

## Research Article

# Leveraging Collaborative Governance Framework for Sustainable Stunting Reduction: An Analysis of Cross-sector Collaboration in Kabupaten Sidenreng Rappang, Indonesia

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## Abstract.

Stunting remains a critical public health challenge in Indonesia, particularly in Kabupaten Sidrap, where prevalence rates persist despite local government's concerted efforts. This study aims to analyze cross-sector collaboration practices in stunting reduction using Emerson and Nabatchi's collaborative governance framework. Employing a qualitative-descriptive approach, data was collected through in-depth interviews with key stakeholders, document analysis, and thematic analysis using Nvivo-12 application. Findings reveal that Kabupaten Sidrap has established a formal collaborative structure through the Tim Percepatan Penurunan Stunting (TPPS), coordinated primarily by Bappeda, with active involvement from health, family planning, education, social services, and livestock agencies. However, collaboration remains predominantly administrative, hindered by sectoral ego, limited cross-sectoral communication, inadequate data integration, and constrained budget allocation. Additionally, involvement from the private sector is minimal despite significant potential for corporate social responsibility (CSR) contributions from local industries, including egg and rice producers. Socio-cultural and economic factors exacerbate stunting risks, particularly through early marriages, traditional practices restricting early health interventions, and persistent structural poverty. Stakeholders propose enhancing collaboration through robust data integration, strengthened regulatory frameworks, improved inter-agency communication, active private sector engagement, and revitalized community-based health interventions, such as school health units (UKS) and nutrition houses (rumah gizi). This research underscores the necessity of integrating Emerson and Nabatchi's collaborative governance principles, emphasizing principled engagement, shared motivation, and joint action capacity, to achieve sustainable stunting reduction. Policy implications highlight the need for strategic leadership, operational regulatory improvements, and comprehensive stakeholder inclusion to overcome implementation barriers and effectively address stunting in Kabupaten Sidrap.

**Keywords:** collaborative governance, stunting, sustainability

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## 1. Introduction

Stunting remains a critical public health challenge in Indonesia, significantly impacting children's growth and cognitive development, thereby hindering national development goals[1][2]. Despite comprehensive interventions and national-level commitments[3][4], Indonesia still faces considerable regional disparities, exemplified by Kabupaten Sidrap, South Sulawesi. The persistence of high stunting rates in this area calls for urgent examination of the governance frameworks and strategies employed at the local government level[5], [6].

Addressing complex public health issues like stunting necessitates robust collaborative governance involving various sectors and stakeholders[7]–[9]. Effective inter-sectoral collaboration, especially through the convergence of programs, has been increasingly emphasized as essential in public administration discourse[10], [11]. However, translating collaborative governance from theoretical frameworks to actionable strategies presents significant challenges, including sectoral egos[12], inadequate communication[13], and resource constraints[11], [14], [15]. The Collaborative Governance Framework proposed by Emerson and Nabatchi [16], comprising principled engagement, shared motivation, and capacity for joint action, provides a comprehensive analytical lens to examine the dynamics of cross-sector collaboration[17]–[19].

Despite growing scholarly attention on collaborative governance, empirical investigations into how these frameworks are operationalized at the local government level [20] in addressing stunting remain limited, particularly within the Indonesian context. Most studies have predominantly focused on health specific[21] interventions without extensively exploring governance and administrative dimensions[22]. Hence, there exists a notable research gap concerning the effectiveness and challenges of applying collaborative governance principles explicitly within local governmental structures aimed at reducing stunting[23].

This study aims to fill this gap by examining how the Collaborative Governance Framework is implemented in Kabupaten Sidrap's efforts to sustainably reduce stunting. Specifically, the research explores stakeholder interactions, identifies structural and socio-cultural challenges, and provides strategic policy recommendations. By evaluating the practical application of Emerson and Nabatchi's model[24][25], this research contributes to public administration literature and offers actionable insights to enhance collaborative governance practices in Indonesia and similar contexts globally.

Collaborative governance has gained significant attention as an effective approach to managing complex public issues that require intersectoral coordination. Emerson

and Nabatchi's Collaborative Governance Framework (2015)[16] provides a robust theoretical model that identifies three fundamental components: principled engagement, shared motivation, and capacity for joint action. Principled engagement emphasizes inclusive stakeholder participation and transparent dialogue[26], shared motivation focuses on building mutual understanding and commitment, while capacity for joint action stresses institutional and operational preparedness to implement agreed-upon solutions collaboratively[27].

Previous research underscores the efficacy of collaborative governance in tackling public health issues such as stunting, highlighting that effective multi-sectoral collaboration can significantly enhance program outcomes. For instance, recent studies (World Bank, 2022; UNICEF, 2023) emphasize the critical role of inter-agency communication, integrated data systems, and coordinated resource mobilization in sustainably reducing stunting. These studies reinforce the notion that isolated sectoral interventions are insufficient, advocating instead for comprehensive governance frameworks that facilitate collaboration among government agencies, private entities, and community organizations.

However, existing literature also identifies substantial challenges in implementing collaborative governance effectively. Factors such as sectoral ego, fragmented authority, lack of sustainable financing mechanisms, and limited stakeholder commitment often impede successful collaboration. For instance, studies conducted in similar developing contexts [28][29] highlight persistent obstacles such as poor data integration and insufficient engagement from non-governmental sectors, particularly private businesses[30], thereby limiting the effectiveness of collaborative interventions in achieving public health goals.

This research provides a distinctive contribution to the international academic discourse by presenting a comprehensive, empirically substantiated application of Emerson and Nabatchi's Collaborative Governance Framework within a decentralized local setting in Indonesia, where collaborative initiatives are frequently influenced by unequal capacities and varied institutional logics[31][32][33]. While existing literature has thoroughly examined the framework's normative aspects such as principled engagement and collective motivation, there is a paucity of studies investigating how these principles manifest in practice within governance structures characterized by fragmentation and limited resources. By concentrating on the case of Kabupaten Sidrap, this research addresses this gap by elucidating how the disjunction of engagement logic between governmental and non-state entities, particularly the private sector, constrains collaborative capacity and long-term viability. The introduction of the notion of "asymmetric logic

of engagement” constitutes a theoretical enhancement that broadens the Collaborative Governance model, rendering it more attuned to the intricate socio-political dynamics of local governance in low- and middle-income nations.

While numerous academic inquiries have elucidated initiatives aimed at mitigating stunting through sector-specific interventions, such as nutrition education[34], health service provision[35], or social protection program [36], these methodologies frequently function in isolation and neglect to confront the multifaceted nature of stunting. The sectoral strategy tends to disregard systemic interdependencies[37], leading to disjointed planning, inconsistent data utilization, and redundant or duplicated initiatives. For instance, health organizations may emphasize supplemental feeding[38] while educational sectors execute uncoordinated awareness campaigns, culminating in inefficiencies and a constrained impact[39]. In contrast, collaborative governance provides a systemic response by promoting principled engagement, harmonizing motivations across sectors, and cultivating joint capacity for action. This integrated paradigm fosters coherence in policy execution, augments data sharing, and facilitates more equitable resource allocation, thereby tackling the underlying causes of stunting in a more comprehensive and sustainable manner. By embedding this framework within local governance structures, collaborative methodologies can alleviate institutional fragmentation and enhance collective accountability

## 2. Methods

This study employed a qualitative-descriptive research design to explore the collaborative governance mechanisms applied in Kabupaten Sidrap for sustainable stunting reduction. A qualitative-descriptive approach[40] was chosen to provide a comprehensive understanding of stakeholders’ interactions, governance practices, challenges, and local contextual factors influencing collaboration. Using Emerson and Nabatchi’s Collaborative Governance Framework[16] as the analytical foundation allowed for in-depth examination of the three main components principled engagement, shared motivation, and capacity for joint action within the context of local government interventions.

Data collection was conducted primarily through in-depth semi-structured interviews with key stakeholders, including local government officials from various agencies (Bappeda, Health, Family Planning, Education, Social Services, and Livestock departments), private sector representatives, and community leaders involved in stunting reduction programs. Additionally, policy documents, regulations, and meeting minutes relevant to collaborative initiatives were reviewed to corroborate interview findings and

provide context. Data processing involved transcribing interview recordings verbatim, followed by thematic analysis using NVivo software, enabling systematic coding and identification of recurring themes aligned with the collaborative governance components.

In order to augment the credibility and dependability of the results, this investigation implemented methodological triangulation. Data were gathered from a multitude of sources, encompassing comprehensive interviews with stakeholders from various sectors (e.g., Bappeda, Health Office, Education Office, Family Planning, Social Services, Livestock Department), document scrutiny (local regulations, TPPS meeting documents, program assessments), and empirical observations. The triangulation of these sources facilitated the cross-verification of emergent themes and mitigated the potential for bias or selective interpretation. Moreover, member checking was performed by disseminating preliminary findings to selected informants to ascertain the precision and coherence of interpretations. The utilization of NVivo software fostered a transparent coding methodology and thematic traceability, thereby enabling systematic comparisons across stakeholder perspectives and enhancing the validity of the comprehensive analysis.

The conclusions were drawn through an interpretative approach, synthesizing themes identified during thematic analysis to articulate comprehensive insights into collaborative governance practices and their implications. The findings were critically compared against Emerson and Nabatchi's theoretical propositions, providing evidence-based interpretations regarding the effectiveness, challenges, and opportunities of local collaborative governance efforts. This approach ensured robust conclusions and actionable recommendations for enhancing collaborative governance in stunting reduction initiatives in Kabupaten Sidrap.

## 3. Results and Discussion

### 3.1. Principled Engagement in Collaborative Efforts in Sidrap

The findings of this study indicate that Kabupaten Sidrap has formally adopted principled engagement in cross-sector collaboration through the establishment of the Stunting Reduction Acceleration Team (TPPS)[41]. Regular inter-agency meetings led by Bappeda as the central coordinator have facilitated structured interaction among stakeholders. However, communication between agencies frequently remains administrative rather

than substantive, hindered significantly by entrenched sectoral egos and divergent institutional priorities.

Furthermore, interview results suggest that, although dialogues regularly occur within coordination forums, many agencies continue to operate programs independently. Ideally, inclusive stakeholder engagement principles should strengthen collaboration, but persistent sectoral egos and primarily administrative coordination have limited the integration of cross-sectoral programs. These findings underscore the need for improved dialogue quality and more meaningful participation in joint planning processes.

### **3.2. Shared Motivation in Stunting Management**

Shared motivation among stakeholders involved in stunting reduction in Sidrap is generally strong, driven by a collective awareness of the urgency in reducing high stunting rates. Each agency demonstrates a common understanding regarding their crucial role in stunting interventions[42]. However, this shared motivation has not been fully translated into practical collaborative implementation, as evidenced by limited synergy between sectoral activities and programs.

Moreover, while motivation levels appear generally positive, internal obstacles related to prioritization and budget allocations within individual agencies inhibit full commitment to collective goals. Disparities in resource capacity among sectors contribute to passive participation by some stakeholders[43], who engage more out of administrative obligation rather than intrinsic commitment to substantially reducing stunting prevalence[17].

### **3.3. Capacity for Joint Action**

Regarding the capacity for joint action, findings indicate that agencies in Kabupaten Sidrap have adequate institutional structures but face significant operational constraints. Essential institutional capacities including human resources, funding, and technical capabilities required to implement convergent actions are limited. The lack of sufficient operational budgets, particularly for non-health sectors, combined with inadequate integrated data systems, significantly hampers effective collaborative action against stunting.

Conversely, some positive steps such as joint training and integrated activity planning have been initiated, albeit on a limited scale. Nevertheless, the overall capacity for joint action remains insufficient to meet the integrative standards expected within a

collaborative governance framework[44]. Institutional strengthening through operational capacity enhancement, integrated data management systems, and proportional budget support for each agency is essential to effectively facilitate and sustain cross-sector collaboration.

3.4. Evaluation of Collaboration Effectiveness

Evaluation of the effectiveness of cross-sector collaboration in reducing stunting in Sidrap presents mixed outcomes. On one hand, formal structures like TPPS [45] and supportive local regulations provide a solid foundation for collaborative implementation. However, collaboration effectiveness remains limited, as field implementation tends to be more administrative and coordination-focused rather than fully integrated, thus insufficiently impacting overall stunting prevalence reduction.

Additionally, this evaluation reveals that the limited effectiveness arises from insufficient private sector engagement, lack of transparency in reporting collaborative outcomes among agencies, and incomplete holistic program integration. These insights highlight the need for managerial and operational improvements, including strengthening coordination mechanisms, enhancing transparency and accountability, and adopting adaptive and inclusive collaborative strategies to significantly improve joint efforts in combating stunting.

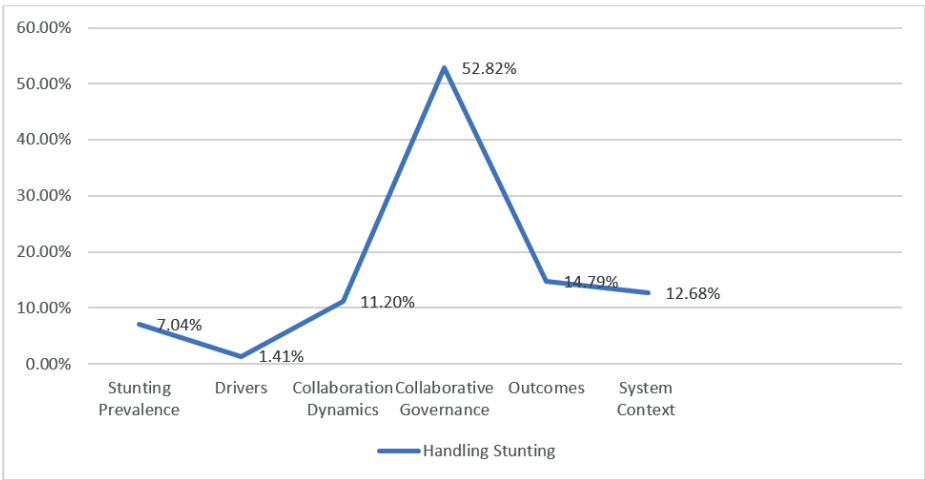


Figure 1: Crosstab query. Source: Nvivo 18 application.

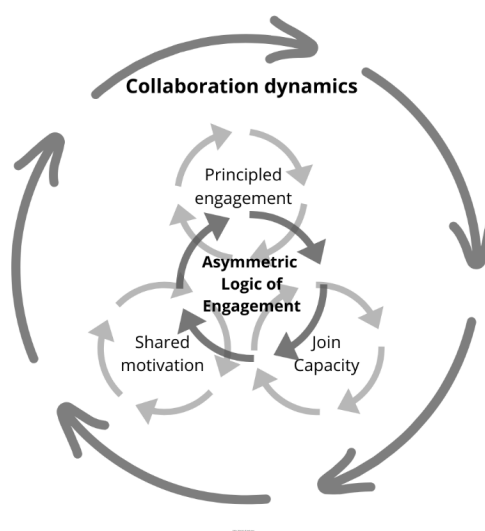
Figure 1 shows the results of the crosstab query conducted through thematic analysis using the Nvivo 18 application. From the visualization, it can be seen that the Collaborative Governance theme is the most dominant theme in the narrative of handling stunting,

with a percentage of 52.82%. This dominance indicates that the main focus of cross-sector collaboration in Sidrap district is closely related to the application of Collaborative Governance principles, which include engagement, communication, coordination and joint decision-making between stakeholders.

The next significant themes are Outcomes (14.79%) and System Context (12.68%). These percentages illustrate that evaluation of the outcomes or impacts of collaborative interventions as well as the system context that influences the success of the program received considerable attention in the analysis process. This indicates the awareness of stakeholders about the importance of evaluating the effectiveness of interventions on an ongoing basis and considering the social, cultural and institutional context in the implementation of collaborative programs.

Meanwhile, the Collaboration Dynamics theme recorded a percentage of 11.20%, reflecting attention to the dynamics of relationships between actors in the collaboration process, including interactions, challenges, and the quality of stakeholder engagement. On the other hand, the themes of Stunting Prevalence (7.04%) and Drivers (1.41%) received a relatively small portion of the narrative, indicating that discussions were more likely to highlight the collaboration mechanism than the prevalence and causes of stunting itself.

Overall, the results of this analysis confirm that effective collaboration through Collaborative Governance is a central issue of concern in efforts to address stunting in Sidrap district. These findings can serve as an important basis for developing policy recommendations to optimize cross-sector collaboration in the future (Figure 2).



**Figure 2:** Model Development Collaborative Governance. Source; Researcher elaboration, 2025.



This research reveals that the implementation of convergence actions to address stunting in Sidenreng Rappang District has not fully integrated the role of the private sector optimally. In fact, this sector plays a strategic role in providing access to nutritious food, such as eggs and clean water, which are important components in nutrition-sensitive interventions. Field findings show that private sector involvement is still limited to incidental contributions, and is not structured in a sustainable collaborative framework. This lack of involvement is rooted in the different perspectives between the government and businesses on the meaning of involvement in social programs.

In the Collaborative Governance framework as proposed by Emerson and Nabatchi (2012), there are three dynamic elements that make up the collaboration system, namely shared motivation, joint capacity, and principled engagement. Among the three, the shared motivation element is a critical point in the context of private sector involvement in Sidrap. The local government tends to rely on administrative-normative approaches in inviting the private sector to participate, for example by delivering appeals or referring to CSR obligations. However, this approach does not reach the mindset of business actors who generally consider engagement based on exchange value or direct interest in the continuity of their business.

This logical asymmetry is an important finding in this study. The government views collaboration as a social obligation, while businesses view it as a partnership that needs to be mutually beneficial. As a result of this asymmetry, the process of formulating and implementing nutrition programs at the local level is unable to substantially tap into the potential contribution of the private sector. When businesses are asked to contribute, they respond with incomprehension and even resistance due to the lack of clarity on incentives, responsibilities and returns. This suggests that the basic assumptions in the collaboration model have not been able to effectively bridge the differences in interests.

Furthermore, failure to build shared motivation has a direct impact on weak joint capacity-the collective ability to strategize, manage resources and implement programs together. In some cases, businesses stated that they were never actively involved or considered equal partners by the government. This relational imbalance is a major obstacle to meaningful collaboration. In fact, engaging the private sector with the right approach has the potential to strengthen local food availability, food distribution, and accelerate the delivery of nutrition interventions.

The failure to build shared motivation and joint capacity in Sidrap is closely tied to local governance structures that remain largely formalistic and non-adaptive to the operational logic of informal actors, particularly micro, small, and medium enterprises (MSMEs). Local institutions tend to rely on bureaucratic mechanisms, such as formal

invitations, administrative procedures, or references to CSR obligations, that do not resonate with the informal sector's transactional orientation and limited institutional capacity. As a result, MSMEs do not perceive collaboration as mutually beneficial or relevant to their core business interests. This misalignment constrains their voluntary participation and leads to symbolic or minimal involvement. Without flexible mechanisms that recognize the economic realities, informal hierarchies, and trust-based networks that characterize MSMEs, local governance systems struggle to mobilize these actors as equal partners in collaborative stunting interventions. Addressing this gap requires not only policy adjustments but also a paradigm shift toward relational governance models that prioritize incentive compatibility and adaptive engagement.

To strengthen the theoretical relevance of the findings, this study compares the Sidrap case with collaborative governance experiences in other decentralized contexts, such as West Java and Sleman Regency in Indonesia. In these regions, studies by Afandi et al. (2022)[19] and Permatasari & Walinegoro, 2023[46] identified similar institutional fragmentation and uneven stakeholder engagement, particularly regarding the role of the private sector. However, the Sidrap case introduces the concept of "asymmetric logic of engagement," wherein the government views collaboration through a normative-administrative lens, while local businesses perceive involvement based on transactional or incentive-driven logic. This divergence helps explain the persistent gap between formal policy expectations and actual stakeholder participation.

Moreover, findings derived from international case studies, including those from Tanzania [47] and various Latin American nations [48], substantiate the existence of relational asymmetries and misaligned incentives prevalent in other low- and middle-income contexts. These investigations underscore the imperative for collaborative frameworks that are attuned to the multifaceted motivations and contextual limitations, rather than presuming uniformity among stakeholders. Consequently, the insights garnered from Sidrap not only corroborate fundamental components of Emerson and Nabatchi's Collaborative Governance Framework but also enhance it by advocating for the incorporation of an "asymmetric logic of engagement" as a pivotal element to elucidate disparities in collaborative outcomes. This contribution is vital for the advancement of more adaptable and inclusive governance paradigms within the public health domain.

The theoretical implications of this finding challenge the Collaborative Governance framework that has been assumed to be universally applicable. In a regional context like Sidrap, where the private sector consists of informal actors and micro-enterprises that are not bound by CSR regulations, the concept of shared motivation must be reinterpreted. This study offers a conceptual contribution in the form of a proposal to

add a new dimension to the model, namely the asymmetric logic of engagement, an approach that recognizes that the motivations and ways of thinking of collaborative actors are not always homogeneous, and need to be adjusted to the relevant incentive structure.

Thus, handling stunting through a collaborative framework requires more than just coordination instruments between agencies. Local governments need to map the interests and thinking patterns of each actor, and build an appropriate incentive system for businesses to be actively involved. The strategy for engaging the private sector cannot be confused with the approach that applies to government organizations or NGOs, but must be based on equality of relations, transparency of goals, and clarity of benefits. Without reconstructing this approach, the involvement of non-state actors will only be a formality in policy documents.

Finally, the findings confirm that the main challenge in cross-sector collaboration lies not in the lack of actors, but in the failure to understand and unify the logic of their involvement. When businesses do not feel equally valued, or do not see the value of their involvement, collaboration becomes unequal and unsustainable. Therefore, collaboration strategies in convergence actions need to be tailored to the socio-economic realities of local actors and geared towards building a governance ecosystem based on common interests, not just administrative compliance.

## 4. Conclusion

This study concludes that the implementation of Collaborative Governance in handling stunting in Sidenreng Rappang District has not run optimally due to the inequality of thinking logic and motivation between state and non-state actors. The findings show that the private sector, especially local businesses that play a role in providing nutritious food, is not substantively involved in the planning and implementation of the convergence program. This is not due to an explicit rejection, but rather a lack of congruence in the logic of engagement, where the government uses an administrative and normative approach, while the private sector tends to be oriented towards pragmatic interests and immediate exchange rates.

This situation reveals a weakness in Emerson & Nabatchi's Collaborative Governance theoretical framework, which assumes homogeneity of motivation between actors. Therefore, this research proposes a conceptual enrichment in the form of "asymmetric logic of engagement" an approach that recognizes the inequality of logics, interests, and participation structures between stakeholders. This concept helps explain why shared

motivation and joint capacity do not form effectively, and why collaborative interventions tend to be symbolic or unsustainable.

To operationalize the concept of asymmetric logic of engagement, local governments must develop context-sensitive incentive schemes that align with the motivations of informal and private sector actors, particularly MSMEs. Rather than relying solely on normative appeals or CSR obligations, local administrations should offer tangible, reciprocal benefits, such as public recognition, tax relief, simplified licensing processes, or access to procurement opportunities, for businesses that contribute to stunting reduction programs. Additionally, mechanisms like community-based partnership forums or joint planning units can foster trust and ensure that businesses feel like equal stakeholders rather than passive donors. Embedding these incentives within local regulations or village-level development plans will institutionalize collaboration and enhance long-term sustainability. Such adaptive strategies allow local governments to move beyond administrative compliance and cultivate a genuine, interest-driven collaborative ecosystem

## References

- [1] Flynn J, Alkaff FF, Sukmajaya WP, Salamah S. ... of WHO growth standard and national Indonesian growth reference in determining prevalence and determinants of stunting and underweight in children under five: a .... europepmc.org, 2020. [Online]. Available: <https://europepmc.org/article/pmc/pmc7281657>
- [2] Requejo J, Strong K, Agweyu A, Billah SM, Boschi-Pinto C, Horiuchi S, et al. Measuring and monitoring child health and wellbeing: recommendations for tracking progress with a core set of indicators in the Sustainable Development Goals era. *Lancet Child Adolesc Health*. 2022 May;6(5):345–52.
- [3] Obasohan PE, Walters SJ, Jacques R, Khatab K. A scoping review of the risk factors associated with anaemia among children under five years in sub-Saharan African countries. *Int J Environ Res Public Health*. 2020 Nov;17(23):1–20.
- [4] Van de Poel E, Hosseinpour AR, Speybroeck N, Van Ourti T, Vega J. Socioeconomic inequality in malnutrition in developing countries. *Bull World Health Organ*. 2008 Apr;86(4):282–91.
- [5] Onoka CA, Onwujekwe OE, Uzochukwu BS, Ezumah NN. Promoting universal financial protection: constraints and enabling factors in scaling-up coverage with social health insurance in Nigeria. *Health Res Policy Syst*. 2013 Jun;11(1):20.

- [6] Kennedy E, Branca F, Webb P, Bhutta Z, Brown R. Setting the scene: an overview of issues related to policies and programs for moderate and severe acute malnutrition. *Food Nutr Bull*. 2015 Mar;36(1 Suppl):S9–14.
- [7] Oktorina S. “Key Factors Related to Stunting in Indonesia,” *Int. Conf. Sustain.* ..., 2018, [Online]. Available: <https://proceedings.uinsa.ac.id/index.php/ICOSHPRO/article/view/6> <https://doi.org/10.29080/icoshpro.v1i0.6>.
- [8] Mosley WH. “Biological and socioeconomic determinants of child survival,” *Salud Publica Mex.*, vol. 30, no. 3, pp. 312–328, 1988, [Online]. Available: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-0024004909&partnerID=40&md5=7531d0d9dcb7348987a61fcc5e051d11>
- [9] Vir SC, Suri S. Young Child Undernutrition: Crucial to Prioritize Nutrition Interventions in the First 1000 Days of Life. *Indian J Pediatr*. 2023 Dec;90(S1 Suppl 1):85–94.
- [10] Candarmaweni and A. Yayuk Sri Rahayu. “Collaborative governance to achieve SDGs social development: Preventing stunting lesson from Pandeglang,” *E3S Web Conf.*, vol. 211, pp. 1–9, 2020, <https://doi.org/10.1051/e3sconf/202021101014>.
- [11] Grajeda R, Hassell T, Ashby-Mitchell K, Uauy R, Nilson E. Regional Overview on the Double Burden of Malnutrition and Examples of Program and Policy Responses: Latin America and the Caribbean. *Ann Nutr Metab*. 2019;75(2):139–43.
- [12] Klemm GC, Kayanda R, Kazoba A, McCann J, Nnally LP, Dickin KL. Translating Multi-sectoral Nutrition Policy into Community Practice: Participation of Nutrition Officers in Tanzania Fosters Effective Collaborative Strategies to Improve Child Nutrition. *Curr Dev Nutr*. 2022 Feb;6(4):nzac030. <https://doi.org/10.1093/cdn/nzac030>.
- [13] Mansyur E, Habibi J, Badriyah U, Pansori H. Collaborative Pentahelix Model In Overcoming Stunting Anomalous Increase In Stunting Rate In Bengkulu Province. 2024;12(4):4237–50.
- [14] Grundy J, Annear P, Chomat AM, Ahmed S, Biggs BA. Improving average health and persisting health inequities—towards a justice and fairness platform for health policy making in Asia. *Health Policy Plan*. 2014 Oct;29(7):873–82.
- [15] Al Sabbah H, Assaf EA, Al-Jawaldeh A, AlSammach AS, Madi H, Khamis Al Ali N, et al. Nutrition Situation Analysis in the UAE: A Review Study. *Nutrients*. 2023 Jan;15(2):363.
- [16] Emerson K, Nabatchi T, Balogh S. An integrative framework for collaborative governance. *J Public Adm Res Theory*. 2012;22(1):1–29.
- [17] Afandi MN, Tri Anomsari E, Novira A, Sudartini S. Collaborative governance in a mandated setting: shifting collaboration in stunting interventions at local level. *Dev Stud Res*. 2023;10(1):2212868.

- [18] Permatasari A, Walinegoro BG. "Collaborative Governance in Realizing Smart Society as a Sustainable Stunting Reduction Effort in Sleman Regency," in *E3S Web of Conferences*, M. D., A. M., C. D., S. J., S. M., R. A., S. P., and N. A., Eds., SDGs Center, Universitas Muhammadiyah Yogyakarta, Bantul, 55183, Indonesia: EDP Sciences, 2023. <https://doi.org/10.1051/e3sconf/202344001010>.
- [19] M. Afandi, E. Anomsari, A. Novira, and S. Sudartini, "A Penta-Helix Approach to Collaborative Governance of Stunting Intervention In West Java Indonesia," 2022, <https://doi.org/10.4108/eai.15-9-2021.2315238>.
- [20] Roesler AL, Smithers LG, Wangpakapattanawong P, Moore V. Stunting, dietary diversity and household food insecurity among children under 5 years in ethnic communities of northern Thailand. *J Public Health (Oxf)*. 2019 Dec;**41**(4):772–80.
- [21] Sly PD, Trottier B, Carpenter D, Cha'on U, Cormier S, Galluzzo B, et al. Children's Environmental Health in South and Southeast Asia: Networking for Better Child Health Outcomes. *Ann Glob Health*. 2019 Feb;**85**(1):17.
- [22] Beal T, Le DT, Trinh TH, Burra DD, Huynh T, Duong TT, et al. Child stunting is associated with child, maternal, and environmental factors in Vietnam. *Matern Child Nutr*. 2019 Oct;**15**(4):e12826.
- [23] Biswas T, Townsend N, Magalhaes RJ, Hasan M, Mamun A. Patterns and determinants of the double burden of malnutrition at the household level in South and Southeast Asia. *Eur J Clin Nutr*. 2021 Feb;**75**(2):385–91.
- [24] Roediger R, Hendrixson DT, Manary MJ. A roadmap to reduce stunting. *Am J Clin Nutr*. 2020 Sep;**112** Suppl 2:773S–6S.
- [25] Niga JD. Collaborative Governance in an Effort to Reduce Stunting Rate in TTS District, NTT Province. *Int. J. Soc. Serv. Res*. 2023;**3**(4):1060–7.
- [26] Ansell C, Gash A. Collaborative governance in theory and practice. *J Public Adm Res Theory*. 2008;**18**(4):543–71.
- [27] Brown A, Trimble M, Sokal-Gutierrez K, Fernald L, Madsen K, Turton B. Sugar-Sweetened Beverages, Foods of Low Nutritional Value, and Child Undernutrition in Cambodia. *Int J Environ Res Public Health*. 2024 Feb;**21**(2):169.
- [28] Ahmed E. Association of the daily diet with childhood stunting in Burundi. *BIRDEM Med. J*. 2020;**10**(2):108–14.
- [29] Ditya YC, Dwirastina M, Triharyuni S, Herlina N. "Identification components to assess the status of fisheries management in a tributary of the Balikpapan River East Kalimantan," in *E3S Web of Conferences*, S. C.P.H., A.-S. A.R., K. null, D. null, L. A.M., B. M.S., N. null, P. H.W., and K. H.W., Eds., Research Center for Conservation of Marine

- and Inland Water Resources, National Research and Innovation Agency, Cibinong, Indonesia: EDP Sciences, 2023. <https://doi.org/10.1051/e3sconf/202344201032>.
- [30] Elmighrabi NF, Fleming CA, Agho KE. Factors Associated with Childhood Stunting in Four North African Countries: Evidence from Multiple Indicator Cluster Surveys, 2014-2019. *Nutrients*. 2024 Feb;16(4):473.
- [31] Taofik J, Samudra AA, Satispi E. IMPLEMENTATION OF STUNTING REDUCTION REGULATIONS AND POLICIES IN EAST LOMBOK REGENCY, INDONESIA. *J. Law Sustain. Dev.* 2024 Mar;12(2):e3233.
- [32] Jati SP, Budiyantri RT, Nandini N, Dewanti NA, Kusariana N. Collaborative Model for Using Village Funds to Support Maternal and Child Health Resilience in Cirebon Regency. *J. Aisyah J. Ilmu Kesehat.* 2022 Mar;7(1):141–6.
- [33] Krisseptiana, Martadi NS; Krisseptiana and N. S. D. Martadi. Mitigating Stunting in Semarang City, Indonesia: A Comprehensive Approach to Better Health and Well-Being. *J. Promkes Indones. J. Heal. Promot. Heal. Educ.* 2024 Oct;12(2):218–28.
- [34] Paikah N, Yamin M, Hafni N. “Analysis of Policies and Strategies to Lower Childhood Stunting in South Sulawesi, Indonesia,” *El-Usrah J. Huk. Kel.* 2024 Oct;7(1):19–41.
- [35] Van VT, Siguin CP, Lacsina AC, Yao LF, Sales ZG, Gordoncillo NP, et al. A Community-Led Central Kitchen Model for School Feeding Programs in the Philippines: Learnings for Multisectoral Action for Health. *Glob Health Sci Pract.* 2022 Dec;10(6):e2100391.
- [36] Sariatmi A, Jati SP, Martini M, Mustofa SB, Budiyo B. Stakeholder Perception of Health Resources and Village-Funds Optimizing for Maternal and Child Health Program. *KEMAS J. Kesehat. Masy.* 2022 Oct;17(4):594–605.
- [37] Wardani J, Bos JJ, Ramirez-Lovering D, Capon AG. Boundaries as Spaces of Knowledge Integration: learning from transdisciplinary collaboration on planetary health in Indonesia. *J Clim Change Health.* 2023 Oct;11:100242.
- [38] Munawarah VR. “Analisis Efektivitas Program PMT Untuk Menanggulangi Stunting Melalui Potensi Hasil Laut Indonesia: Studi Literatur,” *Miracle J.*, 2023, [Online]. Available: <https://www.ojs.unhaj.ac.id/index.php/mj/article/view/612> <https://doi.org/10.51771/mj.v3i2.612>.
- [39] Safitri C, Valentina TR, Putera RE. THE UTILIZATION OF KAUM-BASED VILLAGE FUNDS AS A FORM OF STRENGTHENING THE CAPACITY OF THE NAGARI GOVERNMENT DURING THE COVID-19 PANDEMIC. *Sosiohumaniora.* 2024 Oct;26(1):86–96.
- [40] Cresswell JW. *Research Design; Qualitative, Quantitative and Mixed Methods Approaches*, vol. 4, no. 1. SAGE Publications Inc., 2018.



- [41] T. N. P. P. K. TNP2K RI, "Panduan Konvergensi Program/Kegiatan Percepatan Pencegahan stunting," *TNP2K Sekr. wakil Pres. Republik Indones.*, p. 96, 2018, [Online]. Available: <http://tnp2k.go.id/filemanager/files/Rakornis2018/PanduanKonvergensiProgramKegiatanPercepatanPencegahanStunting.pdf>
- [42] Supadmi S, et al. "Factor related to stunting of children under two years with working mothers in Indonesia," *Clin. Epidemiol. Glob. Heal.*, vol. 26, no. May 2023, p. 101538, 2024, <https://doi.org/10.1016/j.cegh.2024.101538>.
- [43] Saif S, Anwar S. Unraveling the South Asian enigma: concurrent manifestations of child anthropometric failures and their determinants in selected South Asian countries. *BMC Nutr.* 2023 Oct;9(1):120.
- [44] Prasetyo A, Noviana N, Rosdiana W, Anwar MA, Harwijayanti BP, Fahlevi M. Stunting Convergence Management Framework through System Integration Based on Regional Service Governance. *Sustainability (Basel)*. 2023;15(3):1821.
- [45] Teferi DY, Atomssa GE, Mekonnen TC. Overweight and Undernutrition in the Cases of School-Going Adolescents in Wolaita Sodo Town, Southern Ethiopia: Cross-Sectional Study. *J Nutr Metab.* 2018 Mar;2018:8678561.
- [46] Fatikha NT, Permatasari A. "Collaborative Governance Dalam Penanganan Stunting," *J. Kebijak. Publik*, 2023, [Online]. Available: <https://jkp.ejournal.unri.ac.id/index.php/JKP/article/view/8308> <https://doi.org/10.31258/jkp.v14i3.8308>.
- [47] Cooper CM, Kavle JA, Nyoni J, Drake M, Lemwayi R, Mabuga L, et al. Perspectives on maternal, infant, and young child nutrition and family planning: considerations for rollout of integrated services in Mara and Kagera, Tanzania. *Matern Child Nutr.* 2019 Jan;15(Suppl 1 Suppl 1):e12735.
- [48] Sagastume D, Barrenechea-Pulache A, Ruiz-Alejos A, Polman K, Beňová L, Ramírez-Zea M, et al. Quantifying Overlapping Forms of Malnutrition Across Latin America: A Systematic Literature Review and Meta-Analysis of Prevalence Estimates. *Adv Nutr.* 2024 May;15(5):100212.