

PUBLIC LEGAL AWARENESS AND PARTICIPATION IN SUSTAINABLE TECHNOLOGY DEVELOPMENT

Evi Purnamawati

Faculty of Law, Palembang University
evipurnamawatiplg@gmail.com

Khairani Hasibuan

Faculty of Law, Palembang University
khairani.hsb1989@gmail.com

Tri Astuti Andayani

Faculty of Law, Palembang University
triastutiandayani997@gmail.com

Akhmad Dani

Faculty of Law, Palembang University
akhmaddani@unpal.ac.id

Abstract

Public legal awareness is a crucial aspect in realizing sustainable technology development. Without legal understanding and active public participation, efforts to develop environmentally friendly technology will not run optimally. This study aims to examine the relationship between legal awareness and public participation in sustainable technology development in Indonesia. The method used is a juridical-normative approach with a conceptual approach. The results of the study indicate that a high level of public legal awareness can increase social responsibility for the ethical and sustainable use of technology.

Keywords: *Legal awareness, public participation, sustainable technology, environmental law*

1. INTRODUCTION

Public legal awareness is a crucial element in creating a balance between technological progress and social responsibility. A legally aware society will play an active role in ensuring that technology is used in accordance with legal provisions and sustainability principles. [Satjipto Rahardjo, Ilmu Hukum, (Bandung: Citra Aditya Bakti, 2000), p. 45.] Therefore, public participation in the development of sustainable technology requires not only technical skills but also an understanding of the legal norms that govern the ethics and social responsibility of technology use. [Soerjono Soekanto, Pengetahuan Hukum dan Ketaatan Hukum, (Jakarta: Rajawali Press, 1982), p. 32.]

Technological developments in the 21st century have brought about major changes to human lifestyles. Advances in information, communication, and industry

have provided significant benefits for improving societal welfare. However, this progress has also had negative environmental and social impacts, such as pollution, overexploitation of natural resources, and increasing social inequality. [Satjipto Rahardjo, *Ilmu Hukum*, (Bandung: Citra Aditya Bakti, 2000), p. 23.] In this context, technological development must not only be oriented towards efficiency and economic profit, but also consider the principle of sustainability to ensure environmental sustainability and the well-being of future generations. [United Nations, *Agenda 21: Programme of Action for Sustainable Development*, (New York: UN Publications, 1992).]

On the other hand, the success of sustainable technological development is inseparable from the role of society as a legal subject and development actor. Public legal awareness is a crucial aspect because it determines the extent to which individuals understand, appreciate, and comply with legal regulations governing the use of technology and environmental protection. [Soerjono Soekanto, *Legal Awareness and Public Legal Compliance*, (Jakarta: Rajawali Press, 2008), p. 12.]

Communities with a high level of legal awareness will actively participate in supporting sustainable technological policies and innovation.

Low legal awareness can lead to misuse of technology that can lead to environmental damage, such as the use of hazardous materials, unmanaged industrial waste, and the exploitation of natural resources without regard for environmental carrying capacity. [Ibid., p. 15.] Therefore, increasing public legal awareness is a strategic step in fostering collective responsibility for the development of environmentally sound technology.

Furthermore, public participation in the development of sustainable technology is also a key prerequisite for the successful implementation of national development policies. Law Number 32 of 2009 concerning Environmental Protection and Management has provided space for public involvement in monitoring and decision-making related to natural resource management. [Law Number 32 of 2009 concerning Environmental Protection and Management, Article 67.] Through this participation, the public is not only the object of policy but also a subject playing an active role in maintaining the balance between development and environmental preservation.

Thus, the relationship between legal awareness and public participation is crucial for the development of sustainable technology. This study seeks to explain how the level

of public legal awareness can influence participation in the implementation of environmentally friendly technologies and how the government can strengthen the synergy between law, society, and technological innovation to realize sustainable development in Indonesia. [Bambang Sunggono, *Legal Research Methodology*, (Jakarta: Raja Grafindo Persada, 2010), p. 78.]

The rapid development of science and technology in the 21st century has brought significant changes to the lifestyles of modern society. On the one hand, technological advances provide convenience in various fields such as communication, transportation, education, economics, and governance. However, on the other hand, technological development that is not accompanied by principles of sustainability and legal awareness can have negative impacts such as environmental damage, social inequality, and misuse of technology that harms the wider community.

In the context of national development, Indonesia places sustainable development as a strategic policy direction, outlined in various regulations and long-term development plans. One crucial aspect of sustainable development is the implementation of sustainable technology, namely technology designed to meet present needs without compromising the ability of future generations to meet their own needs. The implementation of sustainable technology requires the support of clear legal regulations, consistent law enforcement, and a high level of public legal awareness.

Public legal awareness plays a crucial role in supporting the success of sustainable technology-based development policies. According to Soerjono Soekanto, legal awareness can be defined as the awareness or values inherent in humans regarding existing or anticipated laws. [Soerjono Soekanto, *Factors Influencing Law Enforcement*, (Jakarta: Raja Grafindo Persada, 2012), p. 42] A legally aware society will understand its rights and obligations, comply with applicable regulations, and actively monitor the implementation of law in its environment. Without legal awareness, laws and regulations will remain merely written norms without any meaning in everyday life.

Furthermore, legal awareness must be accompanied by active public participation in every stage of development, particularly in the context of sustainable technology development. Public participation is not only This includes support for government policies, as well as involvement in local innovation, environmental conservation activities, and the use of environmentally friendly technology. Through this

participation, the community becomes an empowered subject of development, not simply a recipient of policy.

Practically, Palembang, as one of Indonesia's major cities, faces challenges in implementing sustainable development principles, particularly amidst increasing industrialization, population mobility, and energy demand. Government programs such as digital-based waste management, the use of renewable energy, and green transportation require the support of a community with a high level of legal awareness and active participation to ensure their sustainability. Without the involvement of a community aware of its legal and social responsibilities, these policies will struggle to achieve optimal results.

Furthermore, globalization and digitalization have also brought changes to the public's legal awareness. The use of information technology in everyday life demands a new understanding of digital law, environmental ethics, and data protection. Therefore, increasing public legal awareness needs to be systematically implemented through legal education, policy dissemination, and collaboration between the government, academia, and the private sector.

The rapid development of science and technology in the 21st century has brought significant changes to the lifestyles of modern society. On the one hand, technological advances provide convenience in various fields such as communication, transportation, education, economics, and government. However, on the other hand, technological development that is not accompanied by principles of sustainability and legal awareness can have negative impacts such as environmental damage, social inequality, and misuse of technology that harms the wider community.

In the context of national development, Indonesia has positioned sustainable development as a strategic policy direction, outlined in various regulations and long-term development plans long-term. One important aspect of sustainable development is the implementation of sustainable technology, namely technology designed to meet present needs without compromising the ability of future generations to meet their own needs. The implementation of sustainable technology requires the support of clear legal regulations, consistent law enforcement, and a high level of public legal awareness. Public legal awareness plays a crucial role in supporting the success of sustainable technology-based development policies. According to Soerjono Soekanto, legal awareness can be defined as the awareness or values inherent in humans regarding existing laws or laws that are expected to exist.¹

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Furthermore, legal awareness must be accompanied by active public participation in every stage of development, particularly in the context of sustainable technology development. Public participation encompasses not only support for government policies but also involvement in local innovation, environmental conservation activities, and the use of environmentally friendly technologies. Through this participation, the public becomes empowered subjects of development, not simply recipients of policy.

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Therefore, research on public legal awareness and participation in sustainable technology development is crucial. This research aims not only to determine the level of public legal awareness but also to encourage synergy between law, society, and technology to create just, ethical, and environmentally sound development. Strong legal awareness will serve as a moral and social foundation for a society that actively participates in supporting sustainable technological innovation in Indonesia, particularly in the city of Palembang.

The rapid development of technology in the current era of globalization has had a significant impact on various aspects of people's lives, including social, economic,

and legal aspects. Sustainable technology has become a primary focus of modern development because it focuses on efficient, environmentally friendly, and socially just resource utilization. However, the success of sustainable technology development depends not only on the advancement of innovation and government policies, but also on the level of public legal awareness, understanding, complying with, and actively participating in their implementation.

Legal awareness is a crucial indicator in creating an orderly and just society. A society with a strong legal awareness will be able to respect, comply with, and participate in overseeing the implementation of applicable laws and regulations. In the context of sustainable technology development, public legal awareness is a determining factor in the successful implementation of various policies, such as waste management, renewable energy use, and carbon emission reduction. Without public understanding and participation, government regulations will not be implemented effectively.

On the other hand, community participation is a form of social responsibility towards sustainable development. This participation includes active involvement in the planning, implementation, and monitoring of environmentally friendly technology-based policies. Through participation based on legal awareness, communities can become partners with the government and businesses in realizing technological transformation that is not only modern but also sustainable.

Large cities in Indonesia, including Palembang, face significant challenges in realizing sustainable development. High urbanization, increasing energy needs, and changing consumption patterns require synergy between government policies, community legal awareness, and technological innovation. Therefore, research on the level of community legal awareness and participation in sustainable technology development is crucial to determine the extent to which communities understand their legal role and contribute significantly to supporting the sustainable development agenda at the local level.

2. RESEARCH PROBLEMS

The problems to be examined in this paper are:

1. What is the level of public legal awareness in supporting the development of sustainable technology in Palembang City?

2. What efforts can the government make to increase legal awareness and encourage active public participation in the development of sustainable technology in Palembang City?

3. METHODOLOGY

This paper uses a normative juridical legal research method, namely research focused on the study of positive legal norms, legal principles, and legal concepts related to the theme of legal awareness and sustainable technology. [Bambang Sunggono, *Legal Research Methodology*, (Jakarta: Raja Grafindo Persada, 2010), p. 43]

3.1 Research Approach

The approaches used are a conceptual approach and a statutory approach.

The conceptual approach is used to understand legal theories and principles regarding legal awareness and community participation in sustainable development. [Peter Mahmud Marzuki, *Legal Research*, (Jakarta: Kencana Prenada Media, 2011), p. 95.] The statutory approach is used to examine relevant legal regulations, such as Law Number 32 of 2009. Concerning Environmental Protection and Management and its derivative regulations. [Law Number 32 of 2009 concerning Environmental Protection and Management.]

3.2 Types and Sources of Legal Materials

The legal materials used consist of: Primary legal materials, namely laws and regulations related to the environment, sustainable development, and public participation; Secondary legal materials, such as books, journals, and research results discussing legal awareness and the application of sustainable technology; Tertiary legal materials, in the form of legal dictionaries, encyclopedias, and other supporting sources to clarify legal terms. [Soerjono Soekanto, *Introduction to Legal Research*, (Jakarta: UI Press, 1986), p. 52.]

3.3 Legal Material Collection Techniques

Legal materials were collected through library research by searching relevant laws and regulations, books, scientific journals, and academic literature. [Ibid., p. 56.]

3.4 Analysis Technique

The analysis was conducted using qualitative descriptive analysis, which systematically describes and interprets legal data based on applicable legal theories and norms. [Bambang Sunggono, *Op.Cit.*, p. 48.]

This method aims to describe the relationship between public legal awareness, public participation, and the implementation of sustainable technology as a whole.

4. RESULTS AND DISCUSSION

4.1 Level of Public Legal Awareness in Supporting Sustainable Technology Development in Palembang

Palembang, as one of the major cities in South Sumatra, is experiencing rapid development in technology and industrialization. This growth includes the energy, transportation, and home industry sectors, which are increasingly dependent on modern technology. However, the level of public legal awareness in using and managing technology to maintain a sustainability orientation still varies and is not evenly distributed across all levels of society. [Palembang City Government, Palembang City Profile in Figures 2024, (Central Bureau of Statistics, 2024), p. 45.]

Observations and studies indicate that the people of Palembang generally have a basic understanding of the importance of preserving the environment, but do not fully understand the legal aspects governing the use of sustainable technology. Public legal awareness is often limited to a normative understanding—that breaking the law can result in sanctions—without being accompanied by a substantive understanding of legal responsibility towards the environment. [Soerjono Soekanto, *Legal Awareness and Public Legal Compliance*, (Jakarta: Rajawali Press, 2008), p. 28.]

Several factors influencing the low level of legal awareness among the people of Palembang include:

1. Minimal direct socialization of environmental laws and policies by the local government to the community;
2. Low legal and technological literacy among the lower-middle class;
3. A consumerist and pragmatic culture that tends to focus more on economic efficiency than environmental sustainability;
4. Lack of legal oversight of small businesses using environmentally unfriendly technology.

Nevertheless, there have been positive developments, particularly within higher education and environmental communities in Palembang. Several universities, such as Sriwijaya University and the University of Palembang, and environmental non-governmental organizations (NGOs), are actively promoting the use of environmentally friendly technologies, such as community-based waste management,

solar energy for households, and innovative plastic recycling. [Palembang City Environmental Agency, 2023 Environmental Management Performance Report, p. 52.]

In the legal context, the legal awareness of the Palembang community can be categorized into four levels according to Soerjono Soekanto's theory, [Soerjono Soekanto, *Legal Awareness and Public Legal Compliance*, pp. 18–19.], namely:

1. Legal knowledge — some people are already aware of environmental regulations, such as Law Number 32 of 2009;
2. Legal understanding — a small percentage understand the meaning and purpose of environmental law, for example, the importance of AMDAL-based business permits;
3. Legal attitude — people are beginning to show a positive attitude by supporting policies to reduce plastic waste and use environmentally friendly transportation;
4. Legal behavior — some people have implemented concrete actions such as sorting waste and conserving energy, although this has not yet become a common practice. [Ibid., p. 21.]

In addition, the Palembang City Government has issued several policies that support increasing legal awareness in the field of sustainable technology, such as Palembang Mayoral Regulation Number 26 of 2019 concerning the Management of Household Waste and Household-Like Waste. [Palembang Mayoral Regulation Number 26 of 2019 concerning the Management of Household Waste and Household-Like Waste.] This policy emphasizes the community's responsibility to sort and manage waste before disposal, and regulates the obligations of producers to reduce plastic waste. However, the implementation of this regulation still faces obstacles due to low legal awareness and public participation in its implementation. [Palembang City Environmental Agency, *Evaluation of the Implementation of Mayoral Regulation No. 26 of 2019*, (Palembang, 2023), p. 14.]

Thus, it can be concluded that the level of legal awareness among the people of Palembang City in supporting the development of sustainable technology is in a transitional stage—still evolving from normative awareness to substantive awareness. Efforts to increase legal awareness need to be continuously carried out through environmental law education, public participation, and the implementation of strict legal sanctions for violations of sustainability principles. [Bambang Sunggono, *Legal Research Methodology*, (Jakarta: Raja Grafindo Persada, 2010), p. 83.]

4.2 Efforts to Increase Legal Awareness in Palembang City

To strengthen the role of the community in the development of sustainable technology, several strategic steps can be taken, including:

1. Continuous environmental law education through schools, universities, and community organizations;
2. Disseminating regional regulations and national policies regarding green technology and waste management;
3. Engaging the public in green technology programs such as digital waste banks, household-scale renewable energy, and urban agricultural innovations;
4. Increasing collaboration between the government, academics, and the public to build a legal ecosystem that supports sustainable technological innovation. [Peter Mahmud Marzuki, Legal Research, (Jakarta: Kencana Prenada Media, 2011), p. 102.]
5. These efforts will not only increase legal awareness but also strengthen public participation in maintaining a balance between technological progress and environmental sustainability in the city of Palembang.

5. CONCLUSION

Based on the results of the discussion regarding public legal awareness in supporting the development of sustainable technology in Palembang City, public legal awareness in Palembang City in supporting the development of sustainable technology shows significant progress, although various obstacles remain in its implementation. Based on observations and various research sources, the people of Palembang are beginning to demonstrate a better understanding of the importance of regulations and policies that support sustainable development, such as environmental management, the use of renewable energy, and the application of environmentally friendly technology in daily activities.

Public legal awareness can be seen in increasing compliance with government policies, such as digital-based waste management (smart waste management), the Palembang Zero Waste program, and efforts to use electric-powered public transportation introduced by the Palembang City Government. Furthermore, several community groups, particularly Students, university students, and environmental communities have actively participated in social activities such as plastic waste recycling, tree planting, and digital campaigns on sustainable lifestyles.

However, legal awareness remains relatively low among some communities, particularly among the lower-middle class, who do not fully understand the

importance of complying with environmental and technological regulations. Contributing factors include a lack of legal awareness, low levels of environmental legal education, and weak law enforcement against environmental violations such as waste disposal, waste incineration, and excessive use of fossil fuels.

From a participation perspective, the involvement of the Palembang City community in the development of sustainable technology has begun to be evident through various community-based programs. Some concrete examples include:

1. The Digital Waste Bank Program, which encourages the public to exchange inorganic waste for something of economic value through an online application.
2. The Green Palembang Movement, which involves students and residents in tree planting in public areas and along riverbanks.
3. Government collaboration with universities, such as Sriwijaya University and the University of Palembang, in research and outreach on renewable energy technology and household waste management.

This public participation demonstrates that legal awareness is not only reflected in compliance with regulations, but also in concrete actions and concerns in supporting the implementation of sustainable public policies.

1. The level of legal awareness among the people of Palembang City regarding sustainable technology remains moderate. Some people understand the importance of using environmentally friendly technologies, such as digital waste management and renewable energy, but many have not implemented them consistently. This awareness is higher among highly educated groups and young people who are active on social media.
2. Legal education and outreach significantly influence increased legal awareness. The lack of environmental and technological legal education at the community level contributes to a low public understanding of their legal obligations to preserve the environment through the use of sustainable technology.
3. The role of the Palembang City government in encouraging public participation has begun to be evident through various programs, such as the implementation of smart cities, digital waste management, and green technology campaigns. However, the implementation of these policies has not been fully effective due to limited law enforcement and low community participation at the grassroots level.
4. From a legal perspective, sufficient regulations are available, such as Law Number 32 of 2009 concerning Environmental Protection and Management and the Palembang

City Regional Regulation on Environmental Management. However, the enforcement and internalization of these legal values in the community's daily lives still need to be improved to truly realize legal awareness.

Efforts to Increase Legal Awareness and Public Participation to strengthen public legal awareness and increase participation in sustainable technology development, several strategic collaborative steps are needed between the government, community, academics, and the private sector, including:

1. Improving Environmental Law Education and Socialization

The Palembang City Government needs to expand environmental-based legal education programs in schools, universities, and community settings. Through legal education, the public will better understand their rights and obligations, as well as the role of law in maintaining environmental and technological sustainability.

2. Optimizing the Role of Digital Media and Information Technology: Social media and digital platforms can be utilized to disseminate information, conduct legal awareness campaigns, and innovate sustainable technology. Digital-based education has proven to be more effective in reaching the wider community, especially the younger generation.

3. Multi-Party Collaboration (Pentahelix Collaboration). The collaborative approach between government, academics, business actors, communities, and the media (the pentahelix concept) needs to be strengthened to ensure the integrated implementation of sustainable technology. With this collaboration, the public becomes not only the recipient of policies but also an active participant in sustainable development.

4. Improving Law Enforcement and Environmental Oversight: The government needs to strengthen law enforcement instruments against environmental violations, while also providing incentives for communities and businesses committed to sustainable technology practices.

5. Developing a Circular Economy and Local Innovation: Encourage communities to develop circular economy-based innovations such as utilizing waste to create economically valuable products, using solar energy in households, and technology-based organic farming.

6. Building a Sustainable Legal Culture: A long-term effort that needs to be emphasized is building a legal culture oriented toward sustainable values. This can be achieved through exemplary behavior from officials, strengthening public ethics, and consistent development policies.

Increasing public legal awareness is not only the state's obligation through legal education and outreach, but also a shared responsibility to create a social environment that supports the implementation of fair, ethical, and environmentally friendly technology for future generations.

Thus, research on public legal awareness and participation in sustainable technology development is crucial. Through the implementation of these various efforts, it is hoped that the level of legal awareness in Palembang City will significantly increase, enabling the public to become not merely passive participants but also agents of change in realizing sustainable technology that is just, environmentally friendly, and aligned with national legal values.

This research aims not only to determine the level of public legal awareness but also to encourage synergy between law, society, and technology in creating just, ethical, and environmentally sound development. Strong legal awareness will serve as a moral and social foundation for the creation of a society that actively participates in supporting sustainable technological innovation in Indonesia, particularly in Palembang City.

6. RECOMMENDATIONS

Based on the conclusions above, the following recommendations can be made:

1. The Palembang City Government needs to increase the intensity of socialization of environmental law and sustainable technology through collaboration with universities, non-governmental organizations, and green technology communities to strengthen public legal awareness.
2. There is a need to strengthen regional regulations (Perda) that specifically regulate community participation in the implementation of environmentally friendly technology and the use of clean energy. These regulations must also be accompanied by clear sanction mechanisms and incentives for businesses and residents.
3. Educational institutions and the mass media are expected to play an active role in providing ongoing education on environmental law and sustainable technology. Environmental law education should be included in local curricula, especially at the secondary school and university levels.
4. The government, together with the private sector, can encourage the creation of a green innovation hub in Palembang, a center for environmentally friendly technology

innovation that involves the community, academics, and businesses to create sustainable solutions based on local technology.

5. Environmental and technological law enforcement must be strengthened by increasing the capacity of officials, ensuring policy transparency, and providing awards to communities or businesses that consistently implement sustainable development principles.

REFERENCES

Bambang Sunggono, *Legal Research Methodology*, Jakarta: Raja Grafindo Persada, 2010.

Palembang City Environmental Agency, 2023 Environmental Management Performance Report, p. 52

Palembang City Environmental Agency, Evaluation of the Implementation of Mayoral Regulation No. 26 of 2019, (Palembang, 2023), p. 14.

KLHK, 2023 Environmental Monitoring Report, (Jakarta: Ministry of Environment and Forestry, 2023), p. 45.

Ministry of Environment and Forestry (KLHK), 2023 Environmental Monitoring Report, Jakarta: KLHK, 2023.

KLHK, 2023 Environmental Monitoring Report, (Jakarta: Ministry of Environment and Forestry, 2023), p. 45.

Marzuki, Peter Mahmud, *Legal Research*, (Jakarta: Kencana Prenada Media, 2011)

Soerjono Soekanto, "Legal Awareness and Public Legal Compliance," Jakarta: Rajawali Press, 2012.

Soerjono Soekanto, "Legal Awareness and Public Legal Compliance," (Jakarta: Rajawali Press, 2008)

Soerjono Soekanto, "Introduction to Legal Research," (Jakarta: UI Press, 1986)

Soerjono Soekanto, "Legal Awareness and Public Legal Compliance," (Jakarta: Rajawali Press, 2012)

UNDP Indonesia, *Green Innovation and Technology Report*, Jakarta: UNDP, 2022.

Legislation:

Law Number 32 of 2009 concerning Environmental Protection and Management.

Law Number 32 of 2009 concerning Environmental Protection and Management, Article 70 paragraph (1).

Law Number 32 of 2009 concerning Environmental Protection and Management.

Palembang City Regional Regulation Number 3 of 2020 concerning Environmental Management.

Palembang City Government, Palembang Smart City Masterplan 2023–2026, (Palembang: Communication and Information Service, 2023), p. 22.

Palembang City Regional Regulation Number 3 of 2020 concerning Environmental Management.

Palembang City Government, Palembang Smart City Masterplan 2023–2026, (Palembang: Communication and Information Service, 2023), p. 22.

Palembang City Regional Regulation Number 3 of 2020 concerning Environmental Management.

Palembang City Government, Palembang City Profile in Figures 2024, (Central Bureau of Statistics, 2024), p. 45.

Palembang Mayoral Regulation Number 26 of 2019 concerning Household Waste and Household-Similar Waste Management.

Official Documents and Reports:

Palembang City Government, Palembang Smart City Masterplan 2023–2026, Palembang: Communication and Informatics Agency, 2023.

Palembang City Environmental Agency, Smart Environment Program Annual Report, Palembang: DLH, 2024.

Journals and Other Supporting Sources:

Siti Rahmawati, “The Role of Legal Awareness in the Implementation of Green Technology in Urban Areas,” *Journal of Law and Development*, Vol. 52 No. 3 (2022).

Agus Santoso, “Public Participation and Environmental Policy in the Digital Era,” *Journal of Social Sciences and Law*, Vol. 17 No. 2 (2021).