

Assessment of the Implementation Level and Gaps in the Disaster-Resilient Neighborhood Program (KALTANA) in Supporting Relevant *Sustainable Development Goals* (SDGs) in Cirebon City

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Abstract. The Disaster-Resilient Neighborhood Program (KALTANA) is one of the Community-Based Disaster Risk Reduction (CBDRR) strategies developed by the National Disaster Management Agency (BNPB) to enhance community capacity in facing disaster threats. Meanwhile, the Sustainable Development Goals (SDGs) identify disaster resilience as a key aspect of achieving sustainable development. The KALTANA Program has been implemented in 12 neighborhoods in Cirebon City; however, the extent to which its implementation supports the achievement of relevant SDG goals and targets still requires evaluation. This study aims to assess the level of implementation and gaps in the KALTANA Program in supporting the achievement of relevant SDGs at the neighborhood level in Cirebon City. This study employs a descriptive qualitative approach using data collection techniques such as in-depth interviews, document analysis, and a literature review. Analysis was conducted through data reduction, data presentation, assessment of the implementation level of KALTANA indicators, and an analysis of gaps relative to relevant SDG targets. The results indicate that the implementation of the KALTANA Program in Cirebon City has been carried out across the entire study area. However, the level of implementation is not yet uniform. Differences in implementation are influenced by institutional capacity, the availability of disaster-related facilities and infrastructure, community participation, and the continuity of program guidance. The implementation of KALTANA indicators contributes to supporting several SDGs, particularly SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action). However, there remains a gap between the actual implementation conditions on the ground and the sustainable development targets. Therefore, it is necessary to strengthen coordination among stakeholders, enhance capacity, and provide continuous program guidance so that the implementation of KALTANA can make a more optimal contribution to achieving the SDGs at the urban village level.

Keywords: Disaster-Resilient Neighborhoods, Implementation, SDGs, Disaster Risk Reduction, City of Cirebon

1 Introduction

Disasters are one of the main challenges in realizing sustainable development because their impacts not only cause physical losses but also hinder social, economic, and environmental development. In recent years, Indonesia has continued to be dominated by hydrometeorological disasters, such as floods, extreme weather, and landslides, highlighting the need for a paradigm shift in disaster management from a reactive to a preventive approach through community-based disaster risk reduction [1].

As part of the implementation of the Community-Based Disaster Risk Reduction (CBDRR) approach, the National Disaster Management Agency (BNPB) developed the Disaster-Resilient Village/Neighborhood Program (DESTANA/KALTANA) based on BNPB Head Regulation No. 1 of 2012[2]. This program aims to enhance community capacity so that they can identify threats, reduce vulnerability, and carry out preparedness and recovery efforts independently. As the program has evolved, the assessment tools for village and neighborhood resilience have been refined through the 2021 Guidelines for Assessing Village and Neighborhood Disaster Resilience, which include 5 components and 32 assessment indicators[3].

At the global level, the Sustainable Development Goals (SDGs) position disaster risk reduction as an integral part of sustainable development. Community resilience to disasters contributes to the achievement of various SDG goals, particularly Goal 11 (Sustainable Cities and Communities) and Goal 13 (Climate Action). Therefore, the implementation of the KALTANA Program not only plays a role in enhancing community preparedness but also has the potential to support the achievement of sustainable development targets at the local level[1].

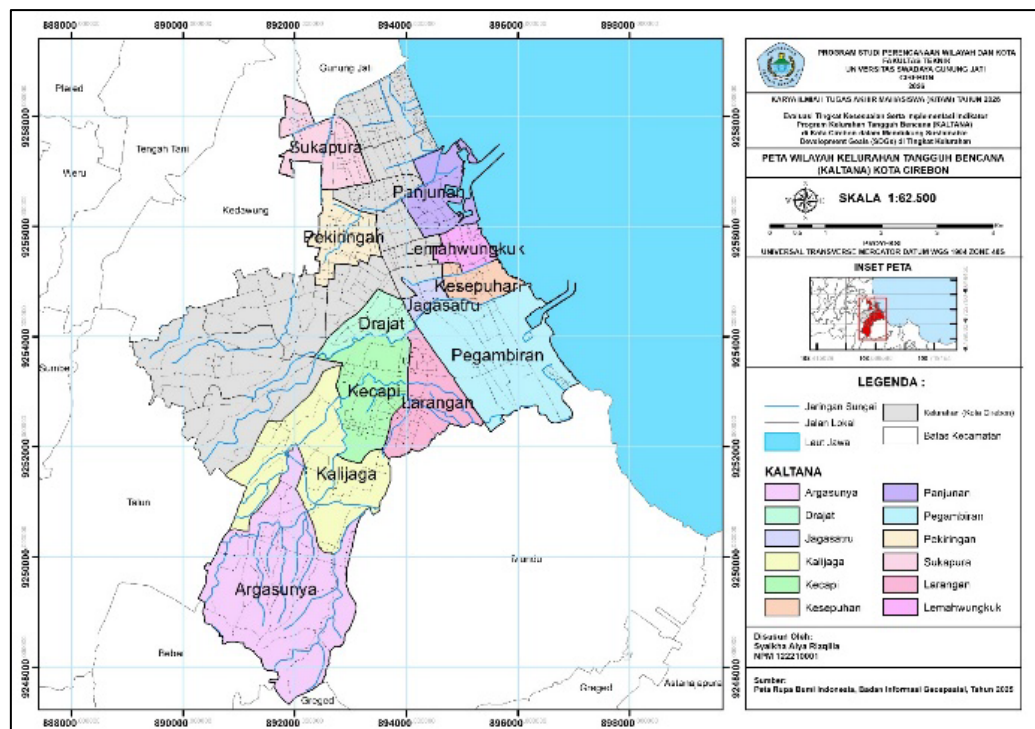


Figure 1. Map of Disaster-Resilient Neighborhoods (KALTANA)
 Source: Data Analysis Results, 2026

The city of Cirebon is one of the areas in West Java Province that is vulnerable to hydrometeorological disasters, particularly floods and extreme weather. In an effort to enhance community capacity, the Cirebon City Government has implemented the KALTANA Program in 12 of its 22 neighborhoods. However, the program's implementation varies across neighborhoods in terms of institutional capacity, community participation, and the provision of disaster-response infrastructure. These conditions indicate that the program's success has not been uniformly achieved, necessitating an evaluation to determine the extent to which its implementation supports sustainable development[4].

Several previous studies have shown that the KALTANA Program is effective in enhancing community capacity to cope with disasters through institutional strengthening, disaster awareness campaigns, and early warning systems[5]. Other studies also explain that community-based programs contribute to the achievement of sustainable development goals through increased community participation[6]. Nevertheless, research that specifically evaluates the level of implementation of the KALTANA Program based on the 2021 BNPB resilience assessment indicators while also examining its gaps with relevant SDG goals and targets at the urban village level remains relatively limited. Therefore, this study offers a more comprehensive perspective by linking the implementation of the KALTANA Program to the achievement of the SDGs in 12 urban villages in Cirebon City.

Although it is linked to the Sustainable Development Goals (SDGs), the KALTANA Program was not designed as an instrument to fulfill all 17 SDG goals. The KALTANA Program is a sectoral program in the field of disaster management that intersects with several SDG goals, particularly those related to regional resilience, disaster risk reduction, and climate resilience.

Based on these conditions, this study aims to assess the level of implementation and identify gaps in the Disaster-Resilient Neighborhood Program (KALTANA) in supporting the achievement of relevant SDGs at the neighborhood level in Cirebon City. The research results are expected to serve as evaluation material for local governments in strengthening the implementation of the KALTANA Program while enriching studies on community-based disaster risk reduction in support of sustainable development.

2 Literature Review

2.1 Disaster-Resilient Neighborhood Program (KALTANA)

The Disaster-Resilient Neighborhood Program (KALTANA) is an elaboration of the community-based disaster risk reduction approach at the neighborhood level, the implementation of which is grounded in a number of laws and regulations, including the BNPB Head Regulation on general guidelines for disaster-resilient villages/neighborhoods[7]. This program is designed to encourage neighborhoods to manage disaster risks independently through institutional strengthening, planning, and community capacity building.

The effectiveness of the program's implementation is measured using a structured assessment tool. Based on the currently applicable guidelines for assessing the disaster resilience of villages and urban neighborhoods, the KALTANA instrument covers five main components: basic services; disaster management regulations and policies; prevention and mitigation; emergency preparedness; and recovery preparedness. These are broken down into 32 indicators and 128 assessment questions[8]. This tiered assessment structure allows each urban village to be categorized at a specific resilience level, in line with the previous instrument, which grouped achievements into the Pratama, Madya, and Utama categories based on the fulfillment of indicators within each pillar. This categorization serves as a reference for assessing the extent to which a sub-district has fully implemented the program, while also serving as the basis for identifying implementation gaps in each component.

2.2 The Concept of the Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are a global development framework agreed upon by United Nations member states as a continuation of previous development agendas, encompassing 17 goals, 169 targets, and hundreds of performance indicators aimed to be achieved by 2030.[9] The success of achieving these targets depends heavily on the ability of local governments to translate global goals into local development policies and programs,[10]. Therefore, evaluating the contribution of programs at the sub-district level is essential to assess the extent to which the implementation of local policies has supported this agenda. [4]

Among the various SDG goals, several targets are directly linked to disaster risk reduction efforts, one of which is Target 11.5 under the Sustainable Cities and Communities goal, which explicitly aims to reduce the impact of disasters on the population. Disaster risk reduction is also viewed as an integral part of sustainable development, as disasters have the potential to simultaneously hinder the achievement of various development targets.[1] On this basis, the assessment of the level of implementation of disaster resilience programs needs to be directly linked to the achievement of relevant SDG targets, rather than merely viewed as a standalone technical disaster management program. In this study, the analysis was not conducted on all 17 SDGs, but was limited to the goals and targets related to the KALTANA program indicators.

2.3 The Relationship Between KALTANA Implementation and SDG Achievements

The Disaster-Resilient Neighborhood Program (KALTANA) is linked to several Sustainable Development Goals (SDGs) and their targets, particularly those related to community resilience, disaster risk reduction, institutional strengthening, and environmental sustainability. However, the KALTANA Program is a sectoral program in the field of disaster management and is therefore not intended to cover all 17 SDGs. The relationship between KALTANA indicators and the relevant SDGs can be seen in the following Venn diagram.



Figure 2. Venn Diagram of KALTANA and the SDGs
 Source: Data Analysis Results, 2026

The pie chart shows that some of the indicators in the KALTANA Program are linked to several SDG goals, particularly those related to disaster resilience and climate resilience. This overlap demonstrates the KALTANA Program's contribution to achieving specific SDG goals and targets at the urban village level. An assessment of the KALTANA Program's implementation level cannot be limited to measuring the achievement of the program's internal indicators alone. Since the KALTANA instrument shares conceptual overlaps with various SDG goals, the degree of fulfillment of each program component can also be interpreted as a representation of the sub-district's contribution to relevant sustainable development targets. Based on this logic, gaps identified in specific components of the KALTANA instrument also indicate gaps in the achievement of related SDG targets in the respective areas. This approach forms the basis for assessing the level of program implementation and gaps relative to SDG targets in this study, namely by using the results of KALTANA indicator measurements as the basis for identifying the level of program support for relevant SDG goals and targets at the sub-district level.

3 Methodology

This study employs a qualitative approach using descriptive methods to analyze the implementation level of the Disaster-Resilient Neighborhood Program (KALTANA) in supporting the achievement of the Sustainable Development Goals (SDGs) in Cirebon City. This approach was chosen because it provides an in-depth understanding of program implementation based on actual conditions in the field as well as the perceptions of program implementers [11]. The study was conducted in 12 urban villages in Cirebon City that have implemented the KALTANA Program, namely Argasunya, Kalijaga, Kesepuhan, Pekiringan, Sukapura, Drajat, Kecapi, Larangan, Lemahwungkuk, Pegambiran, Jagasatru, and Panjunan, which are spread across five urban villages with relatively high vulnerability to hydrometeorological disasters, particularly floods and extreme weather.

Data collection was conducted through two sources: primary data in the form of in-depth and semi-structured interviews using *purposive sampling*. Informants were selected purposively and grouped based on the research focus. Informants from the Cirebon City Disaster Management Agency (BPBD) were used to obtain data on the policies and implementation of the KALTANA Program. Informants from the Regional Development Planning Agency (BAPPERIDA) were used to obtain data on the relationship between the KALTANA Program and the regional development agenda and the SDGs. Meanwhile, informants from village administrative units and KALTANA coordinators were used to obtain data on program implementation, community participation, and the current status of the KALTANA Program's implementation in each village. This study also utilized secondary data in the form of official documents such as the Guidelines for Assessing Village and Urban village Disaster Resilience, SDGs documents, and reports from relevant government agencies.

Data analysis was conducted using qualitative descriptive methods by interpreting the results of interviews and a literature review, followed by an assessment of the implementation of the Disaster-Resilient Urban village Program (KALTANA) using 32 indicators based on the BNPB's 2021 Guidelines for Assessing Village and Urban village Resilience to describe the current state of its implementation. The assessment of the implementation level was conducted through a *coding* technique for each sub-district, assigning a score of 1 if an indicator had been implemented and a score of 0 if it had not been implemented, based on the results of source triangulation through interviews with the Regional Disaster Management Agency (BPBD), the Regional Development Planning Agency (BAPPERIDA), sub-district officials, and KALTANA administrators, as well as a review of supporting documents. Due to time constraints, this study did not conduct comprehensive field observations in all 12 urban villages. The assessment results were then summarized as implementation percentages per urban village and compared with the ideal conditions for each indicator to identify the extent of the gap between the KALTANA Program's implementation and the relevant SDG targets, thereby identifying which indicators have supported SDG achievement and which still require strengthening.

4 Results and Discussion

4.1 Results

The assessment of the implementation level of the Disaster-Resilient Urban Village Program (KALTANA) was conducted based on 32 indicators that refer to the Guidelines for Assessing Disaster Resilience in Villages and Urban Villages published by the National Disaster Management Agency (BNPB) [1]. The assessment was conducted in 12 kelurahan in Cirebon City through an analysis of interview results, documentation, and verification of evidence regarding the implementation of each indicator. Each indicator was then categorized as implemented or not yet implemented based on the conditions observed in the field.

The assessment results show that all urban villages have implemented the KALTANA Program, albeit with varying levels of achievement. Variations in implementation are evident in the number of indicators successfully met by each urban village. Some urban villages were able to meet most of the assessed indicators, while others still exhibited limitations in certain aspects of implementation.

Table 1. Level of Implementation of the KALTANA Program

No.	Indicator	Urban village											
		K 1	K 2	K 3	K 4	K 5	K 6	K 7	K 8	K 9	K1 0	K1 1	K1 2
A.1	Provision of Educational Services	1	1	1	1	1	1	1	1	1	1	1	1
A.2	Provision of Health Services	1	1	1	1	1	1	1	1	1	1	1	1
A.3	Transportation Facilities and Infrastructure	1	1	1	1	1	1	1	1	1	1	1	1
A.4	Clean Water Supply	1	1	1	1	1	1	0	1	1	1	1	1
A.5	Food and Nutrition Programs and Activities	1	1	1	1	1	1	1	1	1	1	1	1
A.6	Empowering MSMEs and the Economy through Village-Owned Enterprises	1	1	1	1	1	1	1	1	1	1	1	1
A.7	Communication and Information Facilities and Infrastructure	1	1	1	1	1	1	1	1	1	1	1	1
A.8	Administrative and Civil Registration Services	1	1	1	1	1	1	1	1	1	1	1	1
A.9	Regulations/Activities on Environmental Protection and Management	1	1	1	1	1	1	1	1	1	1	1	1
A.10	Religious Regulations and Activities	1	1	1	1	1	1	1	1	1	1	1	1
A.11	Cultural Regulations and Activities	1	1	1	1	1	1	1	1	1	1	1	1
A.12	Security Protection Regulations and Activities	1	1	1	1	1	1	1	1	1	1	1	1
A.13	Regulations and Activities for Women’s Empowerment and Child Protection	1	1	1	1	1	1	1	1	1	1	1	1
A.14	Special Services (People with Disabilities)	1	1	1	1	1	1	1	1	1	1	1	1
A.15	Disaster Risk Assessment	1	1	1	1	1	1	1	1	1	1	1	1
A.16	Disaster Mitigation Plan	0	0	0	0	0	0	0	0	0	1	0	0
A.17	Disaster Management Training	1	1	1	1	1	1	1	1	1	1	1	0
A.18	Disaster Management Institutions	1	1	1	1	1	1	1	1	1	1	1	0
A.19	Assistance/Cooperation in the Implementation of Disaster Mitigation Activities	1	1	1	1	1	1	1	1	1	1	1	1
A.20	Disaster Prevention	1	1	1	1	1	1	1	1	1	1	1	1
A.21	Disaster Mitigation	1	1	1	1	1	1	1	1	1	1	1	1
A.22	Disaster Awareness Outreach	1	1	1	1	1	1	1	1	1	1	1	0
A.23	Warning	1	1	1	1	1	1	1	1	1	1	1	1
A.24	Dissemination of Hazard Warnings	1	1	1	1	1	1	1	1	1	1	1	1
A.25	Evacuation Plan	1	1	1	1	1	1	1	1	1	1	1	1

No.	Indicator	Urban village											
		K 1	K 2	K 3	K 4	K 5	K 6	K 7	K 8	K 9	K1 0	K1 1	K1 2
A.2 6	Evacuation Route	1	1	1	0	1	1	1	1	0	1	0	1
A.2 7	Evacuation Centers	1	1	1	1	1	1	1	1	1	1	1	1
A.2 8	Readiness Test/Simulation	1	1	1	1	1	1	1	0	1	1	1	0
A.2 9	Mechanisms for Self-Assessment Following a Disaster	0	0	0	0	0	1	1	1	0	1	0	0
A.3 0	Self-Directed Early Recovery Mechanism	1	1	1	1	1	1	1	1	1	1	1	1
A.3 1	Transparent and Accountable Mechanisms for Self-Managed Aid	1	1	1	1	1	1	1	1	1	1	1	1
A.3 2	Build Back <i>Better</i>	0	0	0	0	0	0	0	0	0	0	0	0

Source: Data Analysis Results, 2026

Based on the assessment results in Table 1, most indicators related to institutional development, coordination with the Cirebon City Disaster Management Agency (BPBD), and the implementation of outreach activities have been implemented in the majority of urban villages. However, several indicators related to program sustainability, the preparation of planning documents, the provision of disaster-related facilities and infrastructure, and capacity building have not yet been uniformly met across all study locations.

To provide a clearer picture of the implementation level in each urban village, the assessment results were then summarized based on the number of indicators met by each urban village. This summary is presented in Table 2.

Table 2. Summary of the KALTANA Program Implementation Levels

No.	Urban village	Number of Implemented Indicators	Percentage
K1	Pegambiran	29/32	90.6
K2	Panjunan	29/32	90.6
K3	Jagasatru	29/32	90.6
K4	Kesepuhan	28/32	87.5
K5	Larangan	29/32	90.6
K6	Kalijaga	30/32	93.8
K7	Argasunya	29/32	90.6
K8	Sukapura	29/32	90.6
K9	Drajat	28/32	87.5
K10	Pekiringan	31/32	96.9
K11	Kecapi	28/32	87.5
K12	Lemahwungkuk	25/32	78.1

Source: Data Analysis Results, 2026

Based on Table 2, the implementation rate of the KALTANA Program shows that most urban villages have achieved a high level of implementation. However, there are still several indicators that have not been optimally met, resulting in variations in implementation rates among urban villages. The indicators most frequently not met generally relate to the preparation of disaster management planning documents, the conduct of periodic disaster simulations, and post-disaster recovery mechanisms. These implementation levels were then compared with relevant SDG targets to identify gaps in the KALTANA Program's implementation regarding sustainable development.



Figure 3. Gaps in the Current Status of the KALTANA Program
 Source: Data Analysis Results, 2026

The gap analysis results indicate that the implementation of the Disaster-Resilient Neighborhood Program (KALTANA) in Cirebon City has generally contributed to the achievement of Sustainable Development Goals (SDGs) related to disaster risk reduction. Program implementation has shown fairly good progress on targets related to community capacity building, the provision of basic services, disaster risk reduction, and strengthening regional resilience. This indicates that most KALTANA indicators have supported sustainable development efforts at the kelurahan level.

The analysis also reveals that there remains a gap between the current state of the KALTANA Program's implementation and the ideal conditions expected under the SDGs. This gap is evident in several indicators that have not been fully met, meaning their contribution to achieving the SDGs is not yet optimal. Based on the assessment results, gaps were primarily found in the areas of disaster management planning, institutional strengthening, emergency preparedness, and recovery preparedness. These findings indicate that the implementation of the KALTANA Program in Cirebon City has supported the achievement of the SDGs, but improvements are still needed in several areas so that all relevant targets can be implemented more effectively.

4.2 Discussion

The research results show that the Disaster-Resilient Neighborhood Program (KALTANA) has been implemented in all neighborhoods included in the study, but the level of implementation still varies. This variation indicates that the existence of the KALTANA Program does not automatically guarantee that all indicators will be optimally met. The level of implementation is influenced by each kelurahan's capacity to develop institutional frameworks, allocate resources, and ensure the sustainability of disaster management activities. These findings indicate that program implementation depends not only on the establishment of KALTANA but also on the commitment of the kelurahan government and community participation in carrying out the program sustainably.

Several indicators show a relatively high level of implementation, particularly those related to the establishment of disaster management institutions, the drafting of planning documents, and the conduct of public outreach and education. These conditions reflect that the initial stages of the KALTANA Program's implementation have proceeded in accordance with BNPB guidelines[3]. However, indicators related to document updates, the provision of disaster management facilities and infrastructure, and the sustainability of capacity-building have not yet been uniformly met. This suggests that the main challenge in implementation lies not in the program's establishment, but in efforts to ensure the program's continued execution after the initial setup phase is complete.

The results of this study align with the research by Romadhan et al.[5], which states that the success of the KALTANA Program is greatly influenced by institutional capacity, coordination among stakeholders, and community involvement in every stage of the activities. Research by Yunginger and Dako[6] also explains that community-based disaster risk reduction programs will be more effective if supported by collaboration among the government, the community, and relevant institutions. Thus, the sustainability of the KALTANA program requires consistent support to ensure that community capacity is maintained.

From a sustainable development perspective, the implementation of the KALTANA Program has contributed to the achievement of the Sustainable Development Goals (SDGs), particularly Goal 11 (Sustainable Cities and Communities) and Goal 13 (Climate Action), through the establishment of disaster management institutions, community capacity building, and the implementation of mitigation and preparedness activities[9]. However, the analysis results indicate that gaps still exist in achieving the SDG targets relevant to the KALTANA indicators due to the suboptimal implementation of several indicators, such as the updating of disaster management documents, the provision of facilities and infrastructure, and the sustainability of capacity-building efforts. These conditions indicate that the KALTANA Program's contribution to the relevant SDGs depends not only on the program's existence but also on the quality and sustainability of its implementation. Therefore, strengthening institutional capacity, improving coordination among stakeholders, and providing ongoing capacity-building are necessary to reduce implementation gaps while optimizing the KALTANA Program's contribution to sustainable development at the urban village level.

5 Conclusion

This study shows that the Disaster-Resilient Neighborhood Program (KALTANA) has been implemented in 12 neighborhoods in Cirebon City with a relatively high level of implementation, although there are still variations in achievements among neighborhoods. These differences indicate that the implementation of the KALTANA Program is not solely determined by the program's existence but is also influenced by institutional capacity, the availability of disaster-related facilities and infrastructure, community participation, and the sustainability of capacity-building efforts. In general, the implementation of the KALTANA Program has supported disaster risk reduction efforts and contributed to the achievement of the Sustainable Development Goals (SDGs), particularly Goal 11 (Sustainable Cities and Communities) and Goal 13 (Climate Action).

However, the results of the gap analysis indicate that the KALTANA Program's contribution to achieving the SDGs has not yet been fully optimized. Gaps still exist in several indicators, particularly those related to the updating of disaster management documents, the provision of facilities and infrastructure, and the sustainability of capacity-building efforts. Therefore, institutional capacity building, improved coordination among stakeholders, and ongoing program support are necessary to enhance the quality of the KALTANA Program's implementation while optimizing its contribution to achieving the SDGs at the *kelurahan* level.

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