

CONCEPTUAL MODEL OF COLLABORATIVE PLANNING FOR STUNTING INTERVENTION IN THE PERSPECTIVE OF SUSTAINABLE DEVELOPMENT GOALS (SDGS)

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ARTICLE INFORMATION

Article history :

Submit:

14-11-2025

First Revision:

09-12-2025

Accepted:

22-12-2025

Keywords :

*Conceptual Model,
Collaborative Planning,
Stunting intervention,
Sustainable Development
Goals (SDGs)*

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ABSTRACT

This paper proposes a conceptual model of collaborative planning for stunting intervention in the region. The study of stunting intervention is crucial because it is categorized as a global issue. The purpose of this study is to describe the collaboration process and develop a conceptual model of collaborative planning. The approach used in this study is a qualitative approach with Soft Systems Methodology (SSM) analysis tools to develop a conceptual model of collaborative planning. Data collection was conducted through semi-structured interviews, focus group discussions (FGDs), observations, and document studies. The results of the study are a conceptual model of collaborative planning as a solution for stunting intervention to determine the objectives and programs to be implemented by the regional government. Through the stages of this model, a collaborative process can be carried out with stakeholders. Environmental adaptation is needed to ensure the implementation of the conceptual model of collaborative planning runs smoothly. In other aspects, the socio-cultural diversity of the community has the potential to influence the collaborative process in collaborative planning.

A. INTRODUCTION

The Sustainable Development Goals (SDGs) are a commitment to the global development agenda declared by 193 countries, including Indonesia. Through these SDGs, UN member countries, including Indonesia, are committed to ending poverty in the world and protecting the earth to achieve prosperity in 2030. SDGs are considered more comprehensive in accommodating global development both in qualitative and quantitative terms (Panuluh & Fitri, 2016). Sustainable development in Indonesia has become a term in Indonesia's long-term development plan. Indonesia has made several achievements related to the SDGs. Based on the 2020 Sustainable Development Report, Indonesia's SDG Index ranks 101 out of 166 countries with a score of 65.3 (Sachs et al., 2020). Successful implementation of the SDGs

requires efforts to integrate the SDGs effectively into cross-sectoral collaboration at all levels of development (Oosterhof, 2018).

The SDGs consist of 17 goals and 169 targets that address global development issues that are considered the most major and urgent, including the problem of stunting, which is a nutrition and health aspect of the SDGs goals. SDGs policies in Indonesia have been formulated in Presidential Regulation no. 59 of 2017 concerning the Implementation of Achieving Sustainable Development Goals, carried out through a series of planning documents, the SDGs Roadmap up to 2030. This is also Indonesia's commitment as part of the World Health Organization (WHO) in the health sector (Ministry of Health, 2020). Stunting is height below the WHO standard deviation. Stunting is an outstanding concern for a country since stunting will affect the development of the quality of its human resources (Marini et al., 2017).

Prevention of stunting in a country, especially Indonesia, is a major concern in sustainable development; for this, collaborative planning is needed. Stunting is mostly linked to toddlers where their body length or height is less when compared to their age. Stunting is also related to an inadequate nutrient intake (Fikawati: 2017). Stunting intervention efforts require the integration of cross-sectoral planning in regional apparatus organizations. Thus, it is necessary to plan collaboration among organizations in the region. District or city local governments in Indonesia are believed to be the spearhead of stunting interventions. Implementation of stunting interventions through planning has a very substantial role. Planning is a principle for achieving goals in accordance with existing resources (Sjafrizal, 2014).

Planning is an intervention process to make changes in the future. In the public domain, stunting intervention does not merely apply in health sector, but it is also a public domain that is integrated with other organizations in the local government. Initially, the planning approach was based on instrumental rationality. Subsequently, the planning approach was transformed into planning based on rationality and communicative action. Today's more complex societal transformations are known as deliberative participatory planning, consensus planning, or collaborative planning. Collaborative planning is considered to be able to solve problems that involve numerous stakeholders in an increasingly fragmented and increasingly complex society (Sufianti: 2014). Collaborative planning is stakeholder-oriented planning that involves stakeholders (Healey, 2006).

Planning for collaboration in stunting interventions within the scope of local government focuses on sharing roles and programs with regional apparatus organizations. This can also be said to be a collaborative governance concept in which stakeholders sit together to make a public decision. (Anshell & Gash, 2007; Innes & Booher, 2010). District/city local governments in Indonesia as central in program implementation provide an indispensable role in stunting intervention in the aspect of sharing roles and programs across regional apparatus organizations. Collaborative planning has been successfully implemented in urban areas with environmental problems (Healey, 2007; Innes and Booher, 2010; Sufianti, 2011). Trust Lands (Bertaina, et. al: 2006). Collaborative planning has mostly been carried out on environmental aspects and has not been carried out on stunting aspects. Collaborative planning studies on stunting interventions have not been found by the author. So the collaboration planning model for stunting intervention in local government is believed to have originality in this study. This paper aims to describe the collaborative process and collaborative planning conceptual model for stunting intervention from the perspective of SDGs in District/City Regional Government in West Java Province.

B. METHOD

1. Description of The Research Area

This research was conducted in the province of West Java. This research is aimed to find out the collaborative planning model for stunting intervention from the perspective of SDGs in West Java province. Collaborative planning is important because collaboration is a process of interacting and negotiating with stakeholders (Thomson & Perry: 2006, Thomson, Perry & Miller: 2014). The result of the preparation of collaborative planning is then a public policy that is implemented by the regional government. Collaboration in planning has proven effective in the context of public policy (Bertania, et.al: 2006).

The research location is in several districts or cities in the province of West Java. There are 27 regencies/cities in West Java Province. This study covered 3 research areas in regencies/cities in West Java province. Regional selection is based on the representation of high, medium, and low stunting conditions in West Java province. Based on stunting prevalence data by district/city in 2017 as the first database of stunting in West Java (West Java Health Office: 2020). districts/cities with a high prevalence of stunting are represented by Garut district; districts/cities with a moderate prevalence of stunting are represented by Kuningan district, and districts/cities with a low prevalence of stunting are represented by Sukabumi district.

2. Research Approach

In this study, the research design is exploratory in nature to discover, classify, and understand various phenomena in the context of collaborative planning for stunting interventions. The research technique uses system thinking with a Soft Systems Methodology (SSM) approach. The SSM method is action research that has the goal of resolving complex problematic situations, since collaboration planning is a complex activity process involving various stakeholders. The SSM procedure is suitable for solving problems in building a collaborative planning conceptual model for stunting interventions in district/city regional government. The SSM method is subsumed under qualitative research. Qualitative methods look at various perspectives (Creswell, 2014). In this study, the focus is on building a collaborative planning conceptual model. Research limitations on collaborative planning for stunting interventions in district/city local governments in West Java Province.

3. Data Collection

Research data was collected through primary data and secondary data. Primary data was obtained through interviews and field observations, while secondary data was obtained by searching documents related to stunting interventions in local governments in Garut, Kuningan, and Sukabumi Regencies. Primary data through interviews were conducted with 23 participants from the local government of West Java province, Kuningan, Sukabumi and Garut districts. The participants came from high position levels to low position levels and representatives of community cadres who were included in the stunting reduction board. Interview techniques were carried out through semi-structured interviews, looking at the diversity of informants in the field.

Participants were selected based on representation from 6 work units in Kuningan, Sukabumi, and Garut regencies and from representatives of communities concerned with health. Interviews were conducted for 4 days in Kuningan district, 3 days in Sukabumi, and 3 days in Garut. Primary data collection through observation was carried out in 3 research areas, namely Kuningan, Sukabumi, and Garut districts. Observation is a complex process that involves observing human behavior patterns to obtain the desired information (Larry: 2004, Creswell: 2012). The FGD was conducted to strengthen the results of interviews and observations and document studies in the field. The FGD was conducted in November 2021. secondary data through searching official documents related to research problems. The author searches documents in the form of strategic plan documents for regional health offices, regional development planning documents, and annual report documents in Garut, Kuningan, and Sukabumi Regencies.

The data was collected with the intention of obtaining accurate information to answer research problems related to the collaborative planning model. Phase 1 data collection was carried out from March - June 2021. Phase 2 data collection was carried out from July - October 2021. Data analysis was carried out during each data collection period, and the initial results were reviewed to get an overview of conditions in the field. Then the phase 2 data was reviewed, and the results of the interviews became strong supporting data in the study. a collection of knowledge from the results of literature, interviews, and observations. (Dubois & Gadde: 2002). So that, the results of the research are not biased, triangulation is carried out to strengthen the research. Additional data from other sources, such as the media and local government year-end reports, are important notes in this study.

In implementing the strategy in carrying out the Soft System Methodology (SSM) its use, it is carried out with 7 activity steps (Checkland, 1999), namely: SSM stages are (1). The problem situation is unstructured, which reveals that the problem under study is indeed problematic and unstructured. (2). The problem situation expressed is the preparation of a rich picture to reveal the structure of the problems in achieving an independent active alert village. (3). The root definition of the relevant system is a compilation of the root definition of the existing system. (4). Conceptual model, namely the

formulation of a conceptual model of the existing system. (5). Comparison of 4 with 2, namely comparing step 4 to the results of step 2 to test the system and distinguishable aspects that can be improved on the conceptual model. (6). Feasible, desirable changes, namely the identification and intervention of subsystems that are desirable and feasible to be changed or desired. (7). Action to improve the problem situation, namely the real action taken to improve the conceptual model in the real world.

4 Research Analysis

Research fieldwork analysis was carried out using CATWOE Analysis (Customers, Actors, Transformation process, World View, Owners, and Environmental Constraints), Role Analysis, and Social System Analysis. Analysis activities were carried out by examining the phenomenon as a whole as well as the parts that make up the phenomenon and the interrelationships between the elements forming the phenomenon (Sasmojo, 2004). CATWOE Analysis could be described as follows:

Table 1. Schematic Visualization of CATWOE Analysis

Componen	Description	Details
<i>Customer</i>	The whole community and beneficiaries in the local government are in a decline in stunting	District/city regional government Public
<i>Actor</i>	Parties who play a role in development planning for stunting interventions	Development Planning Agency at Sub-National Level Regional apparatus organizations related to stunting interventions
<i>Transformation</i>	Activities or planning processes in the form of collective agreements as a form of planning policy	Development Planning Agency at Sub-National Level
<i>Worldview</i>	Perceptions of collaborative planning activities in stunting interventions	Development Planning Agency at Sub-National Level Regional apparatus organizations related to stunting interventions
<i>Owner</i>	The parties who hold the main control in planning	District head Development Planning Agency at Sub-National Level
<i>Environmental constraints</i>	The organizational paradigm of the regional apparatus towards the existing system in planning for stunting interventions	Development Planning Agency at Sub-National Level Regional apparatus organizations related to stunting interventions

Source: first author

Role Analysis is used to diagnose which parties are problem owners and those who have the authority to intervene in the system under study (Checkland & Poulter, 2006). The purpose of Role Analysis is to detect parties who are clients, problem owners, & problem solvers in the formulation of development planning conceptual models for stunting interventions.

Social System Analysis aims to determine a person's position in formulating a collaborative planning conceptual model so that intervention in a system that is culturally researched is accepted. From a structural or normative point of view, a person's social position can be determined or viewed institutionally, such as the head of the service, the head of the village, and others. But on the other hand, in other social systems, a person's social position in a system is determined by cultural factors in which there are norms and values that apply to the community where the system is located. If a person's actions in a system are in accordance with the norms and values that apply where the person is located, then it is possible for the person's actions to be accepted in a larger society, even though on the other hand structurally in the organization the social position is relatively low (Checkland & Poulter, 2006). This shows that the social system has a role in building it.

C. RESEARCH FINDING AND DISCUSSION

The results of the literature on the district/city local governments in the West Java province, regarding stunting in terms of policy, have led them to issue regulations on accelerating the reduction of stunting in the district/city regional governments in the West Java Province. The implementation of stunting in districts/cities in West Java Province is carried out by regional apparatus organizations that have a role in reducing stunting, namely affairs in the fields of: Food Affairs, Communication and informatics Affairs, Social Affairs, Agricultural Affairs, Population administration and civil registration affairs, Education Affairs, Maritime Affairs and Fisheries, Environmental Affairs, Community and Village Empowerment Affairs, Trade Affairs, Women's Empowerment Affairs, and Child Protection, Public Works Affairs and spatial planning, Population Control and Family Planning Affairs, Public Housing and Residential Areas Affairs, Labor Affairs, Regional Development Planning Affairs, Health Affairs.

Local government affairs in Indonesia are divided into obligatory affairs and optional affairs. Mandatory affairs are divided into mandatory affairs relating to basic services and those not relating to basic services. The contribution of obligatory matters relating to basic services entirely contributes to stunting interventions in the implementation of programs and activities, while obligatory affairs that do not relate to basic services partially contribute to stunting interventions,

In determining stunting indicators based on targets and target indicators based on Presidential Regulation No. 72 of 2021 concerning the acceleration of stunting reduction, it is described as follows in Stunting Indicators, Stunting Specific Interventions. Target Indicators:

1. Percentage of pregnant women with Chronic Energy Deficiency who received additional nutritional intake
 2. Percentage of pregnant women who consumed blood booster supplements, at least 90 tablets during pregnancy.
 3. Percentage of young women taking blood booster supplements.
 4. Percentage of infants aged less than 6 months receiving exclusive breast milk
 5. Percentage of children aged 6-23 months who received complementary foods for breast milk.
 6. Percentage of severely malnourished children under five years of age (toddlers) receiving malnutrition management services.
 7. Percentage of children under five years of age (toddlers) whose growth and development was monitored
 8. Percentage of malnourished children under five years of age (toddlers) who receive additional nutritional intake
 9. Percentage of children under five years old (toddlers) who received complete basic immunization
- Stunting Sensitive Intervention. Target Indicators:
1. Percentage of postnatal family planning services
 2. The percentage of unwanted pregnancies
 3. Coverage of prospective Couples of Reproductive Age who receive a health check as part of the marriage service
 4. Percentage of households that have access to proper drinking water in priority districts/cities.
 5. Percentage of households that have access to proper sanitation (domestic waste water) in priority location districts and cities.
 6. Coverage of National Guarantee Assistance. Recipients of Health Contributions
 7. Coverage of families at risk of stunting who receive assistance
 8. Number of poor and vulnerable families who receive conditional cash assistance
 9. Percentage of targets who have a excellent understanding of stunting in priority locations
 10. Number of poor and vulnerable families receiving food social assistance.
 11. Percentage of villages that stop Open Defecation Free (ODF).

Targets in stunting interventions are divided into 2 aspects, specific interventions and sensitive interventions. For specific interventions, it consists of 9 target indicators, and for sensitive stunting interventions, it consists of 11 target indicators. Stunting is a national strategic program that is accommodated in the Sustainable Development Goals (SDGs). Presidential Regulation Number 59 of 2017 concerning Implementation of the Achievement of Sustainable Development Goals (SDGs). The correlation between stunting and the Sustainable Development Goals (SDGs) is as follows:

Table 2. SDGs Linkage Pattern with Stunting

SDGs	Target	Indicators
Goal 2: Ending hunger, achieving food security and better nutrition, and supporting sustainable agriculture.	Target 2.1: By 2030, ending hunger and ensuring access for all people, in particular the poor and those in vulnerable situations, including infants, to sufficient, safe, and nutritious food all year round.	Indicator 2.1.1: prevalence of malnutrition Indicator 2.1.2: prevalence of food insecurity in the population
	Target 2.2: By 2030, ending all forms of malnutrition, including by 2025, achieving internationally agreed targets on stunting and wasting in children under 5 years of age, and addressing the nutritional needs of adolescent girls, pregnant and lactating women, and the elderly.	Indicator 2.2.1: Prevalence of stunting among children under five Indicator 2.2.2: Prevalence of malnutrition among children under five Indicator 2.2.3: Prevalence of anemia in women 15-49 years
	Target 2.3: By 2030, doubling the agricultural productivity and incomes of small-scale food producers, especially women, indigenous people, family farmers, pastoralists, and fishermen, including secure and equal access to land and other productive resources, inputs, knowledge, financial services, markets, and opportunities for added value and non-farmer jobs.	Indicator 2.3.1: volume per unit of labor Indicator 2.3.2: average income of small-scale food producers
	Target 2.4: By 2030, ensuring sustainable food production systems and implementing resilient agricultural practices that help maintain ecosystems that strengthen capacities for adaptation to climate change, extreme weather, drought, floods, and other disasters that progressively improve soil quality.	Indicator 2.4.1: Proportion of agricultural area used for productive and sustainable agriculture.
	Target 2.5: By 2030, maintaining the genetic diversity of seeds, growing crops, domestic agriculture, livestock, and related wild species, including through diversified and well-managed seed and crop banks at national, regional, and international levels, and promote fair and equitable access to and sharing of the benefits of genetic wealth and associated traditional knowledge, according to international agreements.	Indicator 2.5.1: Amount of plant and animal genetic resources for agriculture and consumption stored in medium- or long-term conservation. Indicator 2.5.2: Proportion of local breeders

Source: first author

Stunting is one of the 17 goals in the SDGs. In table 2, stunting is incorporated in goal 2, where there are 5 targets and 10 indicators. In its implementation, stunting indicators become programs and activities in the regions carried out by regional apparatus. This implementation requires collaboration among stakeholders so that the intervention can be achieved as planned. Based on empirical data from the results of interviews with stakeholders in the Regency/City local government in West Java

province, to ensure the collaboration process in supporting stunting interventions has been carried out based on elements of Collaboration (adapted from McNamara, 2012), there are:

Table 3. Collaboration Elements Adapted from McNamara, 2012

Element	Collaboration	Empirical Findings (Districts/Cities in West Java Province)
Design	There is a division of powers	Collaboration, inter-Regional Apparatus Work Unit relations and equal stakeholders. However, Regional Apparatus Work Unit power is high.
Agreement formalization	Formal and informal agreements	Coordination, agreement made in writing through a statement of commitment and MoU.
Organizational autonomy	Autonomous: policies are jointly drafted by stakeholders	Coordination, convergence action is a policy of the central government
Main Personnel	Implementation of cooperation based on stakeholder initiatives	Coordination, cooperation is based on the mandate of the central government
Information sharing	Information is frequent and open, both formal and informal	Collaboration, intensive information dissemination both formally through meetings and consultations and informally through WA/Telegram groups and pre-deliberation associations
Decision-making	Participatory decision making	Collaboration
Conflict resolution	Conflicts are resolved by themselves	(No significant conflict appears)
Resource allocation	Resources are pooled to achieve a common goal	Collaboration
Thinking Systems	System integration to achieve common goals	Collaboration
Mutual trust	Participants already fully have mutual trust with each other	Coordination, there is still an ego-sectoral case

Source: first author

The process of collaboration in stunting interventions based on table 3 above shows that there are 10 elements of collaboration (McNamara, 2012). These elements from the results of the research show that the collaboration process has not fully occurred for stakeholders in the regions. To support the collaboration process in collaboration planning, potent steps are needed so that the collaboration process occurs in planning and accelerates the reduction of stunting in the regions. Stunting intervention is a national priority program; this is also accommodated in the SDGs. The pattern of linkages between stunting and SDGs, as shown in table 4, has a pattern of linkages between stunting and SDGs.

1. Collaborative Processes on Stunting Interventions

The collaboration process in stunting interventions in district/city local governments in West Java Province empirically shows that there is a collaboration process that has been carried out but is not comprehensive. Based on the 9 elements of collaboration (McNamara, 2012), namely design, agreement formalization, organizational autonomy, core personnel, information sharing, decision making, conflict resolution, resource allocation, thinking systems, and mutual trust. Based on the results of the study, there are 4 elements in the stunting intervention that are still not accommodated in the collaboration criteria, including elements of agreement formalization, organizational autonomy, personal trust, and mutual trust. The elements of the formal agreement are still based on formal agreements, and for informal agreements, this has not been seen empirically.

The element of organizational autonomy shows that policies still originate from the central government in the form of a stunting convergence policy, in the collaboration process it is necessary to have policies drawn up jointly with stakeholders, since the stakeholder element is one of the most integral elements of the collaboration process. In the core personal element, there is still no stakeholder initiative; things that are happening in the field are still due to a mandate. In the element of mutual confidence, there is no mutual trust between others. (Ansell and Gash, 2008) state that aspects of building trust are part of the collaboration process.

The collaboration process in stunting intervention requires the involvement of all stakeholders so that shifts occur in reducing stunting in the regions. The main principles in collaboration (Bertaina, et al: 2006) are transparency, diversity, representation of stakeholders, and the ability of all participants to make decisions. Based on this collaboration process, the current conditions required in the district/city local government in West Java Province are on the aspect of decision-making ability; this is to be able to make decisions, and experience and knowledge are needed to be able to understand the problem. The collaboration process also requires excellent communication through dialogue; in the DIAD Network Dynamic Model (Innes & Booher: 2010) the process of collaboration is related to diversity, interdependence, and the existence of authentic dialogue. Aspects of authentic dialogue and interdependence will occur due to mutual trust. When viewed from the perspective of the cycle of collaboration, there are similarities with regard to dialogue and building trust. The cycle of collaboration according to (Ansell & Gash: 2008) is face-to-face dialogue, trust-building, commitment to the process of commitment to process, shared understanding, and intermediate outcomes.

Aspects of the Anshell & Gash collaboration process when implemented in a stunting intervention based on the results of interviews with the government and stakeholders (Head of human development department, health cadres and village apparatus) provide an explanation for (1). Aspects of face-to-face dialogue have been carried out both formally and informally. Formally it is carried out through coordination with regional apparatus organizations and through stunting consultations at the Regency/City level in local government, informally it is carried out by technology for coordination and there is a negotiation process in stunting consultations in the form of dividing roles and responsibilities. (2). The aspect of building trust based on empirical results in districts/cities is the result of dialogue with each actor entrusting roles and responsibilities, the absence of conflict strengthens mutual trust between actors. (3). The aspect of commitment to this process is the commitment of stakeholders in carrying out their roles and responsibilities, this can be seen from the commitment in stunting consultations carried out by each Regency/City which has displayed the duties and responsibilities of each stakeholder. (4). The aspect of sharing understanding from empirical results in the field shows that there is an understanding that stunting is a social problem that must be solved together, this is merely understood within the internal scope of local government while other stakeholders still do not fully understand. (5). The aspect regarding temporary results refers to the achievement of the program that has been carried out by the Regency/City regional government in stunting intervention; this has been achieved and has been agreed upon through the stunting consultation process.

The collaboration process in the framework of stunting intervention in the scope of regional government in the Regency/City is carried out through the role of regional apparatus organizations that have a role in stunting intervention through various programs that have been set by the government. The stunting reduction program is based on stunting indicators that have been instructed by the government, since stunting reduction is a national strategic program that has been formulated in the SDGs. A schematic visualization of the correlation can be seen in the image below:



Source: first author

Figure 1. Schematic Visualization of Stunting Intervention Correlations

In figure 1, it can be interpreted that, based on empirical results in the stunting field, one of the goals of the SDGs must be completed by regional officials running the program to achieve stunting indicators, so that the government's goal of accelerating the reduction of stunting is achieved in accordance with established policies.

The collaboration process for stunting interventions can be carried out if there is dialogue supported by the participation of stakeholders, so that it will result in joint commitment and agreement in decision-making, which then becomes the formulation of plans for stunting interventions. So that a collaboration process is needed to support collaborative planning that results in commitment and agreement of all parties in planning for stunting interventions in district/city regional governments in West Java. In the Regency/City stunting convergence action, in supporting the achievement of stunting reduction in the Regency/City regarding the collaborative process of the 8 stunting convergence actions, in particular action (1) is an analysis of the situation of stunting reduction, action (2) is the preparation of an activity, and action plan (3) is stunting consultation, then the existence of an excellent collaboration process can be implemented through collaboration planning.

2. Collaborative Planning for Stunting Interventions in The Regions

Collaborative planning is a process of obtaining joint decisions with various stakeholders, jointly seeking solutions, and obtaining mutual agreements. Collaborative planning for stunting interventions in the regions is a process of making decisions from various stakeholders in completing solutions in developing stunting intervention programs. Collaborative planning, according to Healey (Healey, 2006; Allmendinger, P, 2002) is stakeholder-oriented and involves stakeholders. According to (Graham and Healey, 1999; Healey, 2006), the collaboration planning process encompasses communication, dialogue, and transactive processes. Furthermore, according to (Innes and Booher, 2010) collaborative planning will be successful if there is dependence between actors. And there is a consensus (Healey, 2006; Innes, 1996; Margerum, 2002) in collaborative planning for stunting interventions, a model is needed that can provide direction in accelerating the reduction of stunting in district/city regional governments in West Java.

According to (Innes and Booher: 2010) the fundamental element of a collaboration is dialogue to reach consensus, which is authentic dialogue, not rhetoric or ritual. For this reason, according to (Gunton and Day, 2003) in collaboration planning, basic things are needed such as structured negotiations in decision making and consensus, which is the result of decision making. Understanding from the various theories presented above relating to the collaboration process, it can be interpreted that the main element of collaboration planning is the collaboration process. Collaboration conceptual models can be built on the integration of collaboration theory and the results of empirical facts in the

field that can support collaborative planning models for stunting interventions in district/city regional governments.

At the practical level of collaborative planning that has been carried out, even though there are differences in its implementation, the main elements such as dialogue and joint decisions are included. This is like the results of research by Bertaina, et. al, (2006) using eight cases in Trust Lands, which provides an overview of the stages of collaborative planning and involves 8 variables used in collaborative planning, namely: (1) Deciding when collaboration is carried out, (2) Compiling a successful process, (3) Determining who will participate, (4) Setting the process, (5) Structuring (6) Decision making, (7) Helping participants work together, sharing information, and (8) Implementing agreements. Other studies also from (Gunton & Day: 2003) tend to link collaborative planning with negotiations, which incorporate pre-negotiation, negotiation, and post-negotiation aspects. Based on the results of these thoughts, building a collaborative planning conceptual model for stunting interventions in local governments is based on empirical facts and an understanding of the concept of the collaboration process.

3. Conceptual Model Collaborative Planning for Stunting Interventions in The Regions

The planning process for stunting interventions is generally carried out according to policies from the central government. The current planning process does not fully accommodate aspects of collaboration. Collaborative planning model as a solution in an effort to accelerate the reduction of stunting in district/city regional governments. To build this collaboration planning model, we used a soft system methodology (SSM) approach. There are generic steps in Soft Systems Methodology (Checkland and Scholes; 1990). SSM is specifically used in relation to human activity systems (Human Activity Systems) where the goals of the system must be perceptible in order to achieve understanding. To explore various phenomena related to collaborative planning, it is carried out through CATWOE analysis, role analysis, and social system analysis.

CATWOE's Analysis of the customer aspect regarding collaboration planning focuses on the local government and the community. Parties who get influence and benefit are the main elements where the community and stakeholders play a crucial role in the collaborative planning process. The main actor in planning in the local government is the regional development planning agency, which has the role of coordinating planning. Regional apparatus organizations, as work units in the local government, have the role of proposing various programs and activities to reduce stunting in the regions. Not all regional apparatus organizations have stunting reduction programs and activities, but merely supporting work units have stunting reduction programs. Transformation is a process of change that exists in collaborative planning in this case so that stunting interventions are realized in the regions. System change through a collaborative process will substitute the existing way of planning by involving various stakeholders and the commitment of the stakeholders. Worldview is concerned with perspectives on collaborative planning in the regions for stunting interventions.

Systems thinking is needed in collaboration planning those results in a pattern of linkages between stakeholders and institutional elements in conducting dialogue between stakeholders. The owner in this planning is the regional development planning agency, as the party whose function is to coordinate planning in the regions. Environmental constraints relate to elements outside the system of the collaborative planning process. This element can be in the form of the level of ability of the community and stakeholders in their involvement in the collaboration process. For this reason, the commitment and role of stakeholders are needed so that the planning process can run according to plan. Description of the elements of CATWOE analysis are described as follows:

Table 4. Elements of CATWOE Analysis in Collaboration Planning

Acronym	Description
<i>Customer</i>	Local government and community
<i>Actor</i>	Regional development planning agencies and regional apparatus organizations are related to stunting interventions
<i>Transformation</i>	The realization of collaborative planning in stunting interventions in the regions
<i>Worldview</i>	Availability of collaborative planning standards for stunting interventions in the regions
<i>Owner</i>	Development Planning Agency at Sub-National Level

Acronym	Description
<i>Environmental constraints</i>	12. The commitment and role of regional apparatus organizations in carrying out collaborative planning for stunting interventions

Source: first author

Role analysis is used to specify parties in the problem owner or problem owners who have authority in system intervention (Checkland & Poulter, 2006). The role analysis aims to label parties who are clients, problem owners, & problem solvers, while the parties involved are:

Table 5. Elements of Role Analysis

Acronym	Description
<i>client</i>	Community in the area
<i>problem owner</i>	Local government
<i>problem solver</i>	Regional development planning agencies and regional apparatus organizations that support stunting reduction activities

Source: first author

In structural or institutional analysis of the social system in planning collaboration, the head of the regional apparatus organization, the head of the field, the head of the village, and others are considered. But in other social systems, a person's social position within a system is determined by cultural factors, which subsume elements of the norms and values that apply to the community in which they live. The collaborative planning for stunting interventions in district/city areas is different since each region has its own cultural characteristics. Social systems in collaborative planning for stunting interventions have a strategic role. Based on empirical facts, the results of interviews with village communities and human development cadres, as well as village community empowerment service employees, show that collaboration planning at the lower level is carried out through deliberations on village level development plans by listening to input from the community, but not all of them can be accommodated by the government. Stakeholder consultations on stunting in the regions have also been carried out by stakeholders to obtain planning proposals that support stunting interventions. Collaboration stunting is still an instruction from the government, not a wish of the community itself. This requires awareness from the community regarding the importance of collaborative planning. The social system in this plan consists of institutional elements consisting of regional and community apparatus consisting of human development cadres, family health service cadres, integrated service center cadres, and other stakeholders in the dialogue that has been carried out by considering the values and norms that apply in the region.

There are 7 stages in the process of building a collaborative planning conceptual model, namely (1) The problem situation is unstructured (2) The situational problem expressed (3) Root definition of relevant systems (4) Conceptual models (5) Comparison of 4 with 2, (6) Feasible, desirable transformations (7) Action to improve the problem situation. In the first and second stages of collaboration planning, the problem is that the collaboration process has not been fully implemented, the involvement of actors and mutual confidence is still not optimal, there are still sectorial egos when formulating plans, this is based on research results as shown in table 3.4. Joint decisions in collaboration planning are needed as a commitment to the collaboration process. The third stage, based on the problems of collaborative planning, can be explained by saying that the root definition of collaborative planning is a process for obtaining joint decisions with stakeholders, jointly seeking solutions, and obtaining mutual agreement on stunting interventions in the regions.

In the fourth stage, namely the formulation of a conceptual model based on the real world and conceptual thinking so that the built model can be properly implemented, based on the structure of the problem in planning collaboration, where the collaboration process is the main element in planning collaboration, building a conceptual model is based on a collaborative process in stunting intervention. In building a collaborative planning conceptual model based on the elaboration of the theories of Anshell and Gash (2008), Innes and Booher (2010), Healey, (2006), Bertaina, et al (2006) and empirical research results. The development of the conceptual model is based on the concept of system thinking, since it requires a concept of thinking that is interdependence or interrelationship between one element and another. This collaborative planning conceptual model describes a collaborative planning process

between stakeholders where the aim is to have a joint agreement in the formulation of programs for stunting interventions in the regions. There are 7 main activities and 3 monitoring activities to achieve collaborative planning. The first activity is to distinguish problems related to stunting issues in the regions. The community must understand that stunting is a common problem that must be resolved with various actors in the region.

The second activity is conducting formal and informal dialogues. This activity involves stakeholders through communication. (Graham and Healey, 1999) states that in collaboration planning there is a process of communication and dialogue. Through this process, there will be interdependence among stakeholders. Community participation will occur well in this dialogue space, which strengthens community participation between stakeholders. Formal dialogue is carried out through discussions and meetings between regional officials and the community, which are carried out through stunting consultation forums. Informal dialogue is carried out through communication between communities or stakeholders through discussions using mobile phones, as well as limited inter-community discussions. The third activity is building commitment. On this agenda, there is agreement and trust that arises between stakeholders. Through the equalization of visions and perspectives that occurs through this collaboration process, the presence of praiseworthy commitment will result in decision-making based on shared commitment. The fourth activity is collaborative decision making; this activity requires transparency. This process requires quite a long time resulting from numerous opinions from stakeholder representatives, with a variety of opinions and input in deciding on the various programs and activities that are formulated in the planning.

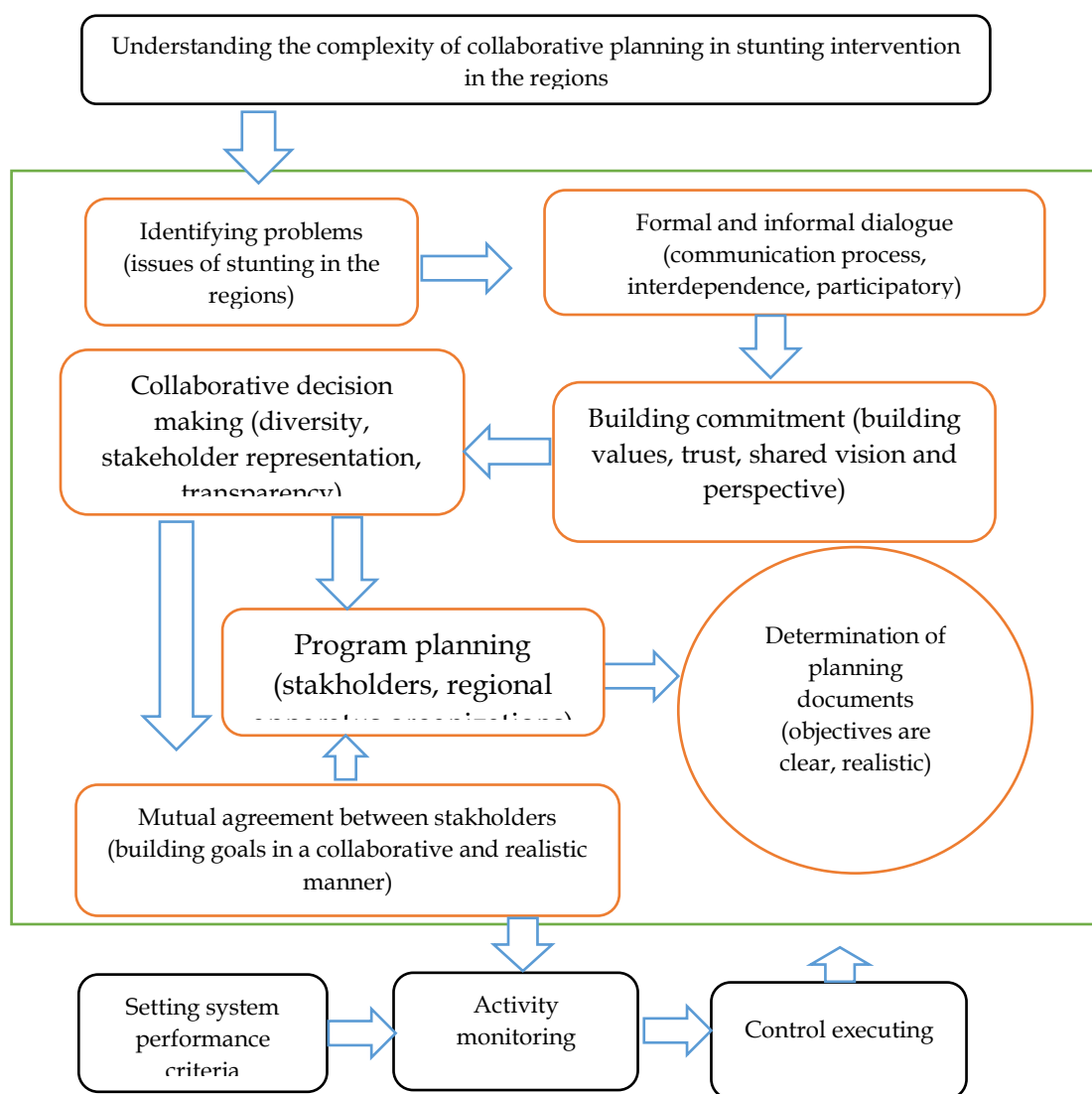


Figure 2. Conceptual Model for Stunting Intervention collaboration planning in the regions

Source: first author

The fifth activity is collective agreement between stakeholders. This is done after making decisions on various programs and activities; the next step is to formulate a joint agreement with stakeholders. At this regional level, there are stunting collaboration activities. This process is carried out to support the program planning stage through the regional development planning agency as the coordinator in regional planning. The sixth activity is program planning. The results of a joint agreement between stakeholders will be formulated in planning. The planning process is carried out by the organization in charge of planning. The preparation of the annual work plan is carried out by each work unit of the regional apparatus, and the preparation of the regional government's annual plan is carried out through the regional development planning agency. With regard to the stunting intervention program, planning is carried out based on the results of a joint stunting consultation agreement, which then becomes a recommendation to prepare a plan that is accommodated by each work unit in the regional government in accordance with the work units that support stunting reduction programs in the regions, since there are work units that do not have an intervention program for stunting in the area.

The seventh activity is the determination of planning documents. In determining the planning documents carried out by the regional government. The determination of the planning document is followed by the budget that has been planned. The determination of work plan documents for regional apparatuses is regulated by the provisions of the Minister of Home Affairs' regulations governing planning documents. Stunting intervention programs and activities exist in each regional work unit that implements stunting reduction indicators. The results of the determination of this planning document will then become the basis for program implementation in reducing stunting in the regions. Through this collaborative planning conceptual model, it can reduce stunting in the regions as part of a national strategic program.

The fifth stage in building a collaboration planning model is to make a comparison between the model that has been built and the problem conditions in the field. The aspect that is of concern in the existing problems is building agreement and commitment in collaborative planning. That aspect has been accommodated in the model so that through this model it becomes a standard in carrying out a collaborative planning process. The process to support this stage is to clarify, through the interview guideline, the justification of the model that has been built. The sixth stage is identifying and intervening with sub-systems that want and deserve to be replaced or desired. This process accommodates input from the results of justification in the field related to the model. The sub-systems of the collaborative planning system that have been built from the results of the research have been well identified and have interrelationships between the existing sub-systems so that the actors already have mutually reinforcing elements to form a model that can be used as a work step in collaboration planning.

The seventh stage of SSM is the real action taken to improve the conceptual model in the real world. The collaborative planning conceptual model is of course ready to be implemented, but it is possible that there will be difficulties in implementing the model since it requires a shared commitment to carrying out the collaborative planning model. Planning a collaboration process that is a concern is difficult to implement as a result of a large number of demands, Johnston, 2010). In addition to a large number of demands, it also takes quite a long time since the process of building agreements, and conflicts or disputes will arise between stakeholders, as well as problems with public involvement in collaboration planning (Gunton and Day, 2003). So the efforts to overcome the obstacles to collaborative planning are: (1). In the collaboration process, a manager or leader is needed as an actor who can provide solutions when problems occur that cannot be resolved together, so the presence of a manager or leader in the planning process will support the collaboration process (2). Existing systems need to make adjustments to the existing environment since each system will be influenced by the surrounding environment. (3). There is clarity about the stakeholders who are present in the collaboration process since, in collaboration planning, the involvement of unclear parties will result in an ineffective plan. Through these efforts, it is hoped that this system will run well and have an impact on accelerating the reduction of stunting in the regions.

D. CONCLUSION AND RECOMMENDATION

Conclusion

It is reasonable to conclude that the concept of systems thinking is needed in collaborative planning in stunting interventions, since collaborative planning is the initial process for setting achievement targets in stunting interventions so that the targets in the SDGs can be achieved properly.

The collaborative planning conceptual model can be implemented. In its implementation will be influenced by the internal and external environment of the system. The main element of the collaborative planning conceptual model is the collaboration process, which requires commitment and trust between actors in planning the collaboration.

Differences in community literacy and between different stakeholders need to be properly addressed through a communication approach, and a leader or manager who is involved in the collaboration process is needed as a facilitator in order to reach a mutual agreement and avoid conflicts between stakeholders.

Recommendation

This research has limitations and focuses on a collaborative planning conceptual model that can be implemented in conditions that pay attention to environmental aspects in the regions, since cultural aspects and values in the regions will influence the collaboration process.

With the limitations of this research, the author suggests that to strengthen this model, further research can be carried out regarding the administer and supervision of collaborative planning collaboration models in modern societies with a diversity of environments, since each region has a different environmental carrying capacity.

Through this system approach, it is hoped that the conceptual model for stunting intervention and collaborative planning in its implementation will be able to adapt to the environment in the region

REFERENCE

- Panuluh, S., & Fitri, M. R. (2016). *Perkembangan Pelaksanaan Sustainable Development Goals (SDGs) di Indonesia*. In *Biefing Paper 02: Vol. INFID (Issue Sustainable Development Goals (SDGs))*.
- Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G., & Woelm, F. (2020). *The Sustainable Development Goals and Covid-19*. Sustainable Development Report 2020. Cambridge University Press.
- Oosterhof, P. D. (2018). Localizing the SDGs to Accelerate Implementation of the 2030 Agenda. *Asian Development Bank*, 33.
- Sadikin, Budi G (2020) laporan kinerja kementerian kesehatan republik Indonesia
- Marini A, Rokx C, Gallagher P. Standing tall: Peru's success in overcoming its stunting crisis. *World Bank Group*; 2017.
- Fikawati, S., Syafiq, A., & Veratamala, A. (2017). *Gizi Anak dan Remaja*. Depok: PT. Raja Grafindo Persada.
- Sjafrizal. 2014. *Perencanaan Pembangunan Daerah Dalam Era Otonomi*. Jakarta: PT Rajagrafindo Persada.
- Sufianti (2014). Kepemimpinan dan Perencanaan Kolaboratif pada Masyarakat Non-Kolaboratif. *Jurnal Perencanaan Wilayah dan Kota ITB* vol. 25, no. 1, hlm. 77-95, April 2014
- Healey, Patsy. (2006) *Collaborative Planning, Shaping Places in Fragmented Societies*. 2nd ed. New York: Palgrave Macmillan
- Ansell, C. dan Gash, A., (2007). Collaborative Governance in Theory and Practice, *Journal of Publik Administration Research and Theory*, 18:543-571., doi: 10.1093/jopart/mum032 First published, November 13, 2007
- Innes, J.E. dan Booher, D.E. (2010). Beyond Collaboration Democratic Governance for a Resilient Society *dalam Planning with Complexity, An Introduction to collaborative rationality or public policy*, pp 196-215., Routledge, Oxon.

- Healey, Patsy (2007) *Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times*. New York: Routledge.
- Sufianti, Ely (2011) perencanaan kolaborasi dalam pengelolaan sampah sebagai upaya pembangunan lingkungan yang berkelanjutan. *Jurnal Ilmu Administrasi* + Volume VIII + No. 3 + Desember 2011
- Bertaina, et. al. (2006) Study for the State Trust Lands Partnership Project of the Sonoran Institute and the Lincoln Institute of Land Policy. *Building Trust: Lessons From Collaborative Planning on State Trust Lands*
- Thomson, A.M., Perry, J.L. 2006. Collaboration Process: Inside the Black Box. Article on Collaborative Public Management
- Thomson, A.M., Perry, J.L., & Miller, T.K. 2014. Linking Collaboration Processes and Outcomes: Foundations for Advancing Empirical Theory.
- Creswell, J., W. (2014). *Research Design: Pendekatan Kualitatif Kuantitatif, dan Mixed*. Edisi revisi Cetakan Ke-4. Yogyakarta. Pustaka Pelajar.
- Dalton E Mc (1959) *Management, principles and practices*, Macmillan Co, New York, p.10
- Willmore, Larry. 2004. *Basic Education as a Human Right*. Institute of Economic Affairs. Oxford: Blackwell Publishing.
- Creswell, John W. 2012. *Research Design Pendekatan Kualitatif, Kuantitatif, dan Mixed*. Yogyakarta: Pustaka Pelajar.
- Dubois, A., dan LE Gadde. 2002. "Penggabungan Sistematis: Pendekatan Abduktif untuk Penelitian Kasus." *Jurnal Riset Bisnis* 55 (7): 553-560.
- Checkland, Peter (1999), *Systems Thinking Practice: Includes a 30-year retrospective*. Chichester: John Wiley and sons.
- Sasmojo, S. (2004). *Sains, Teknologi, Masyarakat & Pembangunan*, Cet. I, Bandung: Program pasca sarjana Studi Pembangunan ITB
- Checkland, Peter dan John Poulter, (2006). *Learning for action: A short definitive account of soft system methodology and its use for practitioners, teachers and students*. Chichester: John Wiley and sons
- Peraturan presiden No. 72 tahun 2021 tentang percepatan penurunan stunting
- Presiden Nomor 59 Tahun 2017 tentang Pelaksanaan Pencapaian Tujuan Pembangunan Berkelanjutan (SDGs)
- McNamara, M. (2012): Starting to Untangle the Web of Cooperation, Coordination, and Collaboration: A Framework for Public Managers, *International Journal of Public Administration*, 35, pp. 389-401.
- Anshell, C. and Gash. (2008) Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory* 18, 543-571.
- Allmendinger, P. (2002) *Planning Theory*. New York: Palgrave.
- Graham, S. and Healey, P. (1999) Relational Concepts of Space and Place: Issues for Planning Theory and Practice. *European Planning Studies* 7 (5), 623-646.
- Gunton, Thomas I. & Day, J.C. (2003) *The theory and practice of collaborative planning in resource and environmental management*.
- Checkland, Peter dan Scholes, Jim, (1990). *Soft Systems Methodology In Action*, John Wiley and Son Ltd., England
- Johnston, E. et al. (2010) Managing the Inclusion Process in Collaborative Governance. *Journal of Public Administration Research and Theory*. first published online Sager, T. 2005. Communicative Planners as Naïve Mandarins of Neo-liberal State? *European Journal of Spatial Development*.