

Public Participation in Environmental Issues in Bandung City

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ABSTRACT

In the contemporary era of globalization, public participation has emerged as a pivotal element in the management of environmental issues. The city of Bandung, in particular, is confronted with a myriad of environmental challenges that necessitate the active involvement of the public. This research endeavors to explore the extent of public participation and its influencing factors in the context of environmental issues in Bandung. Specifically, the objective is threefold: first, to identify forms of public participation; second, to understand the role of stakeholders; and third, to evaluate the effectiveness of communication channels. The study also aims to provide recommendations to improve public involvement in environmental management. The research method is a qualitative approach with a case study method. Data were collected through in-depth interviews, participatory observation, and document analysis, involving various stakeholders, including NGOs, environmental experts, and the general public. The results show that public participation in Bandung is still limited and often formalistic. Despite the existence of diverse communication channels, the level of public awareness and engagement in environmental issues remains inadequate. Stakeholders, comprising government entities and NGOs, play a pivotal role in fostering enhanced participation. This study posits that to augment public participation in the management of environmental issues in Bandung City, a more inclusive and strategic approach is imperative. Recommendations are put forth to refine communication channels and cultivate public awareness, thereby facilitating active contribution to environmental decision-making.

Keywords: public participation; environment; development; Bandung city; case study.

INTRODUCTION

The city of Bandung has experienced profound transformations across multiple domains over the course of several decades (Arfiansyah & Han, 2020; Indraprahasta & Derudder, 2019; Lee, 2016). Initially conceived as a respite during the Dutch colonial period, the city has evolved into a dynamic metropolitan area, confronting a myriad of urban-related challenges. The rapid development has yielded both opportunities and problems, thereby reshaping the city's identity and landscape (Mandeli, 2019).

Indria Sari and Hastu Prabatmodjo's research on "Evaluation of the Sustainability of Bandung City" demonstrates that the pursuit of development in Bandung City aims to enhance the welfare and quality of life for its residents. However, the rapid development of Bandung City has begun to exhibit signs that could hinder the realization of a sustainable city. This study aims to evaluate the implementation of development in Bandung City from the perspective of sustainable development. The results of the study demonstrate that the implementation of development in Bandung City, as measured by the sustainability triangle, has not yet achieved equilibrium among the three aspects of

sustainable development. Specifically, the environmental aspect lags significantly behind the economic and social aspects. Achieving success as a sustainable city requires the concerted efforts of all stakeholders, who must maintain a focus on their respective roles and effective strategies within the constraints of available and carrying capacities.

A pivotal environmental indicator in this regard is the area of Green Open Space (RTH). A decline in performance by the Bandung City government is evident with respect to this indicator, particularly in the initial phase of observation (Kurniawan & Roychansyah, 2023; Rahmasary et al., 2020; Soeriaatmadja & Wulanningsih, 2018). This is attributable to the limited land available, resulting in the conversion of RTH land into residential areas. Consequently, the potential for RTH land in Bandung City has undergone a substantial decline. The enactment of Law No. 26 of 2007 concerning the minimum area of RTH for an area, coupled with the benefits and functions of RTH to the improvement of the quality of the urban environment, encouraged the Bandung City government to improve the environment through increasing the area of RTH. The social sector demonstrated a significant improvement in performance. Initially occupying the lowest rank in 2002 and 2003, this sector demonstrated a marked improvement until 2010. Conversely, the environmental sector exhibited a substantial decline until 2008, followed by a modest recovery in 2010.

Additionally, the waste management issue in Bandung City persists as an unresolved concern. As a densely populated metropolis, Bandung City is experiencing continuous growth. This growth is accompanied by a rise in human needs, leading to an increase in consumption and, consequently, a rise in waste generation. A study of waste generation in Bandung City, based on data from the Bandung City Sanitation PD, reveals that the population of approximately 2,500,000 people generates an average of 1,500 tons of waste per day, equating to approximately 0.6 kilograms of waste per person per day. The composition of this waste is as follows: 56% organic waste and 44% inorganic waste (PD Kebersihan Kota Bandung, 2016). In order to manage waste in Bandung City, PD Kebersihan has implemented various innovations, including waste banks, composting, biodigesters, and bioconversion with maggot. The objective of these innovations is to reduce waste disposed of in landfills. The landfill currently in use is the Sarimukti Landfill, situated in Sarimukti Village, Cipatat District, West Bandung Regency, with an area of approximately 25 hectares. The distance from Bandung City to the landfill is approximately 45 kilometers, necessitating a travel time of 3-4 hours per trip. Waste entering the Sarimukti Landfill originates from Bandung City, Cimahi City, and West Bandung Regency.

Despite these challenges, various efforts have been made to promote transparency and enhance governance, including the implementation of an open government initiative. In 2015, Bandung City was recognized with the Adipura environmental award, and in early 2016, it received an award for bureaucratic reform (Amri, 2020; Azizah, 2024; Yazid, 2019). Additionally, the Bandung City Government has adopted a "smart city" approach, leveraging technology to improve services and quality of life for its residents. The concept of "smartness" in this context refers to an area where

investments in social and human capital, modern and traditional communication infrastructure, and the wise management of natural resources are encouraged to promote sustainable economic development and a high quality of life, with the active involvement of the community. The realization of a "smart city" hinges on two key elements: community participation and involvement.

According to Rianingsih Djohani, who serves as the Director of Science Management at the West Java Initiative NGO, community participation in the district/city level in West Java is still considered formalistic and not maximized. She asserts that this can be seen from a number of programs that involve the community, such as Musrenbang. While the quantitative participation of communities may be sufficient in number, it is not yet substantial, and this is particularly problematic in terms of quality. According to the aforementioned expert, although Musrenbang involves the community, starting from RT/RW, the participation of the community is more formalistic. This phenomenon is prevalent in almost all regions, especially in West Java. Addressing this issue is crucial for resolving the core problem. The issue, as he articulated, is that while the community is involved in the planning process, they do not embody a sense of ownership over the development. This is exemplified by a range of behaviors, including a lack of attention to and care for public infrastructure, traffic discipline, and littering.

This study aims to address these concerns by examining the various forms of public participation in environmental issues in Bandung City, focusing on the factors that influence the level of participation. The research also seeks to understand the roles and contributions of various stakeholders, including non-governmental organizations, environmental experts, and the public, in addressing environmental issues. The study will also assess the efficacy of communication channels utilized to encourage public participation and its impact on public awareness and action regarding environmental issues. The study is expected to provide recommendations grounded in data and analysis to enhance public participation in decision-making processes concerning environmental issues and to encourage policies that are more inclusive and responsive to community needs. The overarching objective of this research is to enhance public awareness regarding the significance of engagement in environmental concerns and the role of collective action in promoting environmental sustainability in Bandung City.

RESEARCH METHOD

The present research adopted a qualitative approach, employing the case study method to facilitate an in-depth understanding of public participation in environmental issues in Bandung City. Data was collected through a combination of techniques, including in-depth interviews, participatory observation, and document study. Semi-structured interviews were conducted with a range of stakeholders, including members of non-governmental organisations (NGOs), environmental experts, and community members, to explore their perceptions and experiences regarding public participation. Direct observations were conducted at relevant locations, such as waste management

sites and green open spaces, with the aim of understanding social dynamics and environmental conditions. In addition, a document analysis was conducted on government reports, NGO publications, and scientific articles related to environmental issues in Bandung City.

The research flow consisted of several stages: first, problem identification to establish the research focus; second, data collection through predetermined techniques; third, data classification into relevant categories; and fourth, data analysis to identify emerging patterns and themes. The analysis process involved coding to identify key themes, categorization based on emerging themes, interpretation of analysis results, and reporting of findings in the form of a report that presents the analysis as well as recommendations for the improvement of public participation in the future. Adopting this systematic approach ensures a comprehensive investigation into public participation in environmental issues in Bandung City, while concurrently generating actionable recommendations for enhancing this participation in the future.

RESULT AND DISCUSSION

The public related to public participation in environmental issues in Bandung City consists of several categories, each type of public is of course different in the type and level of public participation. In Bandung City itself, there are various elements of the public related to environmental issues, ranging from NGOs, environmental experts, environmental communities, environmentalists / community leaders, entrepreneurs, mass media and society in general. In this research, some of these public groups will be researched and examined to what extent they contribute to environmental issues in Bandung City.

Table 1. Public Groups Related to Environmental Issues in Bandung City

No.	Public Category
1.	Non-governmental organizations/activists (NGOs)
2.	Environmental Expert
3.	Environmental Community
4.	Environmentalists/Community Leaders
5.	Community Information Group
6.	Entrepreneur, Mass Media
7.	General Public

The Bandung City Community Information Group (KIM) was established in 2006 based on Circular Letter of the Bandung City Secretary No. 87/SE. 006 Diskominfo regarding the establishment of Community Information Groups (KIM). To date, 110 KIMs have been formed in Bandung City, which have been authorized by the decision of the Head of Village. Development of KIM is carried out gradually under the coordination of the Bandung City Government Communication and Information Office, especially in the Data and Information Processing Section of the Information Dissemination Division, both through socialization activities and improving the quality of KIM human resources (Ahmadi & Rachmiatie, 2019; Gani, 2024; Prabowo et al., 2023).

Of the existing KIMs, most have been actively carrying out various activities that support the progress and welfare of the community, including KIM Sukabungah through information and technology development activities, improving public health, etc. ; KIM Cibangkong with information technology activities, development of urban vegetable crops; KIM Babakan Surabaya in the field of information technology application through Community Radio and social media by empowering the role of the community to actively participate in various development activities.

Bandung Community Information Group was established due to the development of science and technology in Indonesian society in general and the people of Bandung City in particular, affecting the attitudes and behavior of people who always want to quickly get services in everything, including in communication and information (Hadian, 2017; Widya et al., 2023). So far, information has mostly only belonged to the upper middle class and lower groups are often neglected in information needs due to socio-economic conditions that are less able to reach it, the lack of information that can be received in these circles which makes the formation of community information groups as an information bridge.

Based on the same wants and needs of the community, a Community Information Group (KIM) was formed from the community, for the community, independently and creatively, whose activities include information management and community empowerment. The background of the formation of KIM is:

1. The need for community empowerment efforts by developing a paradigm of *communication with the people*, not *communication for the people*. Provincial, district and city governments should develop social communication institutions as partners in information dissemination.
2. Information dissemination is carried out reciprocally from the government to the community, whether requested or not, through mass media or other forms of communication media and/or community communication institutions (KIM).

In addition, there are various social organizations in the city of Bandung, one of which is WALHI, which is very active in environmental issues. Over the past 4 years, WALHI has done several things to educate citizens about public information disclosure in the spatial and environmental sectors, such as local regulations, budgets, environmental licensing, EIA, IMB and others, through discussions or trainings. WALHI also often conducts "*sharing*" with citizens/communities on how to apply for spatial and environmental public information with several communities that have requested assistance from WALHI West Java such as the Formas Bagus Community in Bangbayang Tubagus Ismail, the community of victims of the Sukaraja Cicendo gateway apartment development, the community in the Punclut Hegarmanah area, the community of victims of the dimaja Lengkong road flood, the community in Dago, the community of victims of apartment construction in Margahayu. There are approximately nine communities served by WALHI West Java.



Figure 1. WALHI's work on environmental issues in Bandung City

Source: Interview with Dadan Ramdan, 2016

According to Dadan Ramdan (2016), the implementation of environmental information disclosure is very important in line with the practice of regional development and increasingly massive business investment. The implementation of environmental information disclosure will provide impacts and benefits for all development actors including: First, the state has provided certainty for the guarantee of citizens' rights to know public policy-making plans, public policy programs, and public decision-making processes, as well as the reasons for making a public decision. Second, community participation in the public policy-making process is increasing. Third, the active role of the community in public policy making and good management of public bodies. Fourth, the realization of good, transparent, effective and efficient state administration, accountable and accountable. Fifth, citizens can also find out the reasons for public policies that affect the lives of many people. Sixth, business actors can obey the rules and carry out their business activities safely and comfortably.

Finally, if the implementation of environmental information disclosure in the stages of development and business activities can be carried out in reality, environmental conflicts and disputes that lead to lawsuits and criminalization can be reduced, all parties are not harmed, and the rights and sense of justice of all parties can be achieved.

Table 2. Key spatial and environmental issues that should be of primary concern to the Bandung city government and public

1.	Land conversion by property/utilities business Commercial such as hotels, commercial apartments etc,
2.	Waste problems, increasing waste production and flooding problems
3.	Flood problem

Source: March 2016 Interview

The mechanisms and methods used by WALHI in Bandung City at that time were to educate communities based on requests such as in schools, campuses, citizen communities and educate citizens directly in communities that had spatial and environmental dispute cases and other citizen communities. Inviting the public in Bandung to be actively involved in protecting and managing the environment (reducing waste, managing waste, making infiltration wells, maintaining waterways, etc.) through mass media such as radio, TV, and social media owned by Walhi (*Facebook, Twitter, etc.*). In addition, educating the public to utilize formal spaces such as the Musrenbang at the village level to the Musrenbang at the city level.

The channel of public aspiration and advocacy is carried out by reporting and conveying aspirations through actions and auditions, dialog with the Bandung City DPRD, the Mayor of Bandung and other agencies dealing with the environment and spatial planning. Participating in formal meetings of the Bandung City Government such as musrenbang, EIA discussions, public consultations and other forms of meeting invitations. Media channels; providing opinions in the mass media, conveying aspirations through social media to the Mayor of Bandung. WALHI also often provides responses and input to the Bandung city government by conducting hearings and actions with residents, attending invitations from the Bandung city government to convey directly through the Bandung city government's social media.

Table 3. Walhi's Environmental Action Program in Bandung City that Involves Public Participation

NO	PROGRAM
1.	Babakan Siliwangi city forest rescue
2.	Tree planting with the community and residents
3.	Promote the conception of saving water sources to the Bandung city government
4.	Environmental education with the community
5.	Modeling participatory village planning in Babakan Penghulu Cinambo Village, Bandung City

Source: extracted from Interview results March 2016

Although public information disclosure has been rolled out and bureaucratic reforms launched, in practice there are still various obstacles to public information disclosure and the involvement of public participation in public policy. WALHI notes that there are several supporting and inhibiting factors in the context of public participation in Bandung City, especially in relation to environmental issues.

Table 4: Supporting and inhibiting factors for public participation in the environmental sector in Bandung City.

Supporting Factors	Inhibiting Factors
<ul style="list-style-type: none"> ● Openness of information from the Bandung city government regarding environmental agendas and programs. ● The commitment of the Bandung city government, especially the relevant SKPDs, to involve the public in formal development planning spaces such as musrenbang from the 	<ul style="list-style-type: none"> ● City government closes public information about environmental agenda and programs ● Municipalities and

Supporting Factors	Inhibiting Factors
<ul style="list-style-type: none"> urban village to the city level. ● Open public participation in the implementation of environmental programs ● Behavior/culture of bureaucrats/SKPD who want to collaborate with citizen groups, environmental communities ● The responsive attitude of the Bandung city government and parliament to receive input, complaints and aspirations of its citizens and support the real efforts of citizens in saving the environment. ● Pro-environment budget support and citizen initiatives/works in saving the environment 	<ul style="list-style-type: none"> parliaments are not responsive to inputs, complaints and aspirations and are weak in supporting community initiatives/activities. ● Lack of budget allocation for environmental affairs that supports diverse citizen initiatives.

(source: extracted from an interview with the Executive Director of Walhi Jabar, 2016)

Meanwhile, Member of the Expert Council of the Tatar Sunda Forestry and Environment Observer Council (DPKLTS) Supardijono Sobirin, Mr. Sobirin is the former Head of the Water Resources Research and Development Center who stated,

"The draft regulation that will be made into a regional regulation will only be a 'paper tiger'. Sobirin explained that currently around 90 percent of West Java residents are categorized as not caring about waste. even the government has not been serious in overcoming waste problems. According to him, waste management is inseparable from three factors, namely political will, education, and culture. For the issue of *political will*, said Sobirin, the local government in showing it to overcome the problem of waste comprehensively.

Similarly, in education, there is not a single subject on waste management in schools. Sobirin says that people have become accustomed to not being burdened with waste management because they feel that they have already paid for it. "Ideally, waste management should start with the producers. The process of sorting waste that has accumulated will be costly. Transporting waste from the TPS to the landfill can cost Rp 500,000 per truck," said Sobirin. According to him, the plan to enact a regional regulation on waste is very good. However, based on experience, a legal umbrella related to the environment will only be a toothless 'paper tiger'. During implementation in the field, according to Sobirin, sectoral egos of each city and district are usually encountered. Cities and regencies, according to him, often ignore the legal umbrella rolled out by the provincial government.

Issues related to public participation include: urban waste, traffic congestion, street vendors, behavior of citizens who do not respect regulations, pollution of river basins, urban flooding, aggressive development in protected areas, urban agriculture. Regarding the participation of Bandung residents in environmental matters, Sobirin said, "It can be said that only 20% of Bandung residents actively participate in environmental improvement, and even then it is sporadic, and the level of participation is direct positive action, some provide criticism and correction to the City Government, some are protesting. "

In addition, according to Sobirin, "The role and position of the public is still not institutionalized, because there is no "forum" that can convey aspirations directly to the mayor, each still on behalf of the association or organization. The DPRD, which is supposed to be the connector of public aspirations, is still not expected. The mayor once asked me about the establishment of the Bandung City Environmental Council, but the draft that I had drafted stalled in the municipal bureaucracy. "

Table 5: Supporting factors for environmental problems in Bandung City

1	Public	the public spirit that wants Bandung to be comfortable, the public is easily mobilized if it is exemplified when the Mayor intervenes / visits
2	Regulation	Regulatory factors that support access to public information disclosure: conditions that allow the "media" to accommodate public voices to "force" the city government to be open in development.
3	Exemplary (leadership commitment)	Mayor in many cases intervene / give direct example / blusukan

(source, extracted from an interview with Sobirin)

Factors that support access to public information disclosure: conditions that allow the media to accommodate public voices to "force" the city government to be open in development. Factors that hinder: the city government's policies that are immediately implemented without "announcing" them to the public first (suddenly there is a hotel construction that is not in accordance with the location of its designation).

Furthermore, in terms of public policy, especially related to environmental issues, "better" public policy, "better" public participation; but not necessarily the other way around, "better" public participation, not necessarily "better" public policy, because there are things that are "hidden" behind public policy". Before RK became mayor, he had made a strategic plan in the form of "ROAD MAP TO BANDUNG JUARA", by forming 22 joint working groups between bureaucracy and citizens, with 315 activity programs. Some of them are running, but some of them are not running, the problem is among others in the internal bureaucracy itself.

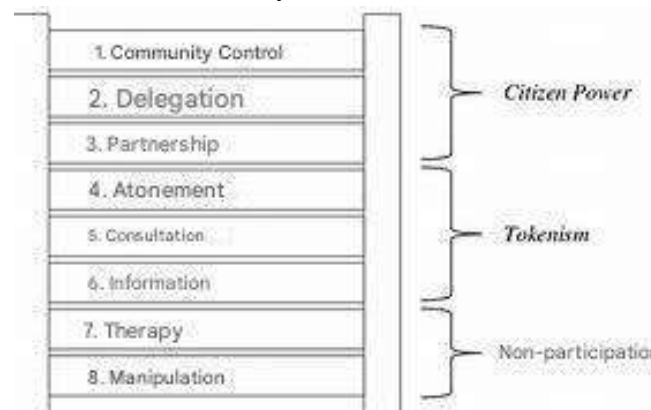


Figure 2. Arnstein's citizen participation ladder (In Hidayah and Meidiana et al, 2024: 16)

In her review in the journal on public participation "A Ladder of Citizen Participation by Sherry R. Arnstein in 1969", Arnstein explained that, "public participation is based on the power of the community to determine an end product, and the extent of citizen power in determining plans and programs." Arnstein then maps it into 8 categories of participation levels, which are categorized as non-participation, pseudo-participation, to a highly participatory level where participation involves the full power of the community in determining development program plans to determine the final product and at the same time involved in the process of implementing the program.

The results of this study indicate that the degree of public participation in Bandung City related to environmental issues is in the realm of tokenism to the level of citizen power. Although this research does not take measurements, based on the results of the research, it can be categorized into the types of public participation described by Arnstein in his ladder of participation. In general, public participation in Bandung, as described by Supardijono Sobirin, is still sporadic, but on the other hand the people of Bandung are generally very concerned about their city. In addition, various layers of society have contributed their participation related to environmental issues in accordance with their respective capacities and positions ranging from NGOs, environmental experts, environmental communities, environmentalists / community leaders, entrepreneurs, mass media and society in general.

In order to show a sense of concern for the environment has also been shown seriously by various institutions in the Bandung City environment. In terms of dealing with waste problems, Parahyangan Catholic University and Grand Tjokro Premiere Bandung Hotel manage waste independently. At the Islamic University of Bandung, although not yet managed institutionally, a number of students who care about the environment and are members of the Clear and Green student activity unit want to deny that young people do not care about the environment. These students started the "Clear and Green" movement since 2017. These students have been managing waste on campus, because they want to contribute to solving the waste problem in Bandung. "Clear and Clean", which consists of 23 students, sorts waste on campus. The students separate organic and inorganic waste. This is what they do:

The processed waste is turned into compost. Clear and Green sells 1 kilogram of compost for Rp5,000 and 500 grams for Rp3,000. The target market is lecturers at Unisba. "We sell this compost not using plastic in general, but using bio plastic, plastic made from tuber juice. So it is environmentally friendly, 6-35 months can be decomposed," said the General Chairperson of the Clear and Green Student Activity Unit (UKM), Agus Wibowo to Bandung City Public Relations, Thursday, February 29, 2024. "In the future, we plan to sell it in an online shop," added Agus, who is also a student of the Faculty of Engineering in the field of Industrial Engineering Studies at Unisba. The compost produced by this UKM is also used as fertilizer for the plants it manages. There are a number of vegetables grown by Clean and Green in the Unisba campus area. Hopefully, the harvest can be cooked for Friday Blessing. So that the

results can be felt by all students," he said. (<https://www.bandung.go.id/news/read,2024>).

According to Agus, waste management can actually create jobs. If Grand Tjokro Hotel and Parahyangan Catholic University as well as Unisba student groups who are members of the "Clean and Green" group can manage waste independently, then this can actually be done by other community groups or institutions. In addition, the pattern of waste management carried out by these two institutions and student groups independently can be used as a "pilot project" that can be applied by other hotels and universities in Bandung. In the meantime, it appears that each component of society still carries out activities related to environmental issues separately. So that there is a gap in communication, collaboration, connectivity in managing the environment in Bandung, especially in dealing with the problem of waste which must be done together by involving all components of society

CONCLUSION

A comprehensive redesign of the development communication model in Bandung City is imperative for establishing a sustainable communication framework. Since Ridwan Kamil's departure from the mayoral position, there has been a noticeable decline in the city's cleanliness and aesthetic appeal. Prioritizing the maintenance of public spaces, which were once well-managed, has become a pressing concern, as these areas now face challenges such as litter accumulation and poorly maintained sidewalks. This has a direct impact on pedestrian comfort and accessibility for individuals with disabilities. Noteworthy, however, is the substantial public engagement in environmental concerns, with various stakeholders demonstrating active involvement. Notable organizations, including WALHI and the Zero Waste Indonesia Alliance, along with grassroots initiatives such as KIM, have been instrumental in environmental efforts.

While communication is not a panacea, it plays a crucial role in development, especially in the context of globalization. Effective communication between the Bandung City government and the community on waste management is vital. Community-driven initiatives, exemplified by those initiated by Parahyangan Catholic University and the Clean and Green Community of Unisba students, demonstrate the potential for independent waste management to generate employment opportunities, support farmers in the production of organic fertilizers, and reduce waste loads. While electronic participation and information technology facilitate communication, true engagement necessitates direct interactions between bureaucrats and the public to ensure the success of participatory development programs.

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