

Citizen Engagement in Ecological Issue Management through Participatory Practices and Community-Based Social Supports

¹Muhamad Amir Bin Zulkarnain, ²Rafadi Khan Khayru, ³Fayola Issalillah, ⁴Carolina da Cruz

¹Universiti Utara Malaysia

²Airlangga University

³Maulana Malik Ibrahim State Islamic University of Malang

⁴Universidade Oriental Timor Lorosa'e

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ABSTRACT

Citizen engagement is a central element in the management of environmental and sustainability issues, especially in addressing the problems of ecological degradation that occur locally and globally. This research aims to comprehensively examine the various forms of community participation and the factors that influence its effectiveness in practice. Through a literature study approach, it is found that citizen engagement is not only related to collective action, but also to social dynamics, local knowledge capital and participatory legitimacy. Factors such as local leadership, gender equality, access to information, government policies, and social capital play an important role in determining the extent to which engagement has a positive impact on the environment. Previous research shows that the success of community-based environmental programs is often influenced by ongoing collective learning processes, open two-way communication, and respect for local knowledge. Citizen engagement can be positioned as a key pillar in environmental democracy and sustainable development. The results of this research are expected to serve as a reference for development actors and policy makers to design a more equitable, effective and Citizen engagement approach that is rooted in the experience of the community itself. This research provides an academic contribution in strengthening participatory approaches in sustainable environmental management.

INTRODUCTION

Awareness of environmental problems has developed rapidly in recent decades. Ecological crises such as climate change, deforestation, water and air pollution, and biodiversity loss have prompted various parties to become more actively engaged in finding collective solutions. In the midst of the complexity of these problems, attention has begun to focus on the power of societies as social units that have great potential to influence real change. This shows a pattern that mitigation and adaptation efforts to environmental problems are no longer the exclusive property of the government or international institutions.

Local communities have a direct connection to the areas where they live, both geographically and emotionally. Their engagement in environmental conservation often reflects a long-term commitment and is based on their social values. Community initiatives such as customary forest management, sustainable agriculture, and household waste reduction are forms of contribution that arise from collective awareness and

the desire to maintain quality of life. This participatory process serves as a bridge between macro policies and more tangible micro needs.

In practice, citizen engagement often grows out of direct experience of environmental degradation. When a society witnesses a decline in water quality, an increase in temperature, or the loss of green spaces in their area, the reaction is not only reactive but also transformative. These experiences generate a sense of ownership over their own environment and create a drive for action. They are beginning to realize that a damaged environment will have a direct impact on their own quality of life (Reed et al., 2018). This sense of loss and threat to quality of life is the starting point for many initiatives at the local level. Society can organize grassroots movements, form social networks, and fight for the right to a healthy environment (Smith et al., 2014). This shows that sustainability is not only born from structural policies, but also from dynamic relations between individuals, groups and the surrounding environment.

* Corresponding author, email address: muhammad.amirbinzulkarnain8@gmail.com

Citizen engagement does not always go without obstacles. Lack of access to scientific information, limited resources, and internal social dynamics are often challenges that need to be examined. Many local communities do not have the resources or means to understand environmental issues in depth, making it difficult for them to make informed decisions or participate effectively in conservation programs. Communities may have passion and concern for the environment, but without adequate support, their efforts cannot develop optimally. It is important to further examine how communities can become active agents in a sustainable environmental movement. Understanding these dynamics will provide a strong basis for policy formation that is not only top-down, but also based on the real capacity of the society. A deep understanding of the internal dynamics of the community is an important foundation in promoting participatory and contextual sustainability.

While citizen engagement is considered an important element in environmental conservation efforts, many research reveal that these participatory efforts are often not supported by adequate institutional systems. Pretty (1995) identifies that many community-based projects are merely symbolic and do not really engage citizens in decision-making. The lack of regulations governing community rights in natural resource management, the unavailability of transparent participation mechanisms, and the dominance of external actors in the project process make community participation merely symbolic (Fabricius, 2013). This implies a low sense of ownership of the project and leads to a lack of continuity in its implementation. Strong and responsive institutional systems are important to establish to support participation administratively and ensure the active role of the society in the entire decision-making cycle.

Limited resources are also a main obstacle for communities to develop sustainable environmental programs. Resources are not only limited to financial aspects, but also include institutional, technical and human capacity (Vivian, 2014). According to Ostrom (1990), successful management of shared resources depends largely on the community's ability to establish effective internal rules and sanction systems. In many cases, communities do not have the institutional or financial capacity to manage such programs independently (Roseland, 2012). As a result, emerging initiatives often stop halfway or suffer from dependence on external assistance. This suggests that the long-term success of community-based environmental initiatives depends heavily on serious investment in strengthening local capacity.

There is a tendency that communities active in environmental issues are not always recognized by formal power structures. As explained by Agrawal and Gibson (1999), the role of local actors is often ignored in the policy formulation process, even though they have very relevant local knowledge. When policies are developed without considering local perspectives and knowledge, the results are often decontextualized and difficult to implement on the ground. This relational imbalance creates tensions between community efforts and larger institutional interests, leading to problems in the overall application of sustainability principles.

This issue is important to observe because the long-term success of environmental programs relies heavily on the engagement of various actors, including citizens. By understanding how societies shape narratives and collective actions in responding to environmental issues, there is room to develop approaches that are more collaborative and rooted in real experiences. Sustainability is not possible through technocratic approaches alone, but requires strengthening social capacity that grows organically at the grassroots level. The approach of placing the society as equal partners, rather than as parties who must be "helped" constantly, is important.

Citizen engagement often has educational and social transformation dimensions. Through participatory processes, citizens learn to build solidarity, strengthen social cohesion and develop a sense of responsibility for their living space. In the long run, this approach can shape an ecological mindset that is deeply embedded in daily life, making society the primary custodians of the quality of the environment in which they live. When sustainability values become part of daily practice, environmental conservation efforts become more sustainable because they are born from awareness. Communities that are accustomed to ecological values will be more resilient in facing environmental challenges in the future and able to become agents of change in their respective regions.

This research aims to explore and analyze the role of communities in maintaining environmental sustainability, focusing on the extent to which their engagement contributes to the effectiveness of conservation programs at the local level. This research is expected to provide critical insights that are useful for policy development and participatory approaches in environmental management, as well as encourage strengthening the capacity of communities as the main actors of change. It is important to assess whether participatory environmental programs strengthen local capacity or perpetuate external dependency.

RESEARCH METHOD

This research uses a literature study approach as the main method in exploring and examining citizen engagement in environmental and sustainability issues. The literature study was chosen because it allows researchers to access various sources of theoretical and empirical knowledge from relevant previous research. Through the collection, selection and analysis of previous research results, this study was able to compile emerging patterns related to how communities take part in environmental conservation. The literature review also provides a space to evaluate theoretical frameworks, key variables and social dynamics that recur in community practices in different areas. This approach is particularly appropriate when the phenomenon being examined is complex and multidimensional. As suggested by Mouton (2001), a systematic literature study can develop a deep conceptual understanding and build a strong foundation for further empirically-based research.

In its implementation, this study refers to the systematic steps in literature research as described by Neuman (2000), which includes the stages of problem identification, collection of relevant academic references, classification of findings, content analysis, and synthesis of findings based on research objectives. All data sources analyzed came from scientific journals, academic reference books, research reports, and documents that have gone through the publication process and have scientific credibility. The data was examined using a thematic approach to find a common thread between citizen engagement and the environmental sustainability outcomes they achieved. This research is not only descriptive, but also analytical. By utilizing the basic principles of the desk study method outlined by Bless and Higson-Smith (1995), the researcher was able to assess the quality, trends and gaps in previous research, which will provide new directions for understanding community-based environmental issues.

RESULT AND DISCUSSION

Concern about changes in the local environment often triggers the growth of collective movements from citizens. In many cases, seasonal irregularities, increasingly frequent floods, and the declining quality of ecosystems are the main reasons society begins to form solidarity in efforts to protect nature. This awareness usually arises organically, starting from the unrest over daily life that is disrupted by changes that continue without certainty of direction. Citizens then no longer just wait for action from the government, but begin to design their own responses to the problems they face (Angel, 2014).

Changes occurring at the local level put psychological and social pressure on society groups who feel their lives are increasingly threatened. Citizen groups whose lives depend on environmental sustainability are beginning to feel uncertainty, loss of security, and even fear for the future of their generation (Flint, 2013). This pressure not only affects the economic aspect, but also the social and emotional stability of the community, especially those who have a strong attachment to their living space historically and culturally. In such a situation, various forms of citizen initiatives emerge that aim to maintain the sustainability of the area where they live. Ranging from informal activities such as joint tree planting to formal structures such as green economy organizing, each action is born out of real needs and shared aspirations to create better living conditions. Shared experiences in dealing with environmental problems often strengthen social bonds and open space for collaboration across backgrounds (Heatherington, 2012).

When societies have the space to be directly engaged, they tend to show high commitment to the sustainability of the programs they support. Such engagement is not limited to symbolic, but includes an active role in decision-making and implementation of initiatives on the ground. With a sense of ownership of the program they are involved in, communities feel more responsible and motivated to maintain the results in the long-term. A number of studies have highlighted that the success of environmental programs is highly dependent on the level of participation of directly affected citizens. Programs designed without listening to the voices of local communities often fail because they do not match local needs, values and social conditions. With an inclusive approach, society is not only the beneficiary, but also the main actor in designing solutions based on their own needs (Aslin & Lockie, 2013).

Citizen engagement in environmental issues often stems from concerns about changes in the areas where they live. Extreme weather changes, water pollution and declining air quality have prompted many local communities to look for ways to protect their living spaces. The forms of engagement vary widely, from river clean-up campaigns, to training in household waste management, to the establishment of society-based green cooperatives. Various researches show that when citizens are directly engaged, environmental initiatives tend to be more sustainable. According to Pretty (1995), participatory approaches allow societies to build a sense of ownership over environmental programs and strengthen their social resilience.

Such engagement does not arise in a vacuum. Socio-economic factors play an important role in determining the extent to which communities can act. Limited economic conditions, low levels of education, and limited access to information are often barriers for communities to participate effectively in environmental initiatives. Communities with low levels of education and limited access to information often experience barriers in organizing environment-based activities. This is reinforced by Adger's (2003) findings that social vulnerability weakens the capacity of communities to respond to environmental challenges. Meanwhile, communities with strong social resources and networks tend to be more proactive and able to develop local innovations in environmental management.

The local leadership dimension also determines the success of community-based environmental movements. Informal leaders such as traditional leaders, activists, or local educators are often the driving force capable of bridging citizens with external parties such as NGOs or the government (Potluka, 2021). They not only lead administratively, but also inspire and mobilize citizen participation based on local values that they understand deeply. According to Narayan (1999), social capital in the form of networks, trust and shared norms has a major influence in strengthening the cohesion and efficiency of collective action. When leadership is built on social trust and local values, the results of citizen engagement are often more enduring.

In many areas, women are important actors in environmental management. They are engaged in water collection, household waste treatment, and environmentally friendly agriculture. Their contributions are often not recognized in formal structures. Shiva (1993) points out that women often have unique ecological knowledge, which comes from their daily interactions with nature. Ignoring women's perspectives and leadership in environmental projects weakens the effectiveness of the program.

It is also important to pay attention to how environmental information is disseminated to the society. Technical knowledge that is not adapted to local language and culture can create a distance between program organizers and target societies. According to Rogers (2003), the diffusion of environmental innovations will be more successful when delivered through social channels that are trusted by the community. Two-way communication based on local experience is crucial in encouraging active engagement. This approach helps create a fuller understanding and sense of ownership of the environmental program.

Citizen engagement is also strongly influenced by policy and institutional support. Environmental policies that are top-down and do not accommodate citizen input often lead to resistance. This approach tends to ignore local knowledge and the real needs of the community, making its implementation in the field ineffective. In Ostrom's (1990) research, society engagement in decision-making can increase a sense of collective responsibility and compliance with environmental rules. Without policy clarity and legal protection for citizen initiatives, many community movements stop at an early stage.

Technological support and access to resources are also important determinants. Communities that have access to simple technologies such as household composters or micro-irrigation systems are able to show significant improvements in pro-environmental behavior. When communities have access to technology that is relevant to their needs, they are more likely to adopt environmentally-friendly behaviors in their daily lives. However, without training and capacity building, these technologies are not optimally utilized. Without training and capacity building, these technologies are not optimally utilized. According to Chambers (1994), a society-centered development approach must be accompanied by participatory and locally appropriate knowledge transfer.

Citizen engagement is not always linear. In some cases, there are conflicts of interest between citizens and industry actors or even between societal groups themselves. These tensions may arise due to differences in vision, economic background, or unequal access to information. These conflicts can weaken the collective spirit if not managed wisely. Fisher (1995) mentions that community-based mediation can be an effective approach to resolve conflicts in natural resource management, because it emphasizes dialogue and respect for local values. This approach allows all parties to express their aspirations and concerns without feeling marginalized.

Time is also an important factor. Community-based environmental initiatives often take a long time to show tangible results. The process of building awareness, forming solidarity and developing collective working mechanisms at the local level takes a long time. Unfortunately, many donor programs or institutional interventions have a short-term orientation that is not in line with the rhythm of social change at the community level. In this case, sustainability becomes a serious issue. Pretty and Ward (2001) emphasize that long-term success depends on continuity of support and gradual strengthening of community capacity. It is important for support agencies to adapt their intervention models to community realities.

The forms of community participation are very diverse, ranging from passive participation as recipients of information, to active participation in decision-making and program management. These forms of participation reflect the extent to which communities are given the space and power to determine the direction and content of programs that impact their lives. White (1996) divides this participation into four typologies: nominal, instrumental, representative and transformational. Nominal participation is only symbolic, where the presence of the community is used to legitimize the program, but their voices are not really heard. Instrumental participation sees the community as a means to achieve project goals, such as volunteer labor or activity implementers. Representative participation provides space for the community to express their opinions through representation, although the final decision is still in the hands of outsiders. From this division, it can be seen that transformational participation, which engages citizens as full actors, has the greatest potential to produce sustainable environmental change.

The influence of cultural values and local belief systems cannot be ignored. In many societies, the relationship between humans and nature is considered sacred, so acts of environmental destruction are seen as ethical and spiritual violations. This view becomes a strong moral foundation for some communities in protecting nature. According to Berkes (1999), traditional ecological knowledge is an important source of community-based environmental management, especially in indigenous areas. This knowledge is not only ecologically relevant, it is also adaptive and has proven to be resilient in the face of environmental changes. In many cases, local belief systems are more effective in preserving the environment than formal, technocratic and centralized approaches.

Collective learning is key to strengthening the environmental movement. When communities learn together through field experiments, open discussions, and shared reflections, they are better able to adapt to change and build innovative local solutions. Argyris and Schön (1978) mention that the double-loop learning process is able to change not only actions, but also the values and basic assumptions of the community, which in turn strengthens resilience to ecological threats. When old, irrelevant values are abandoned and replaced with the principle of sustainability, a more substantial social transformation emerges. This type of learning creates structural and long-lasting change, as the changes come from internal awareness and a collective reflective process.

In a broader framework, citizen engagement can be seen as part of the environmental democracy movement. The movement emphasizes the importance of providing space for communities to be actively involved in decision-making that impacts their environment. When citizens have access to and control over decision-making that affects their environment, it creates ecological and social justice. Citizen engagement is not just a technical issue, but a manifestation of the right to a healthy and sustainable environment. As Bullard (2000) explains, environmental justice demands the redistribution of ecological power into the hands of the society, so that their voices are no longer marginalized.

CONCLUSION

Citizen engagement in environmental and sustainability issues is an important part of social dynamics that contributes significantly to the sustainability of ecosystems. The form of engagement is not uniform and is influenced by various factors such as social structure, knowledge capital, leadership, and institutional support. This research shows that when communities have access to information, strong local leadership and participatory spaces for decision-making, they can be effective agents in maintaining and improving environmental quality. These efforts not only raise ecological awareness, but also strengthen social solidarity rooted in local values and collective experiences.

A more structured understanding of citizen engagement provides guidance for development actors, policy makers and academics to better appreciate the social dimension of environmental management. Ignoring community dynamics can undermine the effectiveness of conservation or sustainable development programs. The findings indicate that citizen engagement strategies should be designed inclusively and adaptively, taking into account social, economic and cultural diversity. This can strengthen program legitimacy and create public trust in environmental initiatives.

It is necessary to strengthen community capacity through continuous training, providing access to simple technology, and establishing local forums for open environmental dialog. Formal institutions such as local governments and NGOs should strengthen partnerships with citizens, not only as policy implementers, but as learning partners in formulating collective measures. Further research is recommended to examine the practice of citizen engagement in areas with unique social dynamics in order to gain a broader understanding of the patterns of success and obstacles in managing environmental issues.

REFERENCES

- Adger, W. N. (2003). Social Capital, Collective Action and Adaptation to Climate Change. *Economic Geography*, 79(4), 387–404.
- Agrawal, A., & Gibson, C. C. (1999). Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation. *World Development*, 27(4), 629–649.
- Angel, R. J. (2014). The Transformation of Solidarity: Changing Risks and the Future of the Welfare State. *Contemporary Sociology*, 43(2), 276–278.
- Argyris, C., & Schön, D. A. (1978). *Organizational Learning: A Theory of Action Perspective*. Addison-Wesley.
- Aslin, H. J., & Lockie, S. (2013). *Citizenship, Engagement and the Environment*. Charles Darwin University Press.
- Berkes, F. (1999). *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Taylor & Francis.
- Bless, C., & Higson-Smith, C. (1995). *Fundamentals of Social Research Methods: An African Perspective* (2nd Ed.). Juta and Company.
- Bullard, R. D. (2000). *Dumping in Dixie: Race, Class, and Environmental Quality*. Westview Press.
- Chambers, R. (1994). Participatory Rural Appraisal (PRA): Analysis of Experience. *World Development*, 22(9), 1253–1268.
- Fabricius, C. (2013). The Fundamentals of Community-based Natural Resource Management. In *Rights Resources and Rural Development*. Routledge.
- Fisher, R. J. (1995). *Collaborative Management of Forests for Conservation and Development*. International Union for Conservation of Nature (IUCN) and World-Wide Fund for Nature (WWF).
- Flint, R. W. (2013). Practice of Sustainable Community Development. In *A participatory Framework for Change*. Springer.
- Heatherington, T. (2012). *The Changing Terrain of Environmentality: EIONET and the New Landscapes of Europe*. *Anthropological Quarterly*.
- Mouton, J. (2001). *How to Succeed in Your Master's and Doctoral Studies: A South African Guide and Resource Book*. Van Schaik Publishers.
- Narayan, D. (1999). *Bonds and Bridges: Social Capital and Poverty*. World Bank Policy Research Working.
- Neuman, W. L. (2000). *Social Research Methods: Qualitative and Quantitative Approaches* (4th Ed.). Allyn and Bacon.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.
- Potluka, O. (2021). Roles of Formal and Informal Leadership: Civil Society Leadership Interaction with Political Leadership in Local Development. In *Handbook on City and Regional Leadership*. Edward Elgar Publishing.
- Pretty, J. N. (1995). Participatory Learning for Sustainable Agriculture. *World Development*, 23(8), 1247–1263.
- Pretty, J., & Ward, H. (2001). Social Capital and the Environment. *World Development*, 29(2), 209–227.
- Reed, M. S., Vella, S., Challies, E., De Vente, J., Frewer, L., Hohenwallner-Ries, D., Huber, T., Neumann, R. K., Oughton, E. A., del Ceno, J. S., & van Delden, H. (2018). A Theory of Participation: What Makes Stakeholder and Public Engagement in Environmental Management Work?. *Restoration Ecology*, 26, 7–17.
- Rogers, E. M. (2003). *Diffusion of Innovations* (5th Ed.). Free Press.
- Roseland, M. (2012). *Toward Sustainable Communities: Solutions for Citizens and Their Governments*. New Society Publishers.
- Shiva, V. (1993). *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*. Zed Books.
- Smith, A., Fressoli, M., & Thomas, H. (2014). Grassroots Innovation Movements: Challenges and Contributions. *Journal of Cleaner Production*, 63, 114–124.
- Vivian, J. M. (2014). Foundations for Sustainable Development: Participation, Empowerment and Local Resource Management. In *Grassroots Environmental Action*. Routledge.
- White, S. C. (1996). Depoliticising Development: The Uses and Abuses of Participation. *Development in Practice*, 6(1), 6–15.