



ARTICLE RESEARCH

URL artikel: <http://jurnal.fkmumi.ac.id/index.php/woh/article/view/woh8301>**Sustainability Analysis of the Stunting Reduction Acceleration Program
in Kubu Raya Regency**Resky Nanda Pranaka¹, Evi Gusmayanti², Indah Budiastutik³, Malik Saepudin⁴, Havid Aqoma⁵^{1,2}Master of Environmental Science, Tanjungpura University³ Faculty of Health Sciences and Psychology, Muhammadiyah University of Pontianak⁴ Department of Environmental Health, Ministry of Health, Polytechnic of Pontianak⁵ School of Energy and Chemical Engineering, Xiamen University MalaysiaEmail Corresponding Author^(C): indahbudiastutik@unmuhpnk.ac.idresky171015@gmail.com¹, evi.gusmayanti@faperta.untan.ac.id², indahbudiastutik@unmuhpnk.ac.id³,mlksaepudin66@gmail.com⁴, havidaqoma.khoiruddin@xmu.edu.my⁵

ABSTRACT

Presidential Regulation Number 72 of 2021 on the Acceleration of Stunting Reduction sets a national target of reducing stunting prevalence to 14% by 2024 through integrated programs across government levels, from ministries to villages. In line with this policy, Kubu Raya Regency has shown a decline in stunting rates from 7.9% to 6.8% based on e-PPGBM data, indicating improved implementation of stunting reduction programs. This study aims to analyze the sustainability status of the stunting reduction program in Kubu Raya Regency using the Rapfish (Rapid Appraisal for Fisheries) multidimensional scaling approach. Data were collected from ten Regional Apparatus Organizations (OPDs) through surveys and interviews. The analysis involved six stages: identifying dimension characteristics, scoring on an ordinal scale, determining sustainability status, conducting sustainability checks, performing a sensitivity analysis, and applying a Monte Carlo simulation to account for uncertainty. The results show that the social and economic dimensions are categorized as "quite sustainable" with scores of 60.04 and 51.86, respectively, while the environmental dimension is "less sustainable" with a score of 38.02. Key attributes influencing sustainability include increasing the number of Open Defecation Free (ODF) villages, improving the accuracy of beneficiary data for food assistance, monitoring fortified food products, enhancing nutritional knowledge among pregnant women at risk of chronic energy deficiency, and strengthening village budget planning and cadre development. These findings highlight the need for targeted interventions to improve program sustainability, particularly in the environmental dimension, to ensure long-term success in reducing stunting prevalence.

Keywords : Kubu Raya Regency; Program Sustainability; Stunting

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INTRODUCTION

Stunting is a condition of chronic malnutrition that occurs during the First 1,000 Days of Life (HPK), spanning from pregnancy to a child's second birthday. This condition disrupts physical growth and brain development, and increases the risk of chronic diseases in adulthood (1–3). In addition to genetic factors, stunting is influenced by environmental sanitation, social behavior, and economic conditions. Deficiencies in macronutrients and micronutrients such as protein, iron, iodine, and vitamin A, as well as a lack of stimulation and inadequate child health protection, also contribute to stunting (4–6).

The Government of Indonesia has taken this issue seriously by issuing Presidential Regulation No. 72 of 2021 concerning the Acceleration of Stunting Reduction. This regulation establishes a National Strategy aimed at reducing stunting prevalence, improving family quality of life, ensuring adequate nutritional intake, enhancing parenting practices, improving the quality of health services, and expanding access to clean water and sanitation. In line with this, the Sustainable Development Goals (SDGs) target the eradication of hunger and malnutrition by 2030 and aim to reduce stunting by 40% by 2025 (7). In West Kalimantan Province, data from the 2019 Indonesian Toddler Nutrition Status Survey (SSGBI) showed a stunting prevalence of 31.5%. This figure decreased to 29.8% in 2021 and declined to 27.8% in 2022, according to the Indonesian Nutrition Status Survey (SSGI) (8-9). Despite this decline, challenges remain, especially as eight regencies/cities reported an increase in stunting prevalence in 2022: Melawi, Kapuas Hulu, Sekadau, Landak, Sanggau, Bengkayang, Kayong Utara, and Singkawang City.

To improve program effectiveness, the government has implemented the 8 Convergence Actions, aligned with the Ministry of Home Affairs Regulation No. 31 of 2019 on Guidelines for the Preparation of Regional Government Work Plans. This highlights the responsibility of local governments to ensure that cross-sectoral interventions are effectively implemented from the provincial to the village level. However, achieving the national stunting prevalence target of 14% by 2024 remains a major challenge.

One area that has shown significant progress is Kubu Raya Regency, which reduced stunting prevalence by 12.7% from 2021 to 2022, based on SSGI data. Furthermore, E-PPGBM (Community-Based Nutrition Recording and Reporting System) data from 2023 shows a further decline to 6.8%. This success is supported by several strategies, including targeted approaches for at-risk families, integrated nutrition strategies, and multisectoral, multi-agent collaboration.

Nevertheless, environmental factors still require attention. According to West Kalimantan Provincial Health Office data in 2020, only 61.8% of the 118 villages in Kubu Raya had implemented Community-Based Total Sanitation (STBM). This increased to 79.7% (or 94 villages) in 2021. However, the achievement of STBM Pillar 1, which focuses on ending open defecation, remains low, with only 16 villages (13.6%) meeting this standard. As of November 2022, only 25 villages across nine sub-districts had been officially declared Open Defecation Free (ODF).

This study aims to analyze the sustainability status of programs and activities related to the acceleration of stunting reduction in Kubu Raya Regency. The goal is to provide a comprehensive overview for stakeholders in formulating future policy directions and program planning. Through this analysis, it is expected to determine the extent to which the implemented strategies have been carried out consistently, integrated across sectors, and hold potential for being sustained or further enhanced in the future.

METHOD

This study adopts a quantitative research approach, utilizing the Multidimensional Scaling (MDS) coordination technique to analyze the sustainability of stunting reduction programs and activities in Kubu Raya Regency. The research protocol has been reviewed and approved by the Health Research Ethics Committee of the Pontianak Ministry of Health Polytechnic, under approval number 202/KEPK-PK.PKP/II/2023. The MDS method identifies key dimensions for evaluating the observed objects and groups them based on their attributes by assessing similarities or dissimilarities among the objects (10). The research was conducted in Kubu Raya Regency, West Kalimantan Province, from September to December 2023. A purposive sampling technique was applied, resulting in 10 respondents from local government agencies responsible for implementing stunting reduction programs. The research site was selected based on several considerations: (1) the existence of 24 priority villages for stunting reduction, (2) a total of 2,845 children under five years old identified as being at risk of stunting, and (3) the regency's significant decrease in stunting prevalence by 12.7%, according to data from the 2022 Indonesian Nutrition Status Survey (SSGI). His study utilized primary data collected through discussions, interviews, and the completion of questionnaires using the Rap-Stunting analysis as a source of information to assess the sustainability of stunting reduction programs and activities in Kubu Raya Regency.

Table 1. Sustainability Index Categories and Status

Index Value (percent)	Category
0 - 25	Poor (Not Sustainable)
25.01 - 50	Low (Less Sustainable)
50.01 - 75	Moderate (Fairly Sustainable)
75.01 - 100	Good (Sustainable)

The measured attributes were scored based on the technical guidelines issued by the provincial government for evaluating district/city government performance in implementing the eight convergence actions for stunting reduction, as well as technical guidelines for assessing healthy homes. The scoring system ranged from 0 to 3, with 0 representing a poor condition and 3 representing a good condition, or vice versa, depending on whether the attribute was positive or negative (11,12). The sustainability index, as the output of the MDS-Rapfish analysis, is presented as a fixed score ranging from 0% to 100%, and is classified into four categories as shown in Table 1 (13,14). The analytical model is considered reliable

when it produces a stress value ($S < 0.25$) and a coefficient of determination (R^2) close to 100%, indicating a good fit of the model (15).

Table 2. Dimensions and Attributes of Sustainability for Stunting Programs and Activities in Kubu Raya District

Dimension	Attributes
Social	Provision of midwives in villages; Achievement of Stunting-Free Villages and implementation of stunting reduction convergence; Strengthening village capacity and cadre development; Implementation of national campaigns and monitoring-evaluation at the local government level; Percentage of villages with trained early childhood education (PAUD) teachers on parenting that supports stunting reduction; Percentage of early childhood institutions implementing Holistic-Integrative PAUD; Fulfillment of service standards for child development monitoring at posyandu; Percentage of villages conducting parenting classes for children under five focusing on the first 1,000 days of life (HPK); Percentage of Adolescent Information and Counseling Centers (PIK Remaja) and Family Development for Toddlers (BKB) providing reproductive health and nutrition education to adolescents; Percentage of prospective couples of childbearing age receiving iron tablets, reproductive health counseling, and nutrition training three months before marriage; Percentage of pregnant women receiving iron supplementation; Percentage of pregnant women with chronic energy deficiency (KEK) receiving nutritional intake; Percentage of infants under six months exclusively breastfed; Percentage of children aged 6–23 months receiving complementary feeding; Percentage of under-five children with malnutrition receiving additional nutrition; Percentage of adolescent girls receiving anemia screening services; Availability of surveillance data and coverage of family assistance for stunting risk, accessible via SIGA; Percentage of postpartum family planning services provided; Percentage of unmet need for family planning services; and stunting audits for children aged 2 years.
Economic	Percentage of Conditional Cash Transfer (PKH) beneficiaries attending Family Development Sessions (P2K2) with health and nutrition modules; Percentage of villages integrating stunting-related programs into village planning and budgeting documents; Percentage of villages with increased Village Fund Allocation (ADD) for specific and sensitive interventions; Percentage of families improving nutrition intake using home garden resources; Percentage of at-risk families encouraged to increase fish consumption; Percentage of PKH beneficiaries (pregnant women, breastfeeding mothers, toddlers) receiving additional food assistance beyond rice and eggs; Coverage of couples of childbearing age (PUS) among marginalized and poor groups receiving conditional cash assistance; Coverage of PUS beneficiaries of non-cash food assistance (BPNT) among poor and vulnerable groups; Coverage of PUS among poor and underprivileged households receiving contribution subsidies; and Percentage of business actors consistently monitoring fortified food products.
Environmental	Availability of clean water facilities, toilet facilities, and wastewater disposal infrastructure; Percentage of households stopping open defecation (OD); Percentage of households practicing Clean and Healthy Behavior (PHBS); and Percentage of villages implementing Community-Based Total Sanitation (STBM).

The variables used in this study are indicators derived from Presidential Regulation No. 72 of 2021, Annex B, covering Pillars 1 through 5, which serve as the basis for programs and activities at the district/city level. Additional references include the article by Hasanah, Handayani, and Wilti (2021), the summary book "100 Priority Districts/Cities for Stunting Intervention" published by the National Team for the Acceleration of Poverty Reduction (TNP2K) in 2017, and the Technical Guidelines for Healthy House Assessment (16,17).

RESULTS

Social Dimension

The Multidimensional Scaling (MDS) analysis indicates a sustainability index score of 60.04, categorized as moderately sustainable and tending toward the "good" quadrant (Figure 1), with a stress value of 0.14 and an R^2 of 95.4%. Furthermore, sensitivity testing using leverage analysis identified two key attributes influencing the sustainability index: the percentage of pregnant women with chronic energy deficiency (CED) receiving nutritional intake (leverage value: 1.79) and the enhancement of village capacity along with the development of community cadres (leverage value: 1.10).

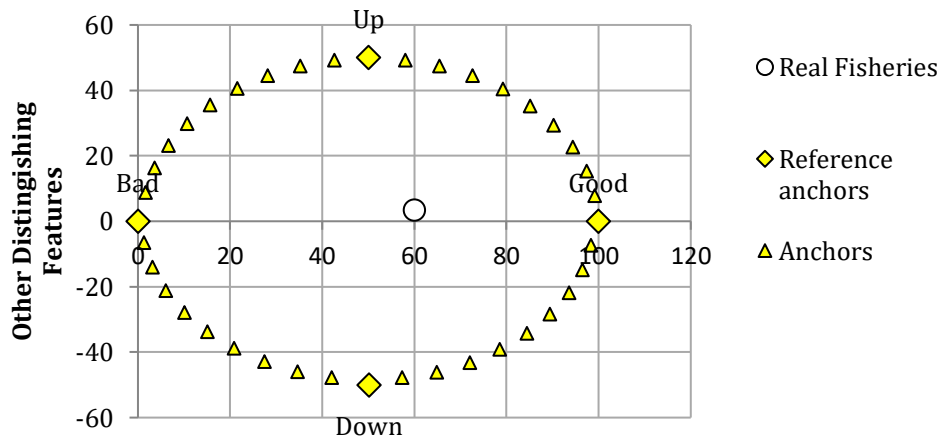


Figure 1. Ordination of the Sustainability Index for the Social Dimension

Economic Dimension

The Multidimensional Scaling (MDS) analysis shows a sustainability status score of 51.86, categorized as moderately sustainable and tending toward the "good" quadrant (Figure 3), with a stress value of 0.14 and an R^2 of 95.3%. Furthermore, sensitivity testing through leverage analysis identified five key attributes that significantly influence the sustainability index:

1. Coverage of couples of childbearing age (PUS) among marginalized and poor populations receiving conditional cash transfers (leverage value: 5.40);
2. Coverage of PUS receiving non-cash food assistance among poor and socially disadvantaged groups (leverage value: 4.61);
3. Percentage of villages integrating programs and activities into their planning and budgeting documents (leverage value: 3.85);
4. Percentage of business actors consistently monitoring fortified food products (leverage value: 3.11);

5. Percentage of Conditional Cash Transfer (PKH) beneficiary families attending Family Development Sessions (P2K2) with health and nutrition modules (leverage value: 2.84).

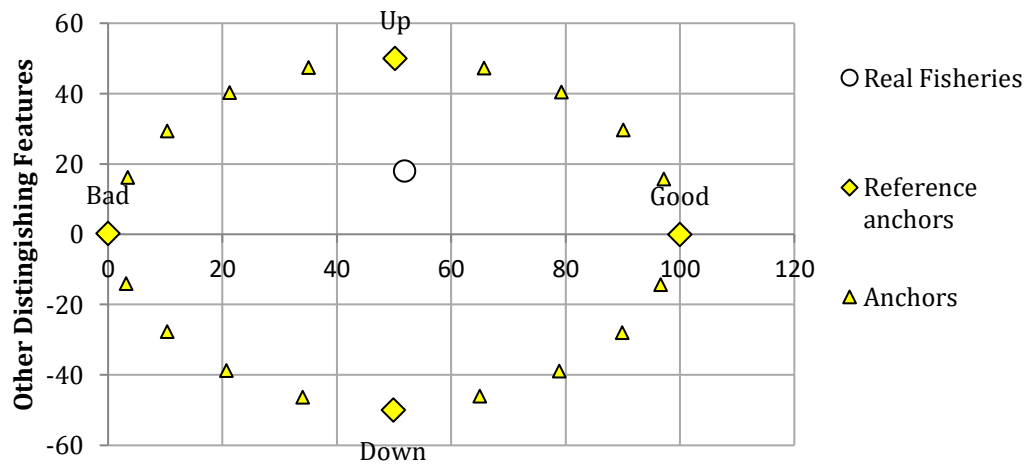


Figure 2. Ordination of the Sustainability Index for the economic Dimension

Environmental Dimension

The Multidimensional Scaling (MDS) analysis using Rapfish shows an ordination position with a score of 38.02 (Figure 5), which falls into the "less sustainable" category, with a stress value of 0.16 and an R² of 94.3%. Sensitivity testing through leverage analysis identified one key attribute influencing the sustainability index in the environmental dimension: the percentage of households that have stopped open defecation (leverage value: 6.19).



Figure 3. Ordination of the Sustainability Index for the Environmental Dimension

DISCUSSION

SOCIAL DIMENSION

The implementation of programs under Pillars 1 through 5 reflects both achievements and challenges in sensitive and specific interventions carried out by the Stunting Reduction Acceleration Team of Kubu Raya District, as reported in the Semester I Report of 2023, namely:

Table 1. Achievements in the Social Dimension Based on Presidential Regulation No. 72 of 2021
Pillars 1–5 in Kubu Raya District

Dimension	Indicator	Achievement	Coverage
SOCIAL	Provision of midwives in villages	123	100%
	Achievement of Stunting-Free Villages and implementation of convergence to accelerate stunting reduction	117	95%
	Strengthening of village capacity and development of community cadres	123	100%
	Implementation of national campaigns and monitoring and evaluation by the local government	1	100%
	Percentage of villages with PAUD teachers trained in stunting-reducing parenting	75	61%
	Percentage of early childhood education institutions developing Holistic-Integrative PAUD	306	100%
	Fulfillment of service standards for child development monitoring at <i>posyandu</i>	-	-
	Percentage of villages conducting parenting classes (Bina Keluarga Balita) for the first 1,000 days of life	94	76%
	Percentage of Youth Information and Counseling Centers (PIK Remaja) and Family Development for Adolescents (BKR) providing reproductive health and nutrition education	84	71%
	Percentage of prospective couples receiving reproductive health counseling and nutrition training three months before marriage	2233	84%
	Number of pregnant women who consumed 90 or more iron tablets during pregnancy	4236	38%
	Percentage of pregnant women with CED receiving nutritional intake	351	8%
	Percentage of infants under 6 months exclusively breastfed	1022	62%
	Percentage of children aged 6–23 months receiving complementary feeding (MP-ASI)	9148	37%
	Percentage of under-five children with malnutrition receiving additional nutrition	170	61%
	Percentage of adolescent girls receiving anemia screening services	4604	48%
	Availability of surveillance data and family assistance coverage for stunting-risk families accessible via SIGA	-	-
	Percentage of postpartum family planning services provided	1513	36%
	Percentage of unmet need for family planning services	49204	47%
	Stunting audit conducted for children aged 2 years	-	-

Based on the analysis results (Figure 1), most programs and activities have met the regional targets outlined by the indicators in Presidential Regulation No. 72 of 2021. Furthermore, the sensitivity analysis identified two sensitive attributes that warrant particular attention for improvement, as these may enhance the sustainability index score in the social dimension. The District Health Office in Kubu Raya prioritizes upstream interventions targeting adolescents, pregnant women, and children under two, known as the first 1,000 days of life, as a key strategy for stunting prevention and control within health programs (18).

One of the innovative programs initiated by the West Kalimantan Provincial Health Office is 'SEHAT MEMBARA' (Every Friday, Take Iron Tablets), launched in 2022. However, Kubu Raya District has already implemented a similar initiative since 2019, known as SALJU (Tuesdays and Fridays), which became a flagship program and led the district to rank among the national top ten in 2020. This program aims to improve public health status and achieve the twelve Minimum Service Standards (SPM) health indicators through integrated, continuous, well-structured, and systematic individual and community health services.

Moreover, higher education levels among local leaders do not necessarily translate into improved skills in addressing stunting. In contrast, the number of village officials shows a statistically significant influence on reducing stunting prevalence (19). Kubu Raya District, through Regent Regulation No. 96 of 2022, mandated all villages to prioritize stunting reduction in their 2023 budget planning, including a minimum allocation of IDR 5 million for supplementary feeding and monthly incentives of IDR 300,000 per Human Development Cadre (KPM), as mandated by the Ministry of Villages and recorded in the Electronic Human Development Worker (e-HDW) system. To support national priorities in reducing stunting prevalence, it is essential to strengthen the capacity of village heads to raise awareness of health initiatives, particularly early stunting prevention, and ensure adequate staffing. Efforts should also focus on development planning, enhancing community and multi-stakeholder participation, and fostering innovation and collaboration (20).

These sensitive attributes are critical, as program outcomes are constrained by limited government funding, low prioritization of childhood anemia, weak implementation capacity and coverage, and poor intersectoral coherence factors that, despite limited scale and capacity, significantly affect target achievement (21). Capacity building at the village level and the development of Human Development Cadres in Kubu Raya serve as key enabling factors, through continuous educational training for at-risk families and communities to enhance understanding and prevention of stunting. These trainings enhance self-efficacy, confidence, and the ability of cadres to support stunted children through home visits. In addition to improving knowledge, they are also motivated to foster a sense of responsibility toward assigned tasks (22,23).

ECONOMIC DIMENSION

The implementation of programs across Pillars 1 to 5 reflects both achievements and challenges in sensitive and specific interventions carried out by the Kubu Raya District Stunting Reduction Acceleration Team, as reported in the Semester I 2023 Report :

Table 2. Economic Dimension Achievements of Presidential Regulation No. 72 of 2021 Pillars 1–5 in Kubu Raya District

Dimension	Indicator	Achievement	Coverage
ECONOMIC	Percentage of Family Hope Program (PKH) beneficiaries attending family capacity-building meetings (P2K2) using health and nutrition modules	84	71%
	Percentage of villages incorporating programs and activities into village planning and budgeting document	123	100%
	Percentage of villages experiencing increased Village Fund Allocation (ADD) for specific and sensitive interventions	117	95%
	Percentage of families increasing nutritional intake using home garden resources	3686	62%
	Percentage of at-risk families encouraged to consume more fish	3872	65%
	Percentage of beneficiaries with pregnant women, breastfeeding mothers, and children under two receiving additional food assistance besides rice and eggs	-	-
	Coverage of Women of Childbearing Age (PUS) among social welfare recipients and the poor receiving conditional cash assistance	-	-
	Coverage of PUS among recipients of non-cash food assistance who are poor and social welfare recipients	-	-
	Coverage of PUS among the poor and disadvantaged receiving contribution assistance	-	-
	Percentage of business actors continuously monitoring fortified food products	198	75%

The sustainability of the economic dimension impacts community economic growth and supports the continuation of stunting reduction programs at both district and village levels, including the achievement of stunting-free villages. Poor family economic status affects the variety and quantity of food consumed, increasing the risk of nutritional deficiencies essential for growth, such as protein, vitamins, and minerals. Government programs focus on empowering families economically and fostering financial management skills, as reflected in the activities implemented by the Kubu Raya District to accelerate stunting reduction across these five attributes.

Conditional cash transfers provide financial assistance to families or individuals to meet basic needs and improve welfare, subject to criteria related to poverty reduction, education, health, and other factors. However, coverage is limited to families registered with the Ministry of Social Affairs, making it unclear whether women of reproductive age (WRA) from stunting-risk families are included. About stunting reduction, targeting WRA is essential from the upstream level by ensuring economic and

nutritional support. Expanding WRA coverage within at-risk families is expected to enhance the success of stunting reduction efforts.

A limitation of this indicator lies in the database of women of reproductive age and Family Hope Program (PKH) beneficiaries, which requires continual updating to ensure accurate targeting. One of the primary causes of stunting is low household economic status, which hinders families from meeting their nutritional needs both in quantity and quality (24). Moreover, food accessibility is achieved when every household has adequate resources to obtain nutritious food. Social protection programs can enhance access to protein-, vitamin-, and mineral-rich food products that were previously inaccessible (25,26).

Legislation is needed to support social protection schemes related to food purchasing, local food production, community gardens, and infrastructure for safe food storage, processing, transportation, and distribution (27). Nadiyah's 2014 study demonstrated a positive and significant association between low family income and stunting prevalence among children aged 0 to 23 months (28). Consequently, families with lower economic status have less financial capacity to purchase nutrient-dense foods, which potentially leads to macro- and micronutrient deficiencies (29). Furthermore, nutrient deficiencies in pregnant women and young children increase the risk of stunting, highlighting the need for educational programs that promote family food self-sufficiency behaviors, especially targeting maternal knowledge as a preventive measure against stunting (29, 30) .

The Kubu Raya District government also makes sure to set aside money from the Regional Budget (APBD) for the Village Fund Allocation (ADD), focusing on extra food support and rewards for development workers, as well as targeted help for specific needs. Furthermore, economic dimension indicators are expected to contribute to poverty reduction and improved family welfare. One of the programs is the Business Income Improvement Program (UP2K), implemented by the Family Empowerment and Welfare Agency, focusing on rural women. This aligns with Palupi's 2022 study on the readiness to implement integrated stunting reduction interventions through the Golden Village Program, which includes three initiatives (DASHAT, Budikdamber, and urban farming). These programs involve sub-district officials, health workers, stunting program facilitators, development cadres, posyandu cadres, and early childhood education teachers (31).

Law No. 6 of 2014 on Villages aims, among other goals, to improve human resource quality in villages, including health. In line with this, stunting reduction convergence efforts in villages represent an investment in human resource development (32). Accordingly, the Kubu Raya District government allocated Village Fund Allocations (ADD) to 123 villages through Regent Regulation No. 96 of 2022, covering programs such as supplementary feeding, incentives for posyandu cadres, and provision of portable ultrasound equipment.

ENVIRONMENTAL DIMENSION

The implementation of programs across Pillars 1 to 5 illustrates the achievements and challenges in sensitive and specific interventions carried out by the Kubu Raya District Stunting Reduction Acceleration Team, as reported in the Semester I 2023 Report :

Table 3. Environment Dimension Achievements of Presidential Regulation No. 72 of 2021 Pillars 1–5 in Kubu Raya District

Dimension	Indicator	Achievement	Coverage
ENVIRONMENT	Access to Clean Water Facilities	301847	49%
	Access to Sanitary Latrines	-	-
	Wastewater Disposal Facilities	117384	65%
	Percentage of Households Practicing Open Defecation-Free (ODF) Behavior	164928	91%
	Percentage of Households Practicing Clean and Healthy Living Behavior (PHBS)	11765	67%
	Percentage of Villages Implementing Community-Based Total Sanitation (STBM)	74	60%

Sustainable natural resource management for future generations is a critical environmental aspect. This includes assessing the environmental dimension index and its sustainability to evaluate the extent of community and government efforts in environmental preservation and improvement to support public health. Targeted attributes are addressed and improved to enhance the sustainability index value. Diseases such as diarrhea, helminth infections, and altered gut structure are caused by unhealthy environmental conditions that facilitate fecal-oral disease transmission (33). Therefore, improved sanitation can provide protective effects against stunting in children (34).

This is supported by data from the Kubu Raya District Health Office, which, as of 2023, has declared 26 villages as Open Defecation Free (ODF), while 90 villages remain in the triggering phase. The Kubu Raya District Government has undertaken stunting reduction efforts through a collaborative approach known as 'Kepung Bakul'. The philosophy of 'Kepung Bakul' reflects a spirit of cooperation, where all sectors—including government, private entities, communities, and academic institutions—actively participate in addressing stunting issues.

Several concrete collaborations have been implemented, including:

1. Pertamina, which contributed through a clean water treatment program in vulnerable areas.
2. Poltekkes, in partnership, applied the Tripikon system a septic tank-like device specifically designed for houses in water-based settlements.
3. Kopernik, in collaboration with USAID WASH, focuses on the provision of sanitary latrines in areas with poor sanitation conditions. These efforts are reinforced by a local regulatory initiative—a draft Regent Regulation proposed by the Health Office and the Public Works and Spatial Planning Office (PUPR), mandating that all new housing constructions be equipped with basic sanitation facilities, particularly bathrooms and toilets.

In the environmental dimension, community empowerment and public participation play essential roles in achieving sanitation goals. Moreover, the local government's collaboration with private sectors and community stakeholders reflects shared responsibility in reducing stunting cases. As a leverage attribute, the government has introduced regulations to improve sanitation particularly requiring that all new housing developments include at least a proper septic tank indicating progress in environmental management.

Several key environmental factors closely linked to human life include access to clean water, latrines, waste management, housing conditions, pollution, sanitation, hazardous materials, and public facility hygiene (35). As part of the Healthy Indonesia Program, twelve essential indicators are used to assess family health status, one of which is access to proper sanitation or having a hygienic latrine (36).

CONCLUSIONS AND RECOMMENDATIONS

The sustainability of the stunting reduction program demonstrates strong performance in social and economic dimensions but remains less sustainable environmentally, with several highly sensitive attributes requiring urgent attention. These include the proportion of households practicing open defecation-free (ODF) behavior, coverage of women of reproductive age (WRA) from disadvantaged households receiving both conditional cash transfers and non-cash food assistance, integration of stunting-related programs into village planning documents, monitoring of fortified food products by businesses, participation of PKH beneficiary families in P2K2 programs with health and nutrition content, nutritional support for pregnant women with chronic energy deficiency (CED), and capacity-building efforts for human development cadres. To enhance the program's sustainability, it is essential to prioritize increasing the number of ODF-certified villages through the provision of adequate and hygienic sanitation facilities, refine data on reproductive-age couples (PUS) to improve aid targeting, strengthen monitoring of food fortification, provide comprehensive nutrition education for CED-affected pregnant women, and integrate stunting interventions into village development plans through sustained training and empowerment of local health cadres.

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