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Reconnecting Policy: Analysis of Climate Change Adaptation in Stunting Prevention Policy in Pesisir Selatan Regency

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ABSTRACT

Climate change adaptation is a key component of government policy. Because climate change has had a wide-ranging impact in various countries and threatens the community's food security system, health, including the quality of nutrition and child development, is particularly vulnerable to the effects of climate change. Climate change threatens the production system and food availability of the community, worsening access to quality nutrition. In addition, climate change impacts stunting policies by affecting children's nutritional status and creating vulnerabilities in the food system. Therefore, stunting prevention requires not only specific and sensitive nutrition interventions but also adaptation to climate change. This study aims to analyze climate change adaptation in stunting prevention in Pesisir Selatan Regency and to reconnect climate change adaptation policies with stunting prevention. This study uses qualitative methods to analyze the reconnection of climate change adaptation policies and stunting prevention. The main contributors to this study are stakeholders, including representatives of local governments, health practitioners, the environment, and affected local communities. Secondary data were collected from policy documents, official reports, and related literature. The results of the study indicate that stunting prevention policies have not fully included climate change adaptation issues in applicable policies, which can increase the vulnerability of household food security. Pesisir Selatan Regency has a high prevalence of stunting in West Sumatra. The conclusion of this study shows that reconnecting climate change adaptation into stunting prevention policies, including food security, clean water availability, and environmental quality, is essential to achieve more effective and sustainable results. Reconnecting policies through this integration can strengthen the synergy between the two policies and increase the effectiveness of stunting prevention programs in dealing with the impacts of climate change.

1. INTRODUCTION

Climate change is indeed a pressing global issue that demands urgent attention from governments around the world. The complexity of climate change requires a multifaceted approach, involving national and international efforts to mitigate its impacts. Different countries have adopted different political and policy responses, influenced by public attitudes, political parties, and environmental factors [1]. International cooperation, such as the Paris Agreement, plays a critical role in uniting countries to reduce greenhouse gas emissions and supporting vulnerable countries in their climate adaptation efforts [2].

The complexity of climate change governance arises from its diverse impacts, which vary across regions and sectors, and the need for coordinated international efforts to address this challenge. Governments are increasingly recognizing the need to integrate climate change considerations into their policies and operations to mitigate and adapt to its impacts. This response explores the political, policy, and governance dimensions of climate change, highlighting the role of international agreements, national policies, and the challenges faced by different countries. European countries demonstrate diverse political and policy responses to climate change, influenced by public attitudes, the role of environmental civil society organizations, and the political landscape, including the influence of Green parties [1]. The European Union (EU) is a leader in climate policy, implementing mechanisms such as the Green Deal to transition to a circular economy and reduce greenhouse gas emissions [3]. Developing countries,

despite their minimal contribution to global emissions, face severe climate impacts and require support from developed countries for mitigation and adaptation efforts [2].

However, political responses and situations in many countries remain problematic. For example, the complex political and economic dynamics associated with climate change governance have hampered the formation of lasting collaboration and innovation. Given the ongoing impact of climate change on the international community, governments are increasingly being called upon to concentrate on climate-related policies and pursue sustainable outcomes.

Climate change has a broad impact on various aspects of human life, from agriculture, health, availability of natural resources, to food and nutrition security. The public health sector, especially those related to nutrition and child development, is one of the areas that is very vulnerable to the impacts of climate change [4]. Long-term climate change has caused threats to food production and availability, and has even made it increasingly difficult for people to access quality food and nutrition for their families. Climate change has an impact on stunting policies by affecting children's nutritional outcomes and creating vulnerabilities in the food system. Therefore, stunting prevention is not enough to only implement specific and sensitive dietary interventions, but also needs to adapt to climate change.

Climate change adaptation policies are essential to address the challenges posed by climate change, including preventing stunting exacerbated by environmental stressors. However, these policies require careful design and implementation to be effective in mitigating the impacts of climate change on vulnerable populations, particularly in the context of stunting prevention. Stunting prevention policies have not adequately adapted to climate change, as evidenced by the limited integration of climate considerations into child health and nutrition strategies. Climate change exacerbates food insecurity and malnutrition, which are important factors in child stunting. However, current policies often fail to comprehensively address these interconnected issues. This gap is particularly pronounced in low-income countries where the impacts of climate change are most severe. A study of 160 national adaptation policies found that only 28% included child-specific adaptation measures, indicating a lack of focus on children's unique vulnerabilities to climate change [5]. Many policies ignore the direct impacts of climate change on food security and nutrition, which are critical to preventing stunting [6]. There is a need for policies that prioritize maternal and child nutrition in the climate change agenda, as these groups are disproportionately affected by climate-induced food insecurity [6].

Adaptation to climate change is not directly related to stunting prevention because there are several complex interrelated factors. While climate change impacts food security, water availability, and sanitation, all of which are linked to stunting, adaptation strategies often do not explicitly target stunting prevention efforts. This disconnect arises from the multidimensional nature of climate change and stunting, which requires an integrated approach that is unfortunately not always implemented in practice. Many adaptation strategies focus more on broader climate impacts without a specific emphasis on stunting, even though the relationship between climate change and malnutrition is well known [7].

While there is a clear need for an integrated approach that combines climate adaptation with stunting prevention, current efforts are often fragmented and poorly integrated. Addressing this gap requires a deeper focus on the direct and indirect impacts of climate change on nutrition, while also enhancing adaptive capacity at the community and household levels. Such a holistic approach is expected to better align climate adaptation efforts with the more comprehensive goal of stunting prevention.

Pesisir Selatan District faces a high prevalence of stunting and serious impacts of climate change. Stunting prevention policies must be comprehensive and adaptive to climate change to protect the health and future of future generations. This study recommends the integration of climate change adaptation into stunting prevention policies and strategies, including food security, clean water availability, and environmental quality. A comprehensive plan that considers ecological and socio-economic factors is essential to achieve more effective and sustainable results in stunting prevention in the region.

This study aims to analyze climate change adaptation in preventing stunting in Pesisir Selatan Regency. Geographically, Pesisir Selatan Regency has great potential in marine resources, forestry, and water supply. However, there are also potential challenges related to natural disasters such as floods, landslides, forest fires, earthquakes, and tsunamis. The frequency and potential of disasters represent recurring problems every year, resulting in economic losses and fatalities, and requiring significant financial resources for effective management. The high prevalence of stunting in Pesisir Selatan Regency can also increase the vulnerability of family food security. Unfortunately, stunting prevention policies have not anticipated climate change. This district has a high prevalence of stunting in West Sumatra, with 2,314 cases or 29.8% in 2023, an increase of 4.6% from 25.2% in 2022. Interestingly, 470 cases are children from underprivileged families, while the rest are from well-off families. A total of 795 cases are in children aged 0-24 months, and 1,519 cases are in children aged 24-59 months [8]. This is the importance of this study.

The issue of stunting prevention policies in the context of climate change in Pesisir Selatan Regency has not been widely studied by scholars, but this does not mean that it is simply ignored. Several previous studies have examined issues such as sanitation and the ability of the village government to overcome stunting through various programs [9, 10]. In addition, efforts to reconnect food policies and environmental ecosystems have also been made to address the prevalence of stunting [11]. However, adaptation to climate change has not been discussed specifically in the context of stunting prevention. The southern coastal areas that are vulnerable to flooding and landslides due to climate change will certainly have an impact on child nutrition and family food security. Government, economic, infrastructure, and environmental factors also influence these impacts [12]. Climate change can cause a decrease in commodity supply and productivity shocks, resulting in financial losses, wealth, and lower GDP [12]. Therefore, adaptation to climate change is an important issue that needs to be integrated into stunting prevention policies in Pesisir Selatan Regency.

2. RESEARCH METHODS

This study used a qualitative methodology that combined case study techniques to analyze the interaction between climate change adaptation and stunting prevention policies in

the Pesisir Selatan District. Primary data were obtained through comprehensive interviews with various stakeholders, including local government representatives, health officials, and local community members. Informants in this study were determined using the purposive sampling method, namely, from people who were considered to understand the problems being studied.

In addition, secondary data were collected from policy documents, official reports, and related literature. Data collection methods included semi-structured interviews, participant observation, and document analysis. The data obtained were amenable to thematic analysis and data triangulation approaches to increase the validity and reliability of the research results.

3. FINDINGS AND RESULTS

Climate change adaptation is increasingly recognized as a critical component in addressing a range of public health issues, including child stunting, which is primarily caused by chronic malnutrition and exacerbated by food insecurity and health challenges [13]. Stunting reflects inadequate nutrient intake during the critical early years of life, especially the first 1,000 days, making it crucial to integrate adaptation strategies that improve food security and nutritional quality in the face of climate change [13, 14]. The impacts of climate change on agricultural productivity can significantly affect food availability and nutritional quality, which are critical to preventing stunting [15]. As climate change alters agricultural practices and crop yields, it is crucial to develop drought-resistant crops that can withstand periods of low water availability, thereby ensuring consistent food production [16]. Adaptation strategies to climate change integrated with stunting prevention efforts through improving food security and nutritional quality are key to addressing these dual challenges. This requires cross-sector collaboration and strong commitment from relevant stakeholders to produce effective, holistic solutions.

Pesisir Selatan Regency is one of the areas with the highest Food Security Index in West Sumatra Province. Data shows that in 2022 [17], the Food Security Index in this region reached a fairly good value, with a food availability level of 93.20, affordability of 85.86, and utilization of 83.53. The national IKP figure at that time was recorded at 83.53. Despite having a relatively good Food Security Index, Pesisir Selatan Regency faces challenges in terms of the prevalence of stunting, which is relatively high. Based on the results of a national survey in the 2023 period, the number of stunting sufferers in Pesisir Selatan reached 2,314 cases or 29.8 percent of the total children in the area. This figure shows an increase of 4.6 percent compared to 2022, which was 25.2 percent. The high prevalence of stunting is a serious concern, considering the negative impacts that can be caused to children's health and development in the future.

Climate change adaptation is an important issue in the context of stunting prevention policies, especially in vulnerable areas such as Pesisir Selatan Regency. In general, this area consists of places that have the highest vulnerability to flood disaster risks, specifically including Barung-Baruang Balanai, Duku, Pasar Tarusan, Pasar Baru, Gurun Panjang, Salido, Painan, Lumpo, Jalamu, Pasar Kuok, Surantih, Kambang, Air Haji, Tapan, Lunang, and Silaut [8]. Based on data provided by the Regional Disaster Management Agency of Pesisir Selatan Regency, in 2020, there were a total of 17 flood events, resulting in one injury and the displacement of 335 people in Pesisir Selatan Regency.

Although Pesisir Selatan Regency has a relatively good Food Security Index, challenges remain high, especially related to the impacts of climate change that threaten agricultural and fisheries productivity, as well as increasing food insecurity in households. This is caused by shifts in unpredictable climate cycles, unbearable peaks in production, and disruptions to food supply flows. Floods damage agricultural assets and cause crop losses, while droughts can reduce production. This results in a shock to food prices, which ultimately burdens people's purchasing power, especially those with low incomes who are vulnerable to food security.

The flash floods in Pesisir Selatan Regency are the culmination of an ecological crisis that has been going on for a long time. Environmental quality has continued to decline over the past few years, making Pesisir Selatan Regency one of the areas in West Sumatra most affected by natural disasters. Ongoing environmental degradation, including forest destruction and river channel manipulation, has created vulnerable conditions that trigger floods and landslides.

Historically, the disasters that have occurred have made it clear that the impact of forest degradation is more obvious, and the affected areas are also much wider. This is exemplified by the wood debris carried by floodwaters to the village. One of the main catalysts for the flood disaster in Pesisir Selatan Regency is illegal logging. In addition, there are examples of illegal mining operations in forested areas. River courses have also been manipulated to the point of destruction, so that during periods of heavy rainfall, materials accumulated as a consequence of illegal mining activities are washed away. Unfortunately, various efforts have been made to restore forests and prevent recurring floods, but have not yet shown significant results.

So far, the government's analysis of this disaster seems very limited, even though the root of the problem stems from long-standing environmental degradation. The rivers that cross the districts along the South Coast originate from Kerinci Seblat National Park, with most of their headwaters located within Kerinci Seblat National Park. There is potential for degradation or deforestation within Kerinci Seblat National Park that has been ongoing for a prolonged period, as evidenced by illegal logging and uncontrolled land conversion. In 2024, floods hit fifteen areas in Pesisir Selatan Regency, resulting in the tragic deaths of fourteen people and the loss of nine residents who were swept away by floods and landslides. Koto XI Tarusan and Sutera Districts recorded the highest number of victims. On the other hand, drought during the 2023 dry season caused a significant decline in agricultural production, especially in rice, corn, vegetables, and other plantation crops. As a result, household food security in Pesisir Selatan Regency has been further eroded, with the ability of local communities to access and utilize food decreasing drastically. Climate change exacerbates flood conditions, threatening community food security. This is evidenced by the damage to agricultural land, where floods submerged 60 hectares of farm land and an additional 44 hectares of corn and secondary crops ready to be harvested, resulting in major economic losses for the farming community. Disruptions to infrastructure, especially the Local Water Company pipe network, have made it difficult to access drinking water, which is essential for irrigation and daily needs.

3.1 Impact of climate change on food security

Climate change significantly impacts food security and nutrition by altering agricultural productivity, increasing food price volatility, and exacerbating malnutrition [18, 19]. Increasing frequency of extreme weather events, changing temperature and rainfall patterns, and environmental degradation are key factors threatening global food systems. The effects are particularly severe in low- and middle-income countries, where climate variability disrupts food systems and threatens food availability and quality [20, 21]. The interactions between climate change and food security are complex, requiring a multifaceted approach to mitigate their adverse effects and ensure sustainable food systems.

Climate change also impacts food availability and accessibility, disrupting food distribution networks, causing food shortages and rising food prices, which in turn compromise food accessibility, especially in low- and middle-income countries [18, 21]. Rising food costs exacerbate malnutrition by reducing household food security and limiting access to nutritious foods [22]. This condition also impacts the nutritional quality of food by reducing the nutrient content of plants and increasing the risk of foodborne diseases [23]. Malnutrition, including inadequate intake and overconsumption, is exacerbated by a lack of nutritious foods, leading to adverse health outcomes [22]. Vulnerable populations, such as children and pregnant women, are particularly at risk, with climate change perpetuating cycles of malnutrition and health complications [23, 24]. This reduction in food availability is directly correlated with higher rates of stunting, especially in vulnerable regions such as South Asia and sub-Saharan Africa [25]. In India, climate change mitigation efforts may inadvertently increase the cost of clean cooking fuels, which may offset the benefits of reduced air pollution on child growth. Integrated policies that address air quality, energy access, and climate change are critical to reducing stunting rates [26].

Climate change in the South Coast causes flooding, landslides, and threatens food security and public health, which have a direct impact on stunting. The complexity of the interaction between climate change and food security increases the prevalence of stunting. Climate change affects stunting policies through its impacts on food security, the economy, and the environment, which disrupts child growth and the availability and access of food for communities, especially the poorest.

3.2 Reconnecting climate change adaptation policy with stunting prevention

Reconnecting climate change adaptation policies with stunting prevention strategies reflects a synergistic approach that strengthens the reciprocal relationship between the two programs. This approach not only increases the effectiveness of health and nutrition interventions but also strengthens the sustainability of stunting reduction initiatives in the face of environmental challenges. Specifically, climate change adaptation policies can leverage current information and best practices to strengthen public health systems, food and agriculture systems, water and sanitation infrastructure, and social protection activities to reduce stunting risks [27].

At the sub-national level, governments can integrate stunting prevention into regional action plans for climate change adaptation. For example, in Pesisir Selatan, this strategy could include improving access to clean water and sanitation, diversifying livelihoods to improve household economic resilience, and climate monitoring and early warning systems to reduce the impact of disasters on food availability and public health. By considering climate change aspects in stunting prevention policies, sub-national governments can strengthen rural economies, improve food security, and improve environmental conditions. Cross-sector collaboration between relevant agencies such as the Health Office, Environmental Office, Agriculture Office, and Social Office will be critical to operationalize this integrated strategy.

Stunting is a multifactorial condition influenced by multiple aspects of the nutritional ecology, including food systems, environmental exposures, and access to health and sanitation services [28]. Climate change can exacerbate food insecurity and undernutrition by affecting agricultural productivity and food systems, which are important components of the external nutritional ecology that influences stunting [28]. Therefore, stunting policies should incorporate strategies that enhance food security and resilience to climate change, such as promoting sustainable agricultural practices and improving water and sanitation infrastructure, which are fundamental determinants of stunting [29].

In addition, political commitment to address stunting, as highlighted in various studies, can be leveraged to integrate climate adaptation measures into national and regional stunting reduction strategies [30]. This integration can be achieved by ensuring that stunting policies are part of broader health and nutrition policies that take into account the impacts of climate change on food systems and public health [31]. Furthermore, the success of stunting reduction in model countries, despite modest economic growth, suggests that targeted interventions focusing on maternal education, nutrition, and health care can be effective even in the face of environmental challenges [29]. By aligning stunting policies with climate adaptation efforts, countries can create a more holistic approach that addresses both immediate and long-term health outcomes, ensuring that vulnerable populations are protected from the dual threats of malnutrition and climate change. This approach requires coordinated efforts across sectors, including health, agriculture, and environmental management, to build resilience and reduce the prevalence of stunting in the context of climate [29, 32].

3.3 Reconnecting policy design: climate change adaptation in stunting prevention

Climate change and unstable environmental conditions can worsen stunting through various mechanisms, such as decreased food production, disruption of clean water sources, and vulnerability to disease. Therefore, a comprehensive strategy is needed that integrates climate change issues and stunting prevention strategies. Stunting intervention designs that take into account the context of climate change can include:

First, it is necessary to systematically and holistically incorporate climate change adaptation considerations into the design and implementation of stunting prevention programs in Pesisir Selatan Regency. By embedding issues such as food security, clean water access, and environmental quality into policies and strategies, we can significantly accelerate stunting reduction and create a more resilient future. The Regional Medium-Term Development Plan and the Decree (SK) of the Pesisir Selatan Regent on the Acceleration of Stunting

Reduction can be an entry point for integrating climate change adaptation into stunting prevention plans and programs. Furthermore, to ensure effective interventions in reducing stunting, local governments need to conduct research and development programs that comprehensively examine the impact of climate change on nutritional status and determinants of stunting at the local level.

This is in line with the Sustainable Development Goals, which provide a framework for addressing stunting through interrelated targets and emphasize the need for specific strategies at the district level that consider local resources and capacities [33]. By systematically integrating climate change adaptation, stakeholders in Pesisir Selatan Regency can develop more holistic and sustainable interventions to address stunting problems. By systematically integrating climate change adaptation, stakeholders in Pesisir Selatan Regency can develop more holistic and sustainable interventions to address stunting problems.

Second, integrating climate change resilience measures into existing maternal and child health and nutrition frameworks. This can be implemented by integrating climate change adaptation into existing maternal and child health and nutrition initiatives. Next, strengthening existing health programs by integrating climate change adaptation, including the development of specific interventions such as increasing nutritional intake adapted to climate change.

Cross-sector collaboration between health, environment, agriculture, and education is essential to ensure effective coordination. The use of technological solutions is needed for continuous monitoring of maternal and child health, along with evaluating the consequences of climate change, thus enabling the application of climate data to design more timely and effective health intervention measures.

Training and education directed at health professionals on the topic of climate change adaptation within the framework of maternal and child health, alongside initiatives for public awareness on the relevance of this adaptation, are fundamental components. In addition, appropriate budget allocation and the pursuit of additional funding streams from national government agencies, international donors, or the private sector are essential to support the necessary resources. Enhance human resource capacity through the recruitment and advancement of specialists in interconnected domains.

Taking into account climate change factors that influence stunting risk, such as household food security, access to clean water and sanitation, and control of climate-related infectious diseases, can make programs more effective and sustainable in addressing stunting in the Pesisir Selatan District. By comprehensively integrating climate change issues into existing nutrition and maternal-child health interventions [6], it is hoped that these programs can be more effective and sustainable in addressing stunting in the Pesisir Selatan District. Synthesizing climate adaptation strategies with nutrition initiatives can serve to mitigate the consequences of climate change, as evidenced by projects across Latin America and the Caribbean that prioritize climate-smart and nutrition-sensitive agricultural techniques [34].

Third, enhancing food security and natural resource management strategies, such as advocating for food diversification, maintaining mangrove ecosystems, and encouraging clean water resource development, requires evaluating the impacts of climate change. This can be implemented by combining community-based adaptation with increasing local government capacity and integrating climate change adaptation into stunting prevention programs. By leveraging synergies between nutrition and climate strategies, policymakers can create resilient systems that support human health and environmental sustainability. This approach requires synergy between different sectors and levels of government, while also encouraging active community engagement to ensure that interventions resonate culturally and gain broad support. This can be achieved through initiatives like health programs for mothers and children, food diversification, and effective cross-sectoral coordination. Such measures may lay the foundation for reducing risk by promoting access to nutritious resources and clean water, while also enhancing the adaptive capacity of populations facing the challenges posed by climate change.

Fourth, both local governments and communities have limitations in dealing with the risks of climate change, especially its impact on food and nutrition security. This can be seen from the implementation of programs to address food insecurity due to floods and landslides, which are still short-term assistance that is an emergency response. Climate literacy, early warning systems, and social protection schemes are not optimal. This is a challenge in preparing regions to face food and nutrition insecurity due to climate change. Greater investment is needed to strengthen the capacity of communities and local governments, including monitoring climate impacts, improving adaptation skills, and resilient social protection mechanisms. Implementing these strategies requires integrating climate change adaptation into stunting prevention programs through Regional Medium Term Development Plan and Regent Regulation, aligning health initiatives for mothers and children with climate adaptation approaches, and developing food diversification, mangrove conservation, and clean water management programs. Effective cross-sectoral coordination and increased capacity building for governments and communities are crucial. Such initiatives are essential to increase the adaptive capacity of populations grappling with the difficulties caused by climate change.

This study provides valuable insights into the importance of integrating climate change adaptation strategies into stunting prevention efforts in Pesisir Selatan Regency [35-38]. Although there are several challenges and potential risks, a combination of specific and nutrition-sensitive approaches and strengthening food security and natural resource management programs integrated with climate change adaptation can provide a more comprehensive and sustainable impact in reducing stunting rates. Effective cross-sector coordination, increased capacity of local governments and communities, and adequate resource mobilization are needed to support effective implementation.

By reconnecting stunting prevention policies and climate change adaptation in a more comprehensive manner, Pesisir Selatan Regency is expected to improve food and nutrition security and support the sustainability of stunting reduction programs in the long term. This integrated approach can help strengthen efforts to address stunting risk factors associated with climate change, such as food production volatility, clean water availability, and disease threats. In addition, this policy reconnection can also encourage synergy between stunting reduction programs and climate change adaptation initiatives, thereby increasing the impact and effectiveness of both interventions [39]. Thus, Pesisir Selatan Regency can better prepare itself to face future challenges, including ensuring food and nutrition security that is more resilient to climate

change (See Table 1).

Table 1. Design of a connecting policy for climate change adaptation in stunting prevention in Pesisir Selatan District

Recommendations	Description	Benefits	Challenges
Integration of Climate Change Adaptation in Stunting Prevention Program through Regional Medium Term Development Plan and Regent Regulation	Integrating climate change adaptation (food security, clean water, environment) into stunting reduction policies and strategies.	More holistic and sustainable interventions to reduce stunting rates.	Requires cross-sector coordination and greater resources. May reduce focus on direct stunting reduction.
Integration in Maternal-Child Health and Nutrition Initiatives	Aligning climate change adaptation with maternal and child health programs.	Programs are more effective in addressing the impacts of climate change and strengthening community resilience.	Increasing implementation complexity and increasing the burden of cross-sector coordination. Excessive focus on climate can deprioritize stunting directly.
Strengthening Food Security and Natural Resource Management Programs	Developing food diversification, mangrove conservation, and clean water sources while taking climate change into account.	Increasing access to food and clean water, and resilience to climate change.	Requires high technical capacity, financial resources, and more complex inter-sectoral coordination.
Effective Cross-Sector Coordination	Building coordination between stakeholders related to stunting and climate change.	Policies support each other and create synergy to reduce stunting and adapt to climate change.	More complex coordination can slow down implementation, requiring large resources.
Government and Community Capacity Building	Increasing climate literacy, early warning, and social protection to deal with the impacts of climate change.	Strengthening food and nutrition security in the face of climate change.	Implementation is limited by suboptimal resources and capacity.

3.4 The challenge of reconnecting climate change adaptation with stunting prevention

While reconnecting stunting prevention and climate change adaptation policies in a more comprehensive manner can provide benefits, such as improving food and nutrition security and supporting the long-term sustainability of stunting reduction programs, this approach also has several challenges and risks that need to be considered. One of the main challenges is One of the main challenges is linking climate change with stunting prevention.

First, Inter-sectoral coordination is needed to ensure that stunting prevention and climate change adaptation policies are well integrated. Ministries, local governments, and related institutions must work together more intensively to avoid overlapping policies and ensure that programs run effectively. The formation of cross-sectoral teams with clear working mechanisms is essential to support coordination and the appropriate division of roles. In practice, this can increase the efficiency of resource use and improve the results of implemented policies.

Second, the main problems in reconnecting policies are limited budget, expertise, and institutional capacity. In certain areas with limited infrastructure, this will be a greater challenge. To overcome this, increased funding can be done through collaboration with the private sector and donor agencies. In addition, training for local personnel is essential to improve technical capacity and ensure that programs can run well. This approach can help overcome resource constraints and ensure program sustainability.

Third, Reconnecting policies between two different policy domains, specifically stunting prevention and climate change adaptation, has the potential to introduce additional layers of complexity and require more sophisticated cross-sectoral collaboration. Research on the integration of stunting prevention and climate change adaptation policies has shown that complex cross-sectoral coordination can slow program implementation and reduce the effectiveness of interventions in both areas. In addition, differences in orientation and programs between institutions, limitations in funding, manpower, and institutional capacity can hinder effective reconnecting policies [40].

Another challenge in reconnecting this policy is the different priorities between climate change and stunting prevention, which can lead to imbalances in policy implementation. In addition, incompatibilities between existing programs and initiatives in both domains can make it difficult to integrate smoothly. Differences in understanding and interests among stakeholders can also hinder the collaborative efforts needed to achieve common goals.

Apart from that, further studies emphasize the importance of competent collaboration among stakeholders, careful strategy development, and adequate resource distribution as fundamental aspects in addressing this challenge effectively. In practice, this integrative approach can be realized through increasing climate literacy, implementing an early warning system, and developing a resilient social protection scheme. So far, climate change and stunting prevention policies have not been mutually supportive, so it is necessary to reconnect policies to ensure that efforts in both areas are mutually reinforcing and well-integrated. By linking the two policies, the local government of the South Coast district and the community can anticipate the impact of climate change on food and nutrition security. Careful planning can enable optimal use of resources to support effective implementation. Through good coordination and careful planning, integration between stunting prevention and climate change adaptation efforts can be implemented practically, thereby maximizing the impact and benefits of this integrated approach.

Fourth, excessive focus on climate change adaptation can divert attention from initiatives that are carefully aimed at reducing stunting, which include nutrition interventions and maternal and child health programs. The right balance is needed so that stunting reduction efforts are not degraded and

remain a top priority. Although the approach of reconnecting stunting prevention policies and climate change adaptation has the potential to provide significant benefits, such as improving food and nutrition security and supporting the sustainability of stunting reduction programs in the long term, stakeholders must be careful in implementing it [26, 34]. They must ensure the right balance between stunting prevention efforts and climate change adaptation support that are strategically integrated. To that end, reconnecting policies are carried out with intensive cross-sectoral coordination, with the formation of cross-sectoral teams with clear working mechanisms and programs, as well as increasing funding and technical capacity through collaboration with the private sector and donor agencies, along with training for local workers. In addition, the development of integrated implementation guidelines that combine stunting prevention and climate change adaptation targets according to local needs, as well as sustainable food security programs through sustainable agriculture, efficient irrigation, and access to clean water, is also needed [39]. This can help Pesisir Selatan Regency be better prepared to face future challenges, including ensuring food and nutrition security that is more resilient to climate change.

Fifth, climate change, such as floods and landslides, poses significant threats to agricultural productivity, clean water supplies, and increases the risk of infectious disease outbreaks. These challenges negatively impact children's welfare and maternal health. To overcome this, a community-based approach can be used with the involvement of local farmers, improving health systems, and providing sustainable clean water in disaster-prone areas as the main keys. This is an effort made to increase community capacity in anticipating local risks caused by climate change.

Finally, the right synergy between programs can strengthen the impact of policies while ensuring long-term sustainability in reducing stunting in vulnerable areas. Policies that are adaptive to the environment and climate change are essential to achieve. Evaluation of policy effectiveness needs to be done in order to adjust to needs. This approach ensures that the stunting reduction program can run effectively and sustainably in the long term. For details, please see Table 2 below:

Table 2. Challenges of reconnecting climate change adaptation with stunting prevention

Category	Challenge/Description	Solution Strategy
Cross-Sector Coordination	Integration of stunting prevention policies and climate change adaptation requires more intensive coordination between ministries, local governments, and related institutions.	Form a cross-sector team with clear working mechanisms to support effective coordination and division of roles.
Limited Resources	Budgets, expertise, and institutional capacity to support integrated programs are often inadequate, especially in areas with limited infrastructure.	Increasing funding through collaboration with the private sector and donor agencies, as well as conducting training of local personnel to increase technical capacity.
Policy Complexity	Integration of two policy areas increases the risk of overlapping programs, slow bureaucracy, and a lack of synchronization between national and regional policy objectives.	Develop integrated implementation guidelines that integrate stunting targets and climate change adaptation according to local needs.
Potential Benefits	Community food and nutrition security can be improved through policy synergy, supporting the sustainability of stunting reduction programs in dealing with the impacts of climate change.	Improving food security through sustainable agricultural programs, efficient irrigation, and access to clean water to support stunting prevention efforts.
The capacity to withstand local risks	This category is threatened by climate change, which is severely affecting the variability of agricultural productivity, drinking water supplies, and exacerbating the risks associated with infectious diseases that have a negative impact on children's well-being and maternal health.	Developing community-based strategies involving local farmers, improving health systems, and providing sustainable clean water in disaster-prone areas.
Effectiveness and Sustainability	Appropriate program synergy can strengthen the impact of policies while ensuring long-term sustainability in reducing stunting in vulnerable areas.	Establish policies that are adaptive to environmental and climate change, and integrate regular monitoring to assess program effectiveness.

4. CONCLUSIONS

Reconnecting policy through the integration of climate change adaptation policies with stunting prevention strategies is a strategic step to create more effective and sustainable interventions. Climate change has had a broad impact on Pesisir Selatan Regency, especially on maternal health and child nutrition through threats to the community's food security system, the availability of clean water, and an increased risk of infectious diseases. Therefore, policies that have been implemented sectorally need to be reconstructed to be more synergistic in building community resilience. In Pesisir Selatan Regency, ecological conditions due to climate change and diverse socio-economic conditions, reconnection through policy integration is becoming increasingly crucial. Linking climate change adaptation policy programs with stunting prevention programs has the potential for significant benefits in the long term. However, this study requires empirical data that directly measures the effectiveness of this policy reconnection in various local contexts. In addition, geographic and socio-economic variability pose challenges in generalizing findings, while policy implementation is highly dependent on political commitment and cross-sectoral coordination that is not always optimal. To overcome these limitations, future research directions need to focus more on empirical studies that measure the effectiveness of climate change adaptation policies in reducing stunting rates in various regions, including Pesisir Selatan Regency. Reconnecting Policy can be realized by developing an interdisciplinary approach that combines policy anthropology, environmental science, and public health to understand the social and institutional dynamics in the implementation of adaptation policies. With more in-depth and evidence-based research, the concept of Reconnecting Policy can be further strengthened as a cross-sectoral approach that not only addresses the impacts of climate change but also ensures community resilience and

reduces the prevalence of stunting in the long term, especially in vulnerable areas such as Pesisir Selatan Regency.

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