health
Vol. 4 No. 2, 2024
e-ISSN : 2776-9062, page 32-46
Available online at: https://icistech.org/index.php/icistech

Determination of Stunting Handling Policy on Enggano Island as One of The Outer Islands

Jatmiko Yogopriyatno[1*], Sartika[2]
[1, 2] Departemen of Public Administration, Universitas Bengkulu, Indonesia
jyogop@unib.ac.id [1*]

Address: Jl. WR. Supratman, Kandang Lemonade, Kec. Muara Bangka Hulu, Sumatra, Bengkulu 38371
Corresponding Author: jyogop@unib.ac.id

Abstract *This research focuses on the implementation of stunting prevention policies in Enggano Island, North Bengkulu Regency, with special attention to policy determinants in remote areas. To understand the complexity and dynamics of interactions between factors that influence the success of health policies in this hard-to-reach area, this research uses a qualitative explanatory approach with case study methods and dynamic system modeling. The results show that the success in reducing stunting rates on Enggano Island cannot be separated from the active involvement of various parties, including the government, health workers, and community leaders, who all work together in monitoring, educating, and providing additional food to children at risk of stunting. In addition, utilizing local wisdom has been shown to play an important role in strengthening households' adaptive capacity to this health problem, which in turn contributes to reducing stunting rates. Policy support complemented by good management also allows for more effective collaboration between actors, thus facilitating policy implementation. This research provides new insights into the importance of integrating local values and cross-sectoral cooperation in addressing health challenges in remote areas. The findings also emphasize that a holistic and adaptive policy approach is necessary for successful stunting management, especially in areas with limited access and resources.*

Keywords *Health Policy; Local Wisdom; Remote Island; Stunting; and System Dynamics.*

1. INTRODUCTION

Stunting is a significant public health challenge in Indonesia, based on data from UNICEF and WHO Indonesia ranks 27th out of 154 countries with the highest prevalence of stunting and fifth among Asian countries [1]. This condition has encouraged the Indonesian government to make stunting a major focus in its health agenda [2]. In an effort to overcome the problem of stunting, the Indonesian government has implemented various comprehensive policies and programs. One of the crucial steps is the issuance of Presidential Regulation Number 72 of 2021 on the Acceleration of Stunting Reduction, which aims to optimize the handling of stunting and set an ambitious target to reduce the prevalence of stunting to 14% by 2024 [3], [4]. In addition, Presidential Regulation Number 18 of 2020 on the National Medium-Term Development Plan 2020-2024 also places stunting as a Strategic Priority Project, underscoring the government's long-term commitment to addressing this issue [5].

This national policy not only focuses on reducing stunting, but also covers other aspects such as improving the quality of family life preparation, fulfilling nutritional intake, improving parenting, improving access and quality of health services, and increasing access to drinking

Received Agustus 15, 2024; Revised Agustus 30, 2024; Accepted September 15, 2024; Published September 17, 2024

water and sanitation. The targets of this policy include various demographic groups, ranging from adolescents, brides-to-be, breastfeeding mothers, and pregnant women, especially in the period of the First 1,000 Days of Life (HPK), namely from the fetus to the 23-month-old child. Therefore, the 1,000 HPK period is also referred to as the golden period to prevent or correct the problem of stunting with various specific and sensitive nutrition interventions. Specific nutrition interventions consist of programs that aim to address the direct causes of stunting, while sensitive nutrition interventions are a group of programs that aim to address the indirect causes of stunting, as shown in Figure 1 [6].

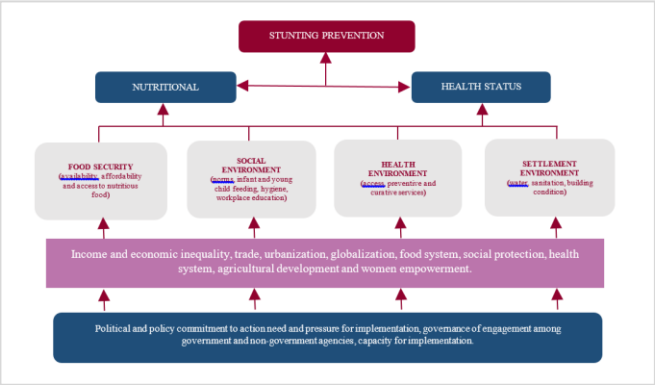
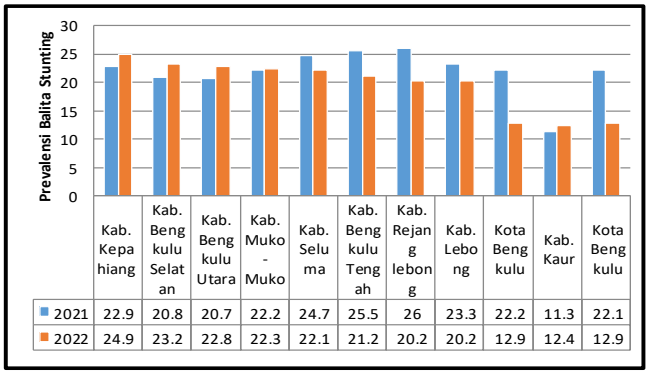


Figure 1. Conceptual Framework for Accelerating Stunting Reduction

Source: Stunting Reduction Acceleration Team Secretariat of the Vice President

Through various efforts made by the government, national data shows a consistent downward trend in stunting prevalence, from 37.2% in 2013 to 21.6% in 2022 [7]. Although this trend is positive, the annual decrease of 2.8% is still below the set target of 3.4% per year. To achieve the target of 14% by 2024, extra efforts and more effective strategies are needed to reduce stunting prevalence by 7.6% in the next two years [8].

In order to achieve stunting reduction targets, the disparity in stunting prevalence between rural and urban areas remains a significant challenge [9], [10]. Factors such as low income levels, geographical isolation, low education levels, limited access to food, lack of health facilities, minimal social networks, and limited access to information sources contribute to high stunting rates in rural areas [11]. In addition, the impact of the Covid-19 pandemic on food availability and regional isolation also has the potential to increase stunting rates in rural areas more than in urban areas [12]. At the provincial level, Bengkulu, which is one of the smaller provinces on the island of Sumatra, also faces challenges in handling stunting. Recent data shows variations in stunting prevalence between districts/cities in this province [13], [14].



	Kab. Kepahiang	Kab. Bengkulu Selatan	Kab. Bengkulu Utara	Kab. Muko-Muko	Kab. Seluma	Kab. Bengkulu Tengah	Kab. Rejang lebong	Kab. Lebong	Kota Bengkulu	Kab. Kaur	Kota Bengkulu
2021	22.9	20.8	20.7	22.2	24.7	25.5	26	23.3	22.2	11.3	22.1
2022	24.9	23.2	22.8	22.3	22.1	21.2	20.2	20.2	12.9	12.4	12.9

Figure 2. Prevalence of Stunting by Regency/City in Bengkulu Province in 2021 and 2022

Source: Indonesia Nutrition Status Survey (SSGI) Results, 2021 & 2022

From the graph above, in 2022 the highest prevalence of stunting was in Kepahiang Regency with 24.9 percent. Then, in second place in South Bengkulu Regency with 23.2 percent. Then, in third place is North Bengkulu Regency with 22.8 percent. North Bengkulu Regency, which is one of the focuses of stunting reduction interventions in Bengkulu Province based on the Decree of the Minister of National Development Planning, ranks third highest with a stunting prevalence of 22.8% in 2022, an increase from 20.7% in the previous year. Data from the Bengkulu Provincial Health Office shows that by 2023, there will be 1,992 stunting cases in North Bengkulu Regency, indicating the urgency for more intensive handling.

In the midst of efforts to address stunting in North Bengkulu Regency, Enggano Sub-district, which is one of Indonesia's outermost islands located in the Indian Ocean, shows the lowest stunting prevalence in the district, at 0.29%. Enggano sub-district is an interesting example of how stunting policies can be effectively implemented in remote areas, despite facing various limitations in access and resources. The success of Enggano sub-district cannot be separated from the implementation of policies that involve various parties, including local government, health workers, and community leaders. The main strategies implemented include routine monitoring of toddler scales, supplementary feeding, parenting education, and adolescent posyandu programs to prevent early marriage.

Although the prevalence of stunting in Enggano Sub-district is relatively low, it is still important to maintain and improve these achievements. The success of Enggano Sub-district in tackling stunting is interesting to study further, especially considering its status as an outer island which generally faces various limitations in access and resources. Research on the implementation of stunting prevention in this district uses a determination perspective with a dynamic system approach. In the context of the stunting prevention program, this approach is expected to improve the quality of recommendations given based on the real role of the Regional Apparatus Organizations (OPD) involved. From an academic perspective, this

research is important for developing a new public governance paradigm based on partnership, togetherness and collaboration, which is very relevant in facing the challenges of the current global era. [15].

Several previous studies have rarely discussed specifically about policy determinations with topographic conditions (outer islands) regarding stunting prevention. Previous research focuses more on stunting as a child growth disorder caused by security crisis and migration factors [16], location factors related to the availability of access to health, sanitation, clean water [17], [18], [19], [20], stunting as an important issue in pandemic conditions [21], [22], [23], and multifactor stunting prevention in the midst of uncertain, complex and ambiguous dynamics related to health and poverty issues [24], [25].

Thus, research related to the implementation of stunting prevention policies with a focus on policy determination, especially in remote areas such as outer islands, is still urgently needed to fill the existing knowledge gap. Based on this description, the researcher is interested in conducting a study entitled "Determination of Stunting Handling Policy on Enggano Island as One of the Outer Islands".

2. MATERIALS AND METHODS

This research uses a qualitative explanatory approach with a case study designed to explain the phenomenon of stunting prevention in remote areas, with a particular focus on policy determinants in Enggano Island, North Bengkulu Regency. This approach was chosen because it is able to reveal the complexity of interactions between factors that contribute to the success or failure of health policies in areas that have limited access and resources. The research process followed five main stages in the system dynamics method, starting with the introduction of the problem structure, where the main issues related to stunting in Enggano Island were identified in depth. The next stage is causal loop modeling, which aims to build a conceptual model that shows the cause-and-effect relationship between the various factors affecting stunting management in the area.

After that, the study proceeds with dynamic modeling, where a more complex model is developed to describe changes in stunting-related variables over time and how these variables influence each other. The fourth stage is scenario development, where alternative scenarios are created and tested to evaluate the effectiveness of the proposed stunting policies and strategies. Finally, the results of modeling and scenario development are applied in the implementation and learning stage, which allows for better and more effective policy adjustments based on the results of the analysis. The data for this study was collected through various methods such as

Focus Group Discussions (FGDs), semi-structured interviews, observations, and documentation studies. Data analysis was conducted using Vensim DSS 64.E software which enables mapping and analysis of dynamic systems related to handling stunting on Enggano Island.

3. RESULT AND DISCUSSION

Result

a. Stunting Rates in Enggano Sub-district, North Bengkulu Regency

Based on data from the Bengkulu Provincial Health Office for the third quarter of 2022, it is known that the number of stunting cases in North Bengkulu Regency is 1,926 toddlers. In 2023, the recapitulation of stunting cases in North Bengkulu was 1,992 toddlers with 1,107 male toddlers and 885 female toddlers. Stunting prevalence data based on sub-districts in North Bengkulu Regency can be seen in the figure below:

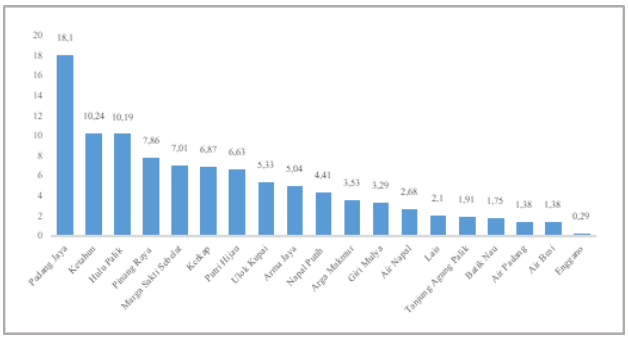


Figure 3. Prevalence of Stunting in Bengkulu Utara Regency

Source: Si Amazing App

The figure above shows that the 3 sub-districts with the highest prevalence of stunting are Padang Jaya sub-district at 18.1%, Ketahun sub-district at 10.24%, Hulu Palik sub-district at 7.86%. Meanwhile, the 3 sub-districts with the lowest prevalence of stunting are Air Padang, Air Besi at 1.38%, and Enggano sub-district at 0.29%. Enggano sub-district, which is the outermost island, is the sub-district with the lowest stunting cases in North Bengkulu Regency.

Although Enggano sub-district does not have high stunting cases, the handling of stunting cases is still very important. This can be seen from the implementation of existing policies in the Enggano sub-district. The Enggano sub-district government seeks to increase the role of all regional apparatus organizations, community groups, practitioners, educational institutions, and the private sector to work together and build synergies in efforts to handle stunting so that Enggano sub-district can be free from stunting problems.

b. Local Wisdom and Community Care

The Enggano Indigenous Community consists of the Kaitora, Kaahoao, Kaarubi, Kaharuba, Kauno, and Kaamay tribes. The history of the Enggano tribe originates from the life story of a stranded woman (Kimanipe) who is believed to be the first human on the island. The story begins when Kimanipe hit a rock (breaking a rock), then a man appeared and they paired up and married.

The descendants that developed from this ancestor according to the story of the community who then developed and formed a unified entity. This entity is divided into three descendants, namely, Kaitora, Kaarubi, and Kaahoao. These three descendants were influenced by various disputes and misunderstandings and then split. Kaahoao's descendants split into two groups, Kaahoao and Kauno. Kaarubi's descendants also split into two groups, Kaarubi and Kaharuba. Kaitora's descendants did not change or split.

The Enggano Customary Law Community specifically adheres to the matrilineal system by choosing the female line as the heir of each descendant. Inheritance carried out by the Enggano indigenous people is related to customary territories in the form of houseyards or villages called Kaudar. The period of development of the Enggano indigenous people is defined as a historical cycle where the Enggano indigenous people have come together to agree to form the Kahaik Yamui customary institution to carry out customary functions, value systems, legal systems, and structuring the territory of Enggano Island based on Pahkude're'ke values.

c. Family Life in Enggano Sub-district

Enggano sub-district consists of 6 villages, namely Malakoni, Apoho, Kahyapu, Kaana, Banjarsari and Meok. The capital of the Enggano sub-district is located in Apoho village. Each village in the Enggano Sub-district is a definitive village with the classification of a self-governing village. The villages in the Enggano sub-district consist of 3 hamlets each, so there are 18 hamlets in the Enggano sub-district. The population density in North Bengkulu Regency in 2020 reached 67 people/Km2. Population density in 19 sub-districts is quite diverse with the highest population density located in Argamakmur sub-district with a density of 1,323 people/km2 and the lowest in Enggano sub-district at 10 people/KM^2.

The number of households in the Enggano Sub-district in 2022 was 1,214 units with an average family size of 4.08 people. This data supports the results of interviews and Focus Group Discussion (FGD) which inform that the household life of people in Enggano Sub-district is relatively safe and there are rarely household disputes. Other information obtained from interviews and FGDs is that family income is sufficient and the support of natural factors is still potential. Although marriage at a young age is still common, divorce is rare due to the

culture and kinship system that is still upheld by the community.

The community's livelihoods are dominated by gardening, farming, raising livestock, fishing and trading. The economic life of the community is still very dependent on nature. Due to the sparse population density, nature is still relied upon to support life. People use their spare time after gardening (pepper, corn, palm oil, rubber, coffee, vanilla, and patchouli) to hunt, fish, and raise livestock. Vegetables, fruits, tubers, and mushrooms that grow around become foodstuffs that are consumed daily by the community.

Potential seasonal vegetable crops in the Enggano Sub-district include chili, long beans, water spinach, watermelon, and cucumber with the highest commodity production being chili and eggplant at 100 quintals each. Some other seasonal vegetable and fruit commodities have very small production and have not been widely cultivated in agricultural businesses in the Enggano District area. Similarly, the agricultural business of ornamental plants and biopharma is still not a commodity that is widely cultivated in the Enggano District area. The production of ornamental plants and biopharma commodities is likely to be planted in the yard for medicinal purposes and hobbies only. The agricultural potential of annual fruits is relatively more developed in the Enggano District area. Some local commodities produced include durian, jengkol, rambutan, papaya, banana, orange, jackfruit, and other fruits.

These three factors build the foundation of household food security in the Enggano Sub-district. Household food security is reflected in the adequacy of food sources sourced from household income allocations and natural products. The food consumption pattern of the district community can be seen from the per capita expenditure on food, which reached 60.73% in 2022.

d. Implementation of Stunting Prevention Policy in Enggano Sub-district

The implementation of the stunting prevention policy in the Enggano sub-district is coordinated by the Stunting Prevention Acceleration Team (TPPS). This team runs a policy agenda that covers four main areas:

1) Specific and sensitive intervention areas, which are managed by the Regional Apparatus Organization (OPD) in charge of health and other related sectors. These interventions include programs that directly or indirectly aim to improve the nutritional status and health of mothers and children.
2) Behavior change communication and family assistance, coordinated by the OPD in charge of population control and family planning. The focus of this field is on community education and providing support to families at high risk of stunting.
3) The coordination, convergence and planning sector, which is under the responsibility of

the Regional Planning and Development Agency (Bappeda). This sector plays an important role in ensuring the synchronization and integration of various programs across sectors.

4) Data, monitoring and evaluation, and knowledge management, which involves universities and related agencies. This sector is responsible for data collection and analysis, as well as evaluation of program effectiveness.

The results of field research and FGD results identified two main factors that influence policy implementation, namely health services and information support. Health services in stunting prevention policies are all activities/actions related to improving the health status of infants/children, mothers, prospective mothers, and the environment that affects maternal and child health. Information support in stunting prevention policies is all things related to data, rules, knowledge, or technology that increase the carrying capacity of stunting prevention policy implementability.

Table 1. Factors in the Implementation of Stunting Handling Policies

Factor	The cause
Health Services	• Improved hygiene, environmental sanitation, hygienic food and health care • Improved general and reproductive health and adequate nutrition of expectant mothers, pregnant women, and adolescent girls • Ensuring adequate nutrition for children under five, immunization, and health care for children under five. • Unmet need for family planning services
Information support	• Family assistance • Convergence action of support for stunting prevention • Monitoring and evaluation of stunting prevention programs • Data and reporting center for stunting prevention

Source: Focus Group Discussion, 2024

e. Causal Loop Diagram of Stunting Management in Enggano Sub-district

Overcoming stunting in Enggano District is an arena consisting of the interaction of several factors and actors. The interaction between factors and actors is captured as a variable model forming a cluster and is dynamic.

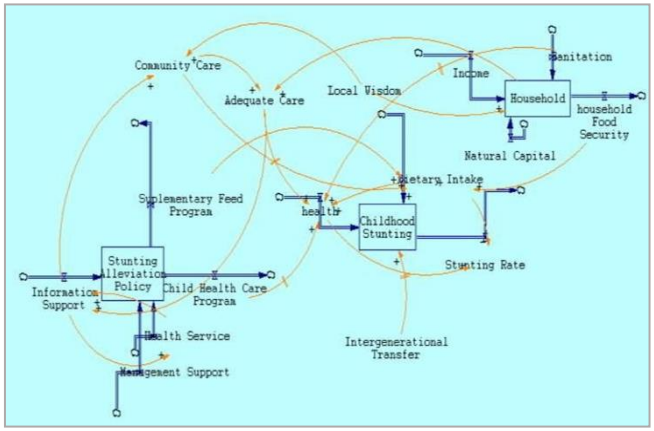


Figure 4. Causal Circle Diagram of Stunting Management on Enggano Island

Source: Vensim, PLE 8.1.0 (2024)

The diagram shows the three main variables in focus, namely Households, Stunting, and Stunting Management Policies. These three variables influence each other and are influenced by various other factors. The local wisdom factor has a significant role in efforts to deal with stunting. This is reflected in the relationship between local wisdom and stunting alleviation policies, household conditions, and the level of stunting itself. The local wisdom of the Enggano community, which prioritizes harmonious social life, has the potential to become an important social capital in the implementation of stunting prevention programs.

Community care is also a key factor, indicated by the variable “Community Care” which is connected to several other aspects. This indicates that the active involvement of the community is necessary for the success of stunting prevention efforts. The household economy aspect appears to have an influence, indicated by the variable “Household Economy” which is related to household food security. This suggests that improving family economic welfare can contribute to improving children's nutritional status and preventing stunting.

Specific programs such as the “Supplementary Feed Program” and “Child Health Care Program” are also visible in the diagram, signifying the importance of child nutrition and health interventions in the stunting response strategy. This needs to be supported by adequate health services, as indicated by the variable “Health Service”.

Intergenerational transfer emerges as one of the factors affecting stunting dynamics. This can be interpreted as the importance of education and knowledge transfer about nutrition and childcare from one generation to the next. The stunting policy itself appears to be

interconnected with various aspects, including management support and information support. This suggests that a comprehensive and integrated approach is needed in designing and implementing stunting policies.

Discussion

The determination of stunting management policies in North Bengkulu Regency, especially in Enggano Sub-district, involves complex interactions between various factors and actors that influence each other. Based on the Causal Loop Diagram (CLD) analysis, three main subsystems play a role in stunting prevention efforts, namely the child stunting subsystem, the household subsystem, and the stunting alleviation policy subsystem.

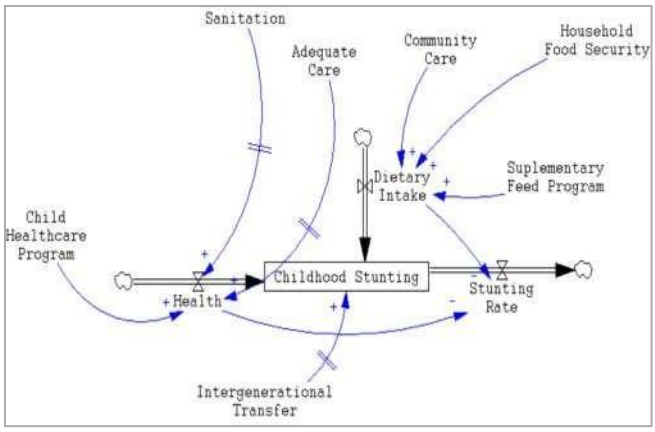


Figure 5. Stock and Flow Diagram of Child Stunting

Source: data interpretation, Vensim PLE 8.1.0 (2024)

In the child stunting subsystem, factors such as dietary intake, health, and genetics have an influence on stunting rates. The analysis shows that improvements in health status and nutrient intake contribute to a decrease in stunting rates. This process involves several delay mechanisms, where factors such as sanitation and adequacy of care over a period of time can change health conditions. One important finding is the role of community care as a potential converter variable in improving food intake. Forms of community care such as food donations, crop sharing, and financial assistance can directly improve the nutritional intake of children under five and pregnant women. This shows the importance of social capital in the stunting management strategy, as some research results on the success of reducing stunting rates through the role of civil society [26], [27], [28]. Furthermore, the household subsystem is an accumulation of income, natural capital, sanitation, and local wisdom variables. Local wisdom acts as a converter that influences the accumulation of variables at the household level.

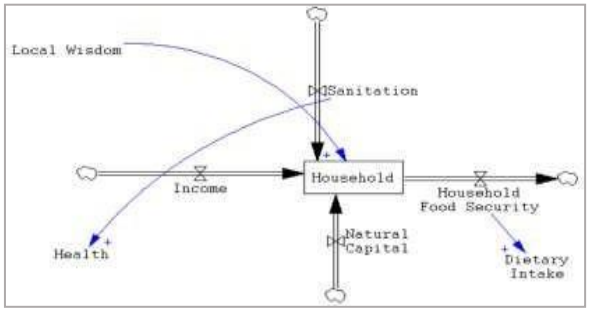


Figure 6. Household Stock and Flow Diagram

Source: data interpretation, Vensim PLE 8.1.0 (2024)

In Enggano Sub-district, local wisdom plays an important role in maintaining and strengthening household norms and adaptive capacity. Local wisdom contains values to adapt and cope with the surrounding environment [26]. Although family poverty and socio-demographic factors are important issues, the availability of adequate natural resources in the Enggano Sub-district can support the food needs of rural communities. It should be noted that the allocation of household income in the Enggano Sub-district plays an important role in household accumulation, amounting to 60.73%.

Lastly, the stunting alleviation policy subsystem consists of health service programs, management support, and information support. Health services are key in implementing programs related to health and sanitation. Information support plays an important role in increasing knowledge and literacy of stunting prevention policies, while management support facilitates collaboration between actors in overcoming stunting. In addition, information support plays an important role in improving health services through clarity of direction and adequate service response [27], [28].

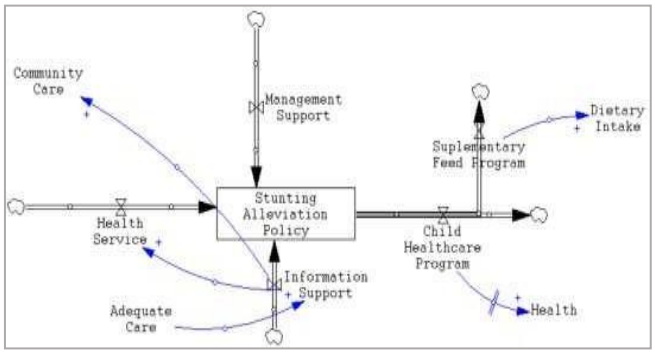


Figure 7. Stunting Alleviation Policy Stock and Flow Diagram

Source: data interpretation, Vensim PLE 8.1.0 (2024)

The stunting reduction convergence program in Enggano Sub-district showed encouraging results, with a decrease in stunting rates by 4.2% until mid-August 2022. This success is supported by the maximization of health services and increased community attention.

This finding is in line with research that emphasizes the importance of community involvement in stunting prevention policies [29], [30]. In addition, adequate awareness also supports information support, which in turn strengthens stunting eradication policies.

The implementation of stunting prevention policies in the Enggano sub-district can be seen as a mixed system involving institutions, values, and meanings, in accordance with the concept proposed by Colebatch & Larmour [31]. It is important to note that the local wisdom factor has a unique role in the context of Enggano District, as described by Beal, et.al (2018) in the context of community support for household economic life [29]. In addressing stunting, a multifactorial approach involving various sectors is crucial. Improving the health status of mothers and children depends not only on child health programs and food intake but also on improved sanitation and adequate care [11].

To improve the effectiveness of stunting management policies in North Bengkulu Regency, particularly in the Enggano Sub-district, a comprehensive and integrated strategy is needed. This strategy must consider the complex interactions between the various factors that have been identified, ranging from health aspects, and household economics, to local wisdom and community social capital. This approach is in line with the recommendations of Harding (2018), which shows the success of convergence programs in reducing stunting in other regions in Indonesia [30].

4. CONCLUSION

This study concludes that the implementation of stunting prevention policies in Enggano Sub-district, North Bengkulu Regency, despite being faced with various access and resource limitations, can be considered successful. This success is due to several key factors that play a role in the policy implementation process. One of the main factors is the involvement of multi-stakeholders, including government, health workers and community leaders, who are actively involved in monitoring, educating and providing supplementary food to the community. This involvement shows the importance of cross-sectoral cooperation in addressing complex health issues such as stunting, especially in remote areas. In addition, this study also found that the utilization of local wisdom has a significant role in the success of this policy. Local wisdom in Enggano Island, which includes social norms and traditional practices, contributes to strengthening households' adaptive capacity to the problem of stunting, thus helping to maintain and even improve the health of children in the area. Good policy and management support is also an important factor supporting this success. Policies supported by effective information management allow for better collaboration between actors and smoother

coordination in policy implementation. Overall, the findings suggest that a policy approach that integrates multiple sectors and utilizes local values is critical to successful stunting management, especially in remote areas such as Enggano Island.

Acknowledgments

The researchers would like to express their gratitude and deep appreciation to the North Bengkulu Regency Health Office, Puskesmas staff, community leaders, and residents of Enggano Island for their cooperation and active participation. The contributions of all these parties are invaluable in the completion of research on stunting management on Enggano Island as one of Indonesia's outer islands.

REFERENCES

Adi, S., Krisnana, I., Rahmawati, P. D., & Maghfiroh, U. (2023). Environmental factors that affect the incidence of stunting in under-five children: A literature review. *Pediomaternal Nurs. J.*, *9*(1). https://doi.org/10.20473/pmnj.v9i1.43863

Akseer, N., Kandru, G., Keats, E. C., & Bhutta, Z. A. (2020). COVID-19 pandemic and mitigation strategies: Implications for maternal and child health and nutrition. *Am. J. Clin. Nutr.*, *112*(2), 251–256. https://doi.org/10.1093/ajcn/nqaa171

Anggraeny, B., Firmansyah, M., Helmi, A., & Ramdhani, N. Z. (2024). Policy brief: Pertanian, kelautan, dan biosains tropika.

Atamou, L., Rahmadiyah, D. C., Hassan, H., & Setiawan, A. (2023). Analysis of the determinants of stunting among children aged below five years in stunting locus villages in Indonesia. *Healthc.*, *11*(6). https://doi.org/10.3390/healthcare11060810

Badan Pusat Statistik. (2022). Laporan indeks khusus penanganan stunting 2021-2022. *BPS Indonesia*. Retrieved from https://www.bps.go.id/id

Beal, T., Tumilowicz, A., Sutrisna, A., Izwardy, D., & Neufeld, L. M. (2018). A review of child stunting determinants in Indonesia. *Maternal and Child Nutrition*, *14*(4). https://doi.org/10.1111/mcn.12617

Browne, J., et al. (2021). Systems thinking for Aboriginal Health: Understanding the value and acceptability of group model building approaches. *SSM - Popul. Heal.*, *15*, 100874. https://doi.org/10.1016/j.ssmph.2021.100874

Cameron, L., Chase, C., Haque, S., Joseph, G., Pinto, R., & Wang, Q. (2021). Childhood stunting and cognitive effects of water and sanitation in Indonesia. *Econ. Hum. Biol.*, *40*. https://doi.org/10.1016/j.ehb.2020.100944

Carletto, C., Maluccio, J. A., Shrestha, S. M., & Stewart, M. F. (2021). Migration, economic crisis and child growth in rural Guatemala: Insights from the Great Recession. *Food Policy*, *104*(August), 102145. https://doi.org/10.1016/j.foodpol.2021.102145

Colebatch, H. K. (2006). Thinking about policy: finding the best way. *Policy*, (May).

Emerson, K., Nabatchi, T., & Balogh, S. (2012). An integrative framework for collaborative governance. *J. Public Adm. Res. Theory*, *22*(1), 1–29. https://doi.org/10.1093/jopart/mur011

Fan, S., Teng, P., Chew, P., Smith, G., & Copeland, L. (2021). Food system resilience and COVID-19 – Lessons from the Asian experience. *Glob. Food Sec.*, *28*, 100501. https://doi.org/10.1016/j.gfs.2021.100501

Gani, A. A., Hadju, V., Syahruddin, A. N., Otuluwa, A. S., Palutturi, S., & Thaha, A. R. (2021). The effect of convergent action on reducing stunting prevalence in under-five children in Banggai District, Central Sulawesi, Indonesia. *Gac. Sanit.*, *35*, S421–S424. https://doi.org/10.1016/j.gaceta.2021.10.066

Harding, K. L., Aguayo, V. M., & Webb, P. (2018). Factors associated with wasting among children under five years old in South Asia: Implications for action. *PLoS One*, *13*(7). https://doi.org/10.1371/journal.pone.0198749

Hurley, K. M., et al. (2021). A longitudinal impact evaluation of a comprehensive nutrition program for reducing stunting among children aged 6-23 months in rural Malawi. *Am. J. Clin. Nutr.*, *114*(1), 248–256. https://doi.org/10.1093/ajcn/nqab010

Ihsani, N. A., Setiani, O., Masyarakat, K., & Diponegoro, U. (2022). Studi literatur: Pengaruh faktor kesehatan lingkungan terhadap kejadian stunting pada balita di Indonesia. *J. Ris. Kesehat. Poltekkes Depkes Bandung*, *14*(2).

Kementerian Kesehatan RI. (2021). Buku saku: Hasil studi status gizi Indonesia (SSGI) tingkat nasional, provinsi, dan kabupaten/kota tahun 2021. *Kemenkes*. Retrieved from https://layanandata.kemkes.go.id/katalog-data/ssgi/ketersediaan-data/ssgi-2022

Kementerian Kesehatan RI. (2022). Buku saku hasil survei status gizi Indonesia (SSGI) tahun 2022.

Kementerian Koordinator Bidang Pembangunan Manusia dan Kebudayaan RI. (2024). Pemerintah optimis target penurunan stunting 14 persen tercapai di 2024. *Menko PMK*. Retrieved from https://www.kemenkopmk.go.id/pemerintah-optimis-target-penurunan-stunting-14-persen-tercapai-di-2024

Kementerian Sekretariat Negara. Dashboard pemantauan terpadu percepatan pencegahan stunting. Retrieved from https://dashboard.stunting.go.id/

Latuszynska, M., & Fate, S. (2022). Combining system dynamics and agent-based simulation

to study the effects of public interventions on poverty. *Procedia Comput. Sci.*, *207*, 3978–3987. https://doi.org/10.1016/j.procs.2022.09.460

Madzorera, I., et al. (2021). Food systems as drivers of optimal nutrition and health: Complexities and opportunities for research and implementation. *Curr. Dev. Nutr.*, *5*, nzab062. https://doi.org/10.1093/cdn/nzab062

Peraturan Presiden Nomor 72 Tahun 2021 tentang Percepatan Penurunan Stunting.

Presiden Republik Indonesia. (2020). Peraturan Presiden Republik Indonesia Nomor 18 Tahun 2020 Tentang Rencana Pembangunan Jangka Menengah Nasional 2020-2024, 1–7.

Purwanti, R., & Nurfita, D. (2019). Review literatur: Analisis determinan sosio demografi kejadian stunting pada balita di berbagai negara berkembang. *Bul. Penelit. Kesehat.*, *47*(3), 153–164. https://doi.org/10.22435/bpk.v47i3.1349

Purwestri, R. C., Renz, L., Wirawan, N. N., Jati, I. R. A. P., Fahmi, I., & Biesalski, H. K. (2017). Is agriculture connected with stunting in Indonesian children living in a rice surplus area? A case study in Demak regency, central Java. *Food Secur.*, *9*(1). https://doi.org/10.1007/s12571-016-0634-2

Ramdhani, N. Z., Anggraeny, B., Firmansyah, M., & Helmi, A. (2024). Policy brief: Pertanian, kelautan, dan biosains tropika.

Sekretariat Kabinet Republik Indonesia. (2023). Targetkan prevalensi 14 persen di 2024, presiden dorong kerja bersama untuk penurunan stunting. *Setkab*. Retrieved from https://setkab.go.id/targetkan-prevalensi-14-persen-di-2024-presiden-dorong-kerja-bersama-untuk-penurunan-stunting

Tigchelaar, M., et al. (2022). The vital roles of blue foods in the global food system. *Glob. Food Sec.*, *33*(March), 100637. https://doi.org/10.1016/j.gfs.2022.100637

Torlesse, H., Cronin, A. A., Sebayang, S. K., & Nandy, R. (2016). Determinants of stunting in Indonesian children: Evidence from a cross-sectional survey indicate a prominent role