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## Leadership, Innovation and Community Participation Pillar of Institutionalization in Bank Sampah Induk Surabaya

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### ABSTRACT

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Surabaya, the second largest city in Indonesia, has serious problems related to waste. The environmental crisis comes from high consumption, producing waste from households and industries. One of the environmental movements that is a local initiative to restore environmental problems in Surabaya is the Bina Bhakti Lingkungan Foundation. This foundation is present in Surabaya as a local initiative at the grassroots level to manage the environment, starting from managing the Bank Sampah Induk in Surabaya. This study analyzes leadership, innovation, and community participation in the Bank Sampah Induk in Surabaya, which the Bina Bhakti Lingkungan Foundation manages. This study uses a qualitative descriptive method with in-depth interview data collection techniques, observations and literature studies. The local initiative movement found in this Bank Sampah shows that collaboration between government, private business units, and community participation can strengthen the environmental movement's institutional process in Surabaya. The results of this study show that the regulative, normative and cultural cognitive pillars have implications for reinforcing institutions internally. Meanwhile, the actor, innovation and community participation pillars have implications for strengthening institutions externally.

**Keywords:** Waste, Environment, Organization, Institution

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### INTRODUCTION

The environmental social movement is a response to various conflicts that occur in environmental issues. The presence of this movement is a struggle for environmental justice to change and maintain a decent living environment (Rochwulaningsih, 2017). The environmental movement is often used in green politics and conservation. This movement is a means of rejecting injustice and efforts to ensure survival over environmental damage (Hapsari, 2016). The environmental movement enlarges the role and program of saving the environment by developing a cooperation framework with national and international networks (Hidayat, 2017). The environmental movement involves various solidarity networks of various scales in fighting for green transition, resource management, and ecological sustainability (Tansel & Tilley, 2024). The growth factors of social movements are influenced by leadership, resource availability, group size and the level of internal organization (Sukmana, 2016). The environmental movement develops networks, disseminates information, and organizes collective actions that increase social legitimacy and public support through social media (Ummah, 2019).

One of the environmental movements that is a local initiative to fix environmental problems in Surabaya is the Bina Bhakti Lingkungan Foundation. This foundation is present in Surabaya as a local initiative at the grassroots level to manage the environment (Larasati & Santoso, 2023). The business process is carried out by empowering related parties, community participation, and collaboration with the private sector and local government. The participation of the community and government gives birth to social institutions for the implementation, development and utilization of the results of environmental conservation (Adawiyah & Ramadhan, 2020). One of the environmental movements being pursued is the Waste Bank. The Waste Bank program is a social movement, a forum or media where environmental communication can occur. The city of Surabaya is the second largest city in Indonesia (Dinas Kependudukan dan Catatan Sipil Kota Surabaya 2023), which is facing an environmental crisis from household and industrial waste (Rofi & Efendi, 2023). Waste generation remains constant and is expected to increase along with human population growth and the expansion of complex human activities. This has also dramatically occurred globally due to the population explosion and the growth of factories (Sanjaya, 2018). Greenpeace International survey states that industrial growth, especially in companies in the fast-moving consumer goods (FMCG) sector, is the primary driver behind the plastic waste crisis that stems from consumption and production activities (Deborah & Sugihartanto, 2024).

This cannot be separated from the impact of urbanization in Surabaya City. Therefore, the Surabaya City Government faces a significant challenge in providing public services in treating municipal waste or garbage (Setiawan, Kaneko, and Kawata 2019). In addition, the increase in travelers in urban regions also affects the high amount of waste that impacts environmental emissions, water pollution and degradation of ecosystems (Sakcharoen et al., 2023). Managing waste has become a pressing issue in cities worldwide, intensified by growing urbanization, rapid population expansion, and shifting consumption habits. These trends contribute to rising waste generation, creating serious risks for environmental sustainability and public health (Anokye et al., 2024). The Indonesian government has demonstrated substantial dedication to addressing climate change across various sectors, including Surabaya municipal solid waste (MSW) management. Nonetheless, the effects of these efforts on reducing greenhouse gas emissions remain unclear (Liem et al., 2024).

The absence of environmental awareness and residents' non-adherence to waste management practices lead to elevated costs for waste management services (Setiawan et al., 2019). This should be supported by the behavior of people who obey the system set by the government. So, it is necessary to foster environmental awareness through social regulation (Amirudin, Inoue, and Grause, 2023). The waste bank is a social innovation that reflects the community's environmental awareness. Waste banks represent a form of social engineering designed to foster community participation in waste management. They offer practical advantages, including financial savings for the community through job creation in waste bank operations and opportunities for investment. By promoting waste banks, communities can enhance their awareness, attitudes, and socio-economic empowerment in managing solid waste. (Bagastyo, Anggrainy, and Maharani Wiguna Hidayat Liang 2023). This reflects the potential of sustainable practices in reducing environmental impacts and encouraging community engagement (Etim, 2024).

The presence of the Bina Bhakti Lingkungan Foundation's Waste Bank Program provides an opportunity for collaboration with the Bank Sampah Induk Surabaya (BSIS) (Noviyanti et al., 2023). This program significantly supports the circular economy transition through various community-based waste management programs and approaches in Surabaya (Larasati & Santoso, 2023). This program was established in response to the increasing volume of waste in Surabaya (Bahtiar, 2023). The Bina Bhakti Lingkungan

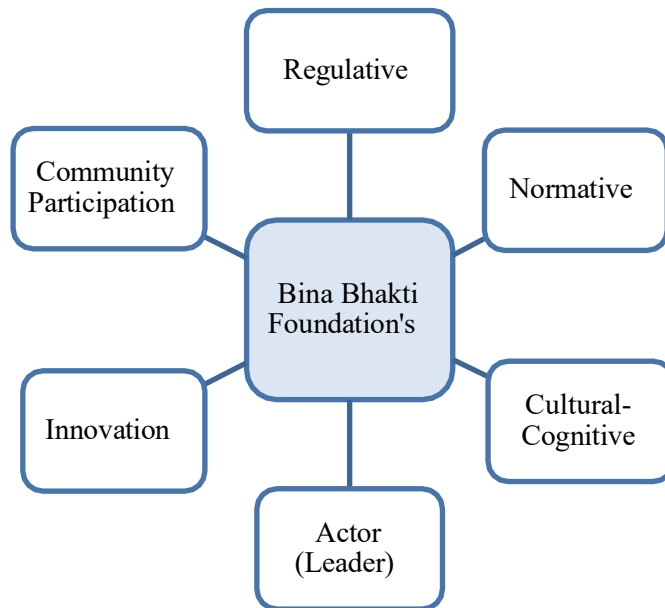
Foundation is an organization established through community initiatives. Its operations are governed by legal procedures and moral and cultural frameworks that grant it legitimacy. Institutions focus on aspects such as property rights, social order, and the processes of institutionalization and deinstitutionalization. These elements serve as mechanisms to regulate actors' access to resources and institutions, ultimately influencing performance in various ways (Scott, 2014).

**Table 1.** Three Pillars of Institutions

	Regulative	Normative	Cultural-Cognitive
Basic of Compliance	Experience	Social obligation	Taken for granted
			Shared understanding
Basic of Order	Regulative rules	Binding expectations	Constitutive schema
Mechanisms	Coercive	Normative	Mimetic
Logic	Instrumentality	Appropriateness	Orthodoxy
Indicators	Rules	Certification	Common beliefs
	Laws	Accreditation	Shared logic of action
	Sanctions		Isomorphism
Affect	Fear Guilt/Innocence	Shame/Honor	Certainty/Confusion
Basic of Legitimacy	Legally sanctioned	Morally governed	Comprehensible
			Recognizable
			Culturally supported

Source: (Scott, 2014)

The table shows the legitimacy of each institution's pillar, as Scott (2014) described. The regulative pillar emphasizes the rules that regulate and provide pressure and obligations in the organization. The logic of this pillar is to focus on goals and results (goal-oriented). So, the actions taken are based on rational calculations. The normative pillar emphasizes the rules of norms and social expectations. Decisions or actions are taken because they prioritize the suitability of norms and ethics based on social and cultural contexts. The Cultural Cognitive pillar emphasizes traditions, beliefs or established principles. So, decisions or actions are based on the view that this method is the correct tradition because it has been widely accepted and inherited. This situation can be called isomorphism, the condition of an organization in an environment that has been homogeneous and acts similarly. So that. The framework of this research can be explained as follows.



**Figure 1.** The framework of thinking on the institutional structure of the Bina Bhakti Lingkungan Foundation's

This study aims to examine the institutionalization process of the Bina Bhakti Lingkungan Foundation through the lens of institutional pillars: regulative, normative, and cultural-cognitive. The regulative pillar focuses on enforcing rules and sanctions, the normative pillar encompasses evaluative standards and obligations, and the cultural-cognitive pillar reflects shared beliefs and frameworks that shape the perception of meaning. Each pillar serves as a distinct foundation for establishing legitimacy. This study also examines the forces that strengthen and maintain these institutions: innovation, actors as agents of change and community participation (Sopandi, 2020).

## **METHOD**

This research uses a qualitative approach. Qualitative research explores questions that focus on understanding human lives' meaning, experiential aspects, and social contexts (Roderick, 2017). Qualitative research is employed to explore the meanings of social phenomena as directly experienced by individuals (Grossoehme, 2014). By employing a descriptive qualitative approach, this research seeks to uncover the underlying dynamics and mechanisms of the Bina Bakti Lingkungan Foundation's initiatives within the context of the environment and new social movements. This methodology facilitates a detailed understanding of how the foundation mobilizes resources, engages community stakeholders, and addresses pressing social issues in Surabaya.

Furthermore, it allows for identifying emergent themes and patterns, contributing to a nuanced analysis of the foundation's strategies and impacts. This research approach ultimately enhances the comprehension of grassroots organizational efforts and their significance within contemporary social movements and institutional theories. Data were gathered through literature reviews and in-depth interviews with key figures, including foundation leaders, staff, volunteers, and beneficiaries, to capture diverse perspectives. Additionally, non-participant observation of the foundation's activities and a thorough review of relevant documents, such as annual reports and policy briefs, are utilized to triangulate findings and ensure data reliability.

## **FINDINGS AND DISCUSSION**

### **Findings**

Yayasan Bina Bhakti Lingkungan is engaged in charitable activities, education, and entrepreneurial training to help the community preserve the environment. This foundation also strives to apply the principles of a circular economy to build independence and sustainability in the community. Initially, this foundation was the Bina Mandiri Waste Bank, then transformed into a legal entity as a Foundation. In addition to the environmental movement originating from independent local initiatives, the Bina Bhakti Lingkungan Foundation collaborates with the Surabaya City Government and PLN UID East Java through CSR (Corporate Social Responsibility) activities.

### **Discussion**

Yayasan Bina Bhakti Lingkungan facilitates community involvement in managing the Waste Bank. By advancing institutionalization processes, household waste can be reduced.

#### **1. Pillar of Regulative**

The regulative pillar suppresses and regulates sanctions. It also exists binding policies and general objectives to be achieved. The city of Surabaya is a big city that has problems with waste production from industry and households. Several Regional Regulations on waste management are as follows.

- a. Mayor Regulation Number 33 of 2017 concerning Procedures for Issuing Waste Management Business Activity Permits.
- b. Mayor Regulation No. 64 of 2018 concerning Policies and Strategies for Managing Household Waste and Waste Similar to Household Waste is a derivative regulation of Government Regulation No. 81 of 2012.
- c. Mayor Regulation No. 10 of 2017 concerning Procedures for Imposing Administrative Sanctions for Violations of Surabaya City Regional Regulation Number 1 of 2019 concerning Waste Management and Cleanliness of Surabaya City
- d. Mayor Regulation No. 16 of 2022 concerning Reducing the Use of Plastic Bags in Surabaya City.
- e. Mayor Regulation Number 22 of 2023 concerning Waste Tariffs and Contributions in the Use of Regional Public Service Agency Services

Local government regulations are the legal basis for waste management by the Bina Bhakti Lingkungan Foundation. This regulation is binding and has a clear purpose. The general objective is to provide transparent governance for implementing and managing waste in Surabaya to realize better environmental health. The Bina Bhakti Lingkungan Foundation implements institutional governance that demonstrates compliance with various government regulations, especially in Mayor Regulation 33 concerning waste management business permits, which contain the substance of the scope, authority, licensing procedures, validity period, and re-registration. This regulation also affects various parties involved in the community, including RT and RW heads, community partners of waste banks, and private parties who work with the Bina Bhakti Lingkungan Foundation and collaborate in activities at the Bank Sampah Induk Surabaya.

#### **2. Pillar of Normative**

The normative pillar emphasizes the rules of norms and social expectations. Decisions or actions are taken because they prioritize the suitability of norms and ethics based on social and cultural contexts. The growth of the environmental movement at Bina Bhakti Lingkungan Foundation is based on moral encouragement and social expectations of the community. The community needs an organization to gather initiatives and forms of

environmental protection through household waste management. In addition, the Bina Bhakti Lingkungan Foundation also participates in various support activities for environmental workers, such as street sweepers and waste pickers. This support includes providing safety training and other social assistance. In internal management, employees' social expectations are reflected in the green knowledge and skills possessed by Bank Sampah Induk Surabaya employees. Thus, these capabilities can provide provision to the community.

### 3. Pillar of Cultural Cognitive

The cultural Cognitive pillar emphasizes traditions, beliefs or established principles. The decisions or actions taken are based on the view that this method is the correct tradition because it has been widely accepted and inherited. Cultural Cognitive conception can be reflected in the involvement of almost all employees who also deposit waste into the Surabaya Main Waste Bank. In addition, managers at Bina Bhakti Lingkungan Foundation also work on and implement green lifestyles such as the use of detergents with natural raw materials, the application of eco enzymes for plants around housing, the application of eco projects, participation in eco Ramadhan and eco urban every year. So, the understood norms have become a tradition in the work environment and daily life - to realize the ethics of environmental cleanliness starting from oneself, family and the nearest community.

### 4. Pillar of Actor (Leader)

The leading actor was inspired to build a waste management movement after witnessing the high number of unemployed and cleaning workers who had additional income. The leading actor networked with the government, private sector and several companies that provided CSR funds so that they could strengthen and expand the impact of the movement. Clarity of standard operating procedures involving mechanisms, division of primary tasks, systems and procedures for implementing waste management policies, functions and authorities, and responsibilities between policy actors that ensure the success of the implementation of waste management policies. The waste management policy in the Bank Sampah Induk Surabaya program under the auspices of the Bina Bhakti Lingkungan Foundation and under the guidance of PT. PLN (Persero) has a standard operating procedure used as a reference for mechanisms, systems, and resources.

### 5. Pillar of Innovation

This foundation develops social welfare programs, including compensation for cleaning workers, caring for cleaning workers, food donations, eco Ramadhan and eco urban. Eco projects carried out by the Bina Bhakti Lingkungan Foundation include recycling organic waste to produce eco-enzymes, recycling inorganic waste as a plant medium (flowers and hydroponics), sorting waste to be saved at the Bank Sampah Induk Surabaya. In addition, to support the sustainability of the program, the Bina Bhakti Lingkungan Foundation drives environmental entrepreneurship programs, including empowering environmental entrepreneurial communities, environmental entrepreneurial character education, Bank Sampah Induk Surabaya, minimal waste stalls and other eco-projects. This program is not only completed in the movement that supports the foundation's financial independence. The Bina Bhakti Lingkungan Foundation also provides training in improving waste management skills through training and workshops, occupational safety and health training for scavengers and garbage collectors, and compensation in basic food packages.

### 6. Pillar of Community Participation

The Bina Bhakti Lingkungan Foundation movement requires solid community participation to expand the impact generated. One method used is through a campaign on social media. Digital activities on social media are utilized for advocacy and to expand public awareness of waste management. The foundation distributes communication through

socialization in several areas in Surabaya City regarding waste management. This seeks to increase public knowledge. This is a fact because community participation is an essential factor in waste management, including decision-making, and the attitude of community awareness on waste management actions is positively related to the performance of waste bank management (Larasati & Santoso, 2023). In addition, collaboration is carried out with academics and communities in waste processing. As a result, almost all universities in Surabaya have collaborated with the foundation. Community participation is also supported by clear and precise information so that the public does not feel confused regarding technical information such as waste collection, sorting rules, schemes, and provisions for free services to customers (schools and places of worship).

The ability of employees' green knowledge and skills is good enough to manage and guide residents in safe and efficient waste management. This increases public awareness of environmental cleanliness that can be processed and managed to produce wider benefits. The foundation carries out a closed employee recruitment method. This is done by only accepting employees from management references or through recommendations from other employees. The reason behind this is that this field of work requires remarkable potential and expertise in handling green work. Uniquely, the waste management business can also apply an inclusive approach to women and disabilities. Female workers are considered more diligent in sorting waste by type and color. In addition, several disabled workers are also involved in waste management. They are empowered in waste management MSMEs. This is also influenced by the fact that waste management is labor-intensive, which can inclusively attract the productivity of women and vulnerable groups.

## **CONCLUSION**

The high population in Surabaya City caused a large waste load that had to be handled, both waste from households and waste from industry. Bina Bhakti Lingkungan Foundation, through Bank Sampah Induk Surabaya, collaborates with the Surabaya City government and various private and community parties to offer social and environmental-based waste management solutions. The Bina Bhakti Lingkungan Foundation's institution is analyzed based on institutional pillars, which show that in the regulative pillar, the foundation drives waste management efforts based on mayoral regulations that provide targets for community-based waste management. The Normative pillar shows that the waste management movement grows from legal demands and social. This movement is needed to provide practical solutions for waste utilization and management at the community level. The cultural cognitive pillar shows that the habitus of the Foundation managers also applies an environmentally sound lifestyle, such as using project results starting from their own homes and the local community. In parallel to institutional analysis, the strengthening of movement actors, types of movement innovations, and community participation. These three pillars also contribute to strengthening the community's environmental movement. It can be argued that internally, the regulative, normative and cultural cognitive pillars have implications for internal institutional reinforcement. While the actor, innovation and community participation pillars have implications for external institutional reinforcement.

## **REFERENCES**

- El Adawiyah, Sa`diyah, and A. I. Ramadhan. 2020. "Partisipasi Masyarakat Dalam Model Geulis (Gerakan Lingkungan Sehat) Perwujudan Desa Siaga Di Daerah Dramaga Bogor." *Baskara* 2(2):93–106. doi: 10.24853/baskara.2.2.93-106.
- Amirudin, Akhmad, Chihiro Inoue, and Guido Grause. 2023. "Assessment of Factors Influencing Indonesian Residents' Intention to Use a Deposit–Refund Scheme for PET

- Bottle Waste." *Circular Economy* 2(4):100061. doi: 10.1016/j.cec.2023.100061.
- Anokye, Kwame, Ohene Boansi Apea, Abigail Okyere Darko, and Luther Adjei Kwabi. 2024. "The Future of Waste Management in Ghana: Assessing the Feasibility and Scalability of Smart Waste Solutions amidst Key Adoption Challenges." *Cleaner Waste Systems* 9(November):100183. doi: 10.1016/j.clwas.2024.100183.
- Bagastyo, Arseto Yekti, Anita Dwi Anggrainy, and Mega Sally Maharani Wiguna Hidayat Liang. 2023. "Assessment of Attitude and Participation Level among the Households and Local Merchants toward Single-Use Plastic Waste Management: A Case Study in Balikpapan Municipality, Indonesia." *Case Studies in Chemical and Environmental Engineering* 7(April):100361. doi: 10.1016/j.cscee.2023.100361.
- Deborah, Natashia, and Mushonnifun Faiz Sugihartanto. 2024. "Assessment of Sustainable Packaging Supply Chain Management Using the Life Cycle Assessment Method (Case Study: FMCG Company in Indonesia)." *Procedia Computer Science* 234:654–62. doi: 10.1016/j.procs.2024.03.051.
- Dinas Kependudukan dan Catatan Sipil Kota Surabaya. 2023. "Rencana Kerja Dinas Kependudukan Dan Catatan Sipil Kota Surabaya Tahun 2023."
- Etim, Emma. 2024. "Leveraging Public Awareness and Behavioural Change for Entrepreneurial Waste Management." *Heliyon* 10(21):e40063. doi: 10.1016/j.heliyon.2024.e40063.
- Grossoehme, Daniel H. 2014. "Overview of Qualitative Research." *Journal of Health Care Chaplaincy* 20(3):109–22. doi: 10.1080/08854726.2014.925660.
- Hapsari, Dwi Retno. 2016. "K Omunikas I." *JIPSI - Jurnal Ilmu Politik Dan Komunikasi UNIKOMurnal Komunikasi* 01(01):25–36.
- Hidayat, Alfian. 2017. "Konstruksi Gerakan Sosial : Efektivitas Gerakan Lingkungan Hidup Global." *Jurnal Administrative Reform* 5(2):56. doi: 10.52239/jar.v5i2.662.
- Identity-, Mobilizationtheory D. A. N., and Oman Sukmana. 2016. "Konvergensi Antara Resource Mobilizationtheory Dan Identityoriented Theorydalam Studi Gerakan Sosial Baru." *Jurnal Sosiologi Reflektif* 8(1):39–62.
- Larasati, Aida Fitri, and Eko Budi Santoso. 2023. "Faktor-Faktor Yang Mempengaruhi Transisi Ekonomi Sirkular Dalam Pengelolaan Sampah Rumah Tangga Di Kota Surabaya." *Jurnal Penataan Ruang* (August):9. doi: 10.12962/j2716179x.v18i1.17229.
- Liem, Yunus Fransiscus, Aulia Ulfah Farahdiba, I. D. A. A. Warmadewanthi, and Joni Hermana. 2024. "Transition of Greenhouse Gas Emission Reduction from the Management of Municipal Solid Waste in Surabaya, Indonesia: Assessment on Past and Future Prospective Conditions." *Case Studies in Chemical and Environmental Engineering* 10(September):100995. doi: 10.1016/j.cscee.2024.100995.
- Naufal Rofi, Muhammad, and David Efendi. 2023. "Kelembagaan Gerakan Forum Komunitas Hijau Terhadap Kebijakan Ruang Terbuka Hijau Di Kota Depok." *Parabela: Jurnal Ilmu Pemerintahan & Politik Lokal* 3(1):14–25. doi: 10.51454/parabela.v3i1.674.
- Noviyanti, Noviyanti, Hesti Inggrit Noviani, Sovianti Octaviasari, Noor Kemia, Fahmi Bargoyah, Deevana Baihaqy, and Putri Septiani Zulfa. 2023. "Implementasi Kebijakan Pengelolaan Sampah Melalui Program Bank Sampah Induk Surabaya (Studi Di Bank Sampah Unit Kelurahan Ngagelrejo, Kecamatan Wonokromo, Kota Surabaya)." *Transparansi : Jurnal Ilmiah Ilmu Administrasi* 6(1):55–71. doi: 10.31334/transparansi.v6i1.2997.
- Rizal Bahtiar, Shela Aulia Rahmadhani. 2023. "Analisis Sistem Kelembagaan Bank Sampah Induk Dalam Pengelolaan Sampah Berkelanjutan Di Kota Surabaya." *Bekasi Development Innovation Journal (Bdi)* 1(1):17–28.
- Rochwulaningsih, Yety. 2017. "Dinamika Gerakan Lingkungan Dan Global Environmental Governance." *Jurnal Sejarah Citra Lekha* 2(2):151. doi: 10.14710/jscl.v2i2.16188.
- Roderick, Eleri. 2017. "Research." *Rural Healthcare* 135–40. doi: 10.1201/9781315379050-11.

- Sakcharoen, Thammananya, Wilailuk Niyommaneerat, Bualuang Faiyue, and Thapat Silalertruksa. 2023. "Low-Carbon Municipal Solid Waste Management Using Bio-Based Solutions and Community Participation: The Case Study of Cultural Tourism Destination in Nan, Thailand." *Heliyon* 9(11):e22025. doi: 10.1016/j.heliyon.2023.e22025.
- Sanjaya, Andreas Ryan. 2018. "Wacana Lingkungan Dalam Gerakan Sosial Digital." *JURNAL IPTEKKOM : Jurnal Ilmu Pengetahuan & Teknologi Informasi* 19(2):133. doi: 10.33164/iptekkom.19.2.2017.133-148.
- Scott, W. Richard. 2014. *Institutions and Organizations: Ideas, Interests, and Identities*. Setiawan, Rulli Pratiwi, Shinji Kaneko, and Keisuke Kawata. 2019. "Impacts of Pecuniary and Non-Pecuniary Information on pro-Environmental Behavior: A Household Waste Collection and Disposal Program in Surabaya City." *Waste Management* 89:322–35. doi: 10.1016/j.wasman.2019.04.015.
- Sopandi, Andi. 2020. *Establishing Institutional Network In Early Warning Systems Of Social Conflict In Bekasi City*. Disertasi pada Universitas Padjajaran.
- Tansel, Cemal Burak, and Lisa Tilley. 2024. "Reproducing Socio-Ecological Life from below: Towards a Planetary Political Economy of the Global Majority." *Review of International Studies* 50(3):514–33. doi: 10.1017/S0260210524000251.
- Ummah, Masfi Sya'fiatul. 2019. "Deep Ecology Religions." *Sustainability (Switzerland)* 11(1):1–14.