
Implementing Sustainable Development Goals (SDGs) at the Village Level: A Case Study of Ciambar Village, Sukabumi Regency, West Java, Indonesia

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Abstract

The KUM-ITT program implemented in Ciambar Village, Sukabumi Regency, West Java, serves as a community-based approach to achieving the Sustainable Development Goals (SDGs) at the village level. The program focused on five key areas: strengthening local MSMEs, improving cooperative literacy, promoting environmental management through waste sorting and diaper recycling education, revitalizing village infrastructure, and empowering women's and children's health. Activities were carried out from July 2–11, 2024, engaging local residents, women's groups (PKK), village officials, and university students. The results showed significant improvements in environmental awareness, infrastructure safety, nutritional knowledge, and economic capacity. The program also fostered active participation of vulnerable groups and strengthened cross-sector collaboration through the pentahelix model. These findings underscore the importance of local empowerment and integrated governance to achieve sustainable rural development aligned with national SDG frameworks. The short-term outcomes provide a strong foundation for long-term impact through continued mentoring and scalable initiatives.

Keywords: Village Sdgs, Community Empowerment, Msmes, Healthy Environment, Rural Infrastructure, Maternal And Child Health.

INTRODUCTION

Ciambar Village, situated in the Ciambar Subdistrict of Sukabumi Regency, West Java, covers 6.72 km², representing 12.57% of the subdistrict's land area, with a population density of around 1,073 residents per km² (BPS Sukabumi, 2023). Most households depend on agriculture and small-scale food production, cultivating cucumbers, chili peppers, and citrus fruits, while some rely on home industries producing traditional snacks like opak and enyek. Despite its fertile landscape and economic potential, Ciambar faces long-standing issues in basic infrastructure, environmental management, and social welfare.

A recent field assessment (KUM-ITT, 2025) identified ten priority problems in Ciambar. These include a lack of proper waste disposal facilities, unsafe bridges, poorly lit roads, and under-maintained public buildings such as schools and prayer houses. Health challenges, such as low hygiene awareness, poor nutrition for children and pregnant women, and limited access to sanitation, persist. Economically, local microenterprises struggle to expand due to traditional production methods, low product value, and limited market access,

while many families remain dependent on high-interest informal loans (bank emok). Institutional gaps, such as underutilized cooperatives and insufficient early education resources, further slow progress toward the Sustainable Development Goals (SDGs).



Figure1, Figure2 & Figure3 Problems at Ciambar Village
Source: Documentation captures

Studies across Indonesia reveal that Ciambar's challenges are not unique. Research in Lombok Barat highlights a widespread gap between the adoption of SDG indicators and the actual quality of their implementation due to fragmented planning and weak data management (Rakhmawati et al., 2024). In other West Java villages, barriers such as poor healthcare access, environmental issues, and limited education persist despite community-based initiatives (Nurhayati et al., 2024a, 2024b). Similarly, research on Situ Gunung, Sukabumi, indicates that even natural-resource-rich areas struggle with equitable and sustainable development outcomes when infrastructure and institutional capacity are weak (Iqbal, Mardiana, & Dharmawan, 2023). Broader analyses of SDG-related policies also stress that empowerment and local economic strengthening are critical for achieving real improvements in welfare (Ardiawanti, Zulkifli, & Hasni, 2025). Additionally, women's contributions to household economies, while significant, remain hindered by barriers in access to capital, technology, and formal business opportunities (Nurhayati, Parinduri, & Jakaria, 2023).

These insights underline that Ciambar's journey toward SDGs cannot be measured solely by the number of programs or indicators adopted. Sustainable change depends on solving structural challenges, improving basic infrastructure, strengthening health and education systems, supporting women's economic roles, and fostering collaborative local governance through the pentahelix model. Without such comprehensive efforts, the village's natural and human resources risk remaining underutilized, leaving development goals only partially achieved.

RESEARCH METHODS

The implementation of this PkM through the KUM-ITT program in Ciambar Village was carried out in three main stages: problem identification, preparation, and main activities. These stages were designed to address priority issues in the community based on field surveys and participatory discussions. A detailed overview is presented in Table 1.

Table 1

Implementation Method			
No	Implementation Method	Activities	Targets
1.	Problem Identification	Conducting surveys, interviews, and observations to map 10 priority problems (waste management, infrastructure, stunting, UMKM, etc.).	Community needs identified clearly and linked to relevant SDGs Desa goals.
2.	Preparation	Planning work programs, assigning student facilitators, preparing educational materials, and coordinating with village officials and PKK members.	Readiness of participants and stakeholders to implement solutions collaboratively.
3.	Main Activities	Implementing 5 main programs: cooperative literacy, waste management, infrastructure revitalization, women's and child health empowerment, UMKM innovation.	Community gains new knowledge, improved sanitation, safer infrastructure, and better local economy.

RESULTS AND DISCUSSION

The implementation of the KUM-ITT program in Ciambar Village addressed five main areas of community development, aligned with relevant SDGs Desa goals. Activities were conducted from July 2–11, 2024, involving local residents, village officials, women's groups (PKK), students, and small entrepreneurs. The following subsections summarize key results and their implications.

Community Welfare and Economic Empowerment (SDGs 1, 2, 8, 10)

Local microenterprises, particularly opak and enyek producers, received training on product rebranding, packaging innovation, and e-commerce marketing. As a result, producers developed new packaging designs and created online sales channels, increasing potential market reach.



Figure4 & Figure5 apacity Building for Cooperative Management and Product Innovation Development of Opak and Enyek

Source: Documentation captures

Table 2
Community Welfare and Economic Empowerment

Activities	Outputs	Benefits for Community
Training in cooperative literacy	Village officials learned basic principles of "Red-White Cooperative"	Community needs identified clearly and linked to relevant SDGs Desa goals.
Product innovation workshop	New labels, packaging colors, and digital marketplace setup.	Increased product appeal and potential for higher sales value.

These initiatives support local economic growth, echoing Nurhayati et al. (2024a), who reported that product innovation is crucial in enhancing the competitiveness of rural UMKM.

Healthy Environment Program (SDGs 3, 6, 9)

Workshops on waste sorting and diaper recycling helped residents understand proper waste management. A demonstration converted used diapers into planting media, reducing waste build-up.



Figure 5 & Figure 6 Socialization on Waste Segregation and Diaper Waste Recycling into Planting Media

Source: Documentation captures

Table 3
Healthy Environment Program

Activities	Indicators of success	Result
Waste sorting education	Residents correctly categorized organic and inorganic waste.	Achieved in most participating households.
Diaper recycling training	Diapers reused as planting medium.	Pilot project implemented by local mothers.

Similar to findings by Ardiawanti et al. (2025), environmental awareness programs increase long-term sustainable practices when coupled with practical, low-cost solutions.

Infrastructure Revitalization (SDGs 9, 11)

Through *gotong royong* (mutual cooperation), the team repaired and repainted unsafe bridges, installed street lighting, and added convex mirrors in hazardous road areas.



Figure 7 & Figure 8 Bridge Rehabilitation, Installation of Street Lighting, and Convex Mirror
Source: Documentation captures

Table 4
Infrastructure Revitalization

Action	Improvement Action	Result
Ciambar bridge	Painted, safety barriers fixed.	Safer access for pedestrians and vehicles.
Dark village roads	New streetlights installed.	Reduced nighttime accidents and improved mobility.
Sharp road bends	Convex mirrors added.	Improved driver visibility and safety.

Revitalization efforts align with SDG target 11.2 (safe, inclusive, accessible transport), reducing traffic accident risk reported by residents.

Women and Family Health Empowerment (SDGs 1, 2, 3, 5)

Mothers and caregivers participated in nutritional literacy sessions, focusing on stunting prevention, healthy diets, and child care practices.



Figure 9 & Figure 10 Nutrition Literacy and Stunting Prevention
Source: Documentation captures

Table 5
Women and Family Health Empowerment

Session Topic	Target Group	Result
Balanced nutrition for children	Mothers, pregnant women	Improved knowledge of food composition and healthy menus.
Stunting prevention education	Family caregivers	Increased awareness on early detection and treatment.

Consistent with Nurhayati et al. (2023) and Rakhmawati et al. (2024), empowering women in household health management is vital to improving family well-being and reducing child malnutrition rates.

Children’s Health Promotion (SDGs 3, 6)

Practical training on dental hygiene was delivered to schoolchildren. Demonstrations taught correct toothbrushing techniques, resulting in observable behavioral change.



Figure 11 & Figure 12 Children Participation and Dental Care Practice
Source: Documentation captures

Table 6
Children's Health Promotion

Activity	Indikator of Success	Result
Dental hygiene workshop	Children demonstrated proper brushing	Achieved by majority of participants.

Early health education ensures habit formation, supporting long-term public health goals. This mirrors the approach recommended by Nurhayati et al. (2024) in similar community health programs.

Overall Outcomes

The implementation of KUM-ITT in Ciambar Village resulted in tangible improvements across several community development areas. Waste management practices improved significantly, as households began adopting proper waste sorting methods and piloting diaper recycling into planting media. These efforts contributed to a cleaner environment and supported SDGs related to health and sanitation.

Infrastructure revitalization had a direct impact on community safety. Repairs to damaged bridges, installation of new street lighting, and placement of convex mirrors on sharp turns reduced the risk of road accidents, improving mobility and accessibility for residents. These initiatives align with SDG 9 (industry, innovation, infrastructure) and SDG 11 (sustainable cities and communities).

In terms of social welfare, the program enhanced knowledge among mothers and caregivers about proper nutrition and stunting prevention. Combined with children's dental hygiene training, these activities fostered healthier behaviors that can reduce long-term health risks. This mirrors the approach emphasized by previous research on women's empowerment and early health education as crucial factors for rural well-being.

Economic empowerment was achieved through innovations in local food production, particularly for opak and enyek. Rebranding efforts, improved packaging, and introduction to e-commerce platforms provided small entrepreneurs with tools to expand their market reach and increase product value. Additionally, cooperative literacy sessions strengthened the institutional capacity of village officials, laying a foundation for future collective economic initiatives.

Overall, the program demonstrated that community-based, multidisciplinary interventions can produce meaningful short-term changes in environmental cleanliness, safety, health literacy, and local economic potential. However, sustaining these outcomes will require continued collaboration between village authorities, women's groups, and external stakeholders to ensure that infrastructure is maintained, training is periodically refreshed, and small businesses have access to wider networks and financing opportunities.

CONCLUSION

The implementation of the KUM-ITT program in Ciambar Village successfully addressed several priority issues aligned with the Sustainable Development Goals (SDGs) Desa. Through participatory and multidisciplinary approaches, the program improved environmental management practices, enhanced local infrastructure safety, increased

community health awareness, and provided innovative solutions for microenterprises. The involvement of women's groups, local officials, and schoolchildren ensured that interventions reached different segments of the population, fostering shared responsibility for sustainable change. These findings are consistent with previous studies highlighting that local empowerment and collaborative governance are key drivers in advancing SDGs at the village level.

While the outcomes demonstrate positive short-term impacts, challenges remain in ensuring sustainability and scaling up the benefits achieved. Maintaining infrastructure improvements, supporting continuous education on hygiene and nutrition, and strengthening institutional and financial support for small businesses are necessary for long-term success. Follow-up collaborations between village authorities, academic institutions, and external stakeholders are recommended to build on these achievements, ensuring that Ciambar's natural and human resources are fully leveraged to create lasting welfare improvements and closer alignment with the national SDGs Desa framework

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