

## Institutional Strengthening Strategy Implementation of *Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah (GPBLHS)* at Junior High Shool Level in Ciamis Regency

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### Abstract

The purpose of this study is to examine and analyze institutional strengthening in the implementation of the School-Based Environmental Care and Culture Movement/*Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah* (GPBLHS) program at the junior high school level in Ciamis Regency, to identify factors that hinder the effective institutional strengthening of the GPBLHS program, and to develop strategies for enhancing its institutional implementation. This study uses a descriptive analysis method with a qualitative approach. The results show that the institutional strengthening of the GPBLHS program at the junior high school level in Ciamis Regency, specifically in terms of individual capacity and organizational capacity, has not been well implemented. There is still a need for more concrete efforts regarding the availability of resources, budgets, monitoring, and private sector involvement. Meanwhile, environmental capacity has reached an optimal level. Factors that contribute to the ineffectiveness of institutional strengthening in the GPBLHS program include limited human resources and budget support, inadequate coordination and communication between local government agencies, weak monitoring, and a lack of commitment among stakeholders. The strategies for strengthening the implementation of the GPBLHS program at the junior high school level in Ciamis Regency include enhancing individual capacity, organizational capacity, and environmental capacity. The novelty of this research lies in the finding that strengthening capacity at the individual, organizational, and environmental levels can be effectively achieved through leadership commitment and active participation from school communities.

**Keywords:** *Strategy, Institutional Strengthening, GPBLHS.*

### INTRODUCTION

The environment is the foundation of life, encompassing all the elements and conditions, including humans and their actions, that exist in the space they occupy. It plays a critical role in sustaining human life and wellbeing. A healthy and sustainable environment is a fundamental

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right for every citizen of Indonesia, as enshrined in Article 28H, Paragraph (1) of the 1945 Constitution of the Republic of Indonesia. Hence, every living being requires a conducive environment to thrive. Human life is intricately connected to its surroundings, and there exists a reciprocal relationship between humans and the environment, where each influences the other. Therefore, the quality of the environment is vital for supporting the life within it.

The decline in environmental quality is often due to negligence, lack of ethics, and disregard for moral responsibilities toward the surrounding environment. This degradation typically results from human actions driven by the ever-growing demand for resources, leading to excessive exploitation of nature, which disrupts the natural balance. Therefore, human attitudes and behaviors play a pivotal role in determining the environmental conditions, be they good or poor.

Maintaining a high-quality environment is not solely the responsibility of the government; it requires collective efforts from all sectors of society. There needs to be a strong collaboration between the government and the community in managing the environment, each performing tasks based on their abilities and authority. The 2019 Environmental Protection and Management Law (Law No. 32/2019) acknowledges the critical importance of environmental preservation, emphasizing that the deteriorating quality of the environment threatens the continuity of human life and other living organisms. As a result, it calls for consistent and sincere efforts in the protection and management of the environment by all stakeholders.

Various programs have been initiated by the government to raise awareness and engage the public in environmental protection efforts. These initiatives aim to minimize environmental degradation and address pressing environmental issues by fostering a sense of responsibility and care among the population. One such program is environmental education, which plays a key role in promoting environmental awareness. It is an individual's right to access environmental education, as affirmed in Article 65, Paragraph (2) of Law No. 32/2009. Environmental education aims to enhance knowledge, skills, attitudes, and actions concerning environmental issues, ensuring sustainable development for present and future generations.

Schools serve as influential institutions in shaping the society of tomorrow. As a social system, schools operate through a network of activities that interact and form a cohesive social entity, enabling the creation of individuals who can contribute positively to society. According to Law No. 32/2009, society has the right to actively participate in environmental protection and management. Collaboration between the government and schools is crucial for fostering a culture of environmental consciousness, which is essential for creating a sustainable and environmentally friendly educational environment. The government can support this initiative by incorporating environmental issues into the curriculum, allocating resources and funding for

environmental activities, and providing incentives or awards to schools that excel in environmental preservation.

Since its introduction in the 1970s, environmental education in Indonesia has faced challenges in its implementation, particularly in terms of dissemination and awareness, leading to suboptimal results. One of the key factors hindering progress has been the lack of knowledge and support from both the governing bodies and the schools themselves. As a result, environmental education has not been fully integrated into the educational system. To address this gap, the Ministry of Environment and Forestry initiated the Adiwiyata program in 2006, a national effort aimed at promoting environmental culture within schools. This program encourages schools to integrate environmental education into both curricular and extracurricular activities, fostering a more profound understanding of environmental responsibility among students, teachers, and the wider school community.

The Adiwiyata program has seen significant growth and impact across Indonesia, reaching all provinces by 2007. The program not only focuses on the physical environment of the school but also on raising awareness and creating a culture of sustainability within the school community. The government's involvement, in collaboration with various stakeholders, has been essential to the success of the program, as schools are encouraged to actively engage in environmental conservation and management. In 2019, the program underwent revisions, resulting in the introduction of two regulations: the Ministry of Environment and Forestry Regulation No. P.52/2019 on the Environmental Care and Culture Movement in Schools (GPBLHS) and the Adiwiyata Award Regulation No. P.53/2019. These regulations emphasize the importance of environmental care and the creation of an environmentally friendly school environment, while also recognizing schools for their efforts in achieving this goal.

Despite the progress made, the implementation of the GPBLHS program in junior high schools (SMP) in Ciamis Regency remains limited, with only 25.9% of schools participating in the program. This low participation rate highlights the need for stronger institutional support and collaboration among local government agencies. Although national efforts have been made to strengthen the collaboration between various ministries, the lack of clear coordination at the local level has hindered the program's effectiveness. A more concerted effort, with the active involvement of all stakeholders, is necessary to ensure the success of the GPBLHS program in Ciamis Regency and the continued preservation of the environment.

The existing research on environmental education in schools provides various perspectives on how environmental education programs are integrated into the curriculum and school activities to shape students' environmentally conscious behavior. Several studies highlight the importance of a school-based approach in developing environmental education, as seen in the Adiwiyata program (Nurhafni et

al., 2019; Umi Fadlilah et al., 2019). This program focuses on shaping students' character through the integration of sustainability principles into everyday school activities, such as waste management, energy efficiency, and natural resource management. Research like that conducted by Lalieta Somwaru (2017) also explores the implementation of school-based programs that combine practical aspects with theory, encouraging students to be directly involved in environmental management activities.

Other studies, such as the one by Purabi Bose (2017), focus more on community-based forest management, examining how the strength of local institutions can influence the success of environmental policies. This research emphasizes the importance of community involvement in environmental management, rather than just formal education in schools.

Studies by Muhammad Akib (2017), and Gould et al. (2018) discuss the importance of institutional policies and their relationship with environmental preservation practices, as well as the impact of culture on students' environmental behavior. Their findings show that the success of environmental education is highly dependent on supporting policies and external factors, such as local culture, that can influence behavioral change.

Other research, such as that conducted by Ellen Landriany (2022) and Siti Nurwaqidah et al. (2019), focuses on the implementation of school environmental policies, particularly those related to *Adiwiyata*. These studies found that although many schools have implemented the program, challenges in its execution still persist, especially in terms of commitment and the involvement of all stakeholders.

This article aims to examine the implementation of the GPBLHS program in junior high schools in Ciamis, with a particular focus on the role of institutional strengthening and collaboration between government agencies. By understanding the challenges and opportunities in the local implementation of this program, the research seeks to provide recommendations for enhancing the effectiveness of environmental education and fostering a more sustainable future for the community. This study emphasizes the institutional strengthening strategy within the context of the GPBLHS program, which not only focuses on environmental education at the student level but also on how environmental policies are implemented and strengthened through institutions at the regional level. This research likely considers the role of local government, schools, and the community in supporting the implementation of this policy, aiming to create a sustainable system that involves multiple stakeholders. The focus on local policies, community involvement, and institutional capacity building at the regional level distinguishes this research from others, which primarily focus on direct application at the school or individual level, such as studies on the *Adiwiyata* program or nature-based schools.

## **LITERATURE REVIEW**

Matachi (2006) defines capacity building as a process designed to enhance the efficiency, effectiveness, and responsiveness of government performance. Institutional capacity building refers to efforts aimed at strengthening the capacity of individuals, groups, or organizations through the development of skills, potential, and competencies. The goal is to enable these entities to adapt and thrive amidst rapid and unforeseen changes. Institutional capacity building involves a series of activities, typically spanning several stages, that foster the development of capacities within individuals, systems, or organizations.

Morisson (2018) further explains that capacity building is a multi-level process that aims to induce change across individuals, groups, organizations, and systems. It seeks to strengthen the self-adaptive capabilities of people and organizations to respond to changing environments continuously. As a learning process, capacity building links ideas to action, emphasizing actionable learning. It is designed to equip governments, communities, and individuals with the skills and expertise required to achieve their goals. Capacity building programs often focus on strengthening the ability to evaluate policy options and implement decisions effectively. These programs may involve education, training, legal and institutional reforms, as well as financial, technological, and scientific assistance.

Philbin (2016) echoes similar sentiments, stating that capacity building involves helping governments, communities, and individuals develop the skills needed to achieve their objectives. Such programs typically include a combination of education, training, institutional reforms, and other forms of support, aimed at improving the quality of human resources and enabling organizations to operate effectively.

According to Keban (2009), in the context of governance, institutional capacity building is a series of strategies aimed at improving the efficiency, effectiveness, and responsiveness of government performance, with a focus on human resource development, organizational strengthening, and institutional or environmental reforms. This approach emphasizes that not all aspects of capacity need to be enhanced simultaneously. A critical component of institutional capacity is the ability to interpret and respond appropriately to the specific challenges faced.

Gandara (2008) identifies five key factors in institutional capacity building, which include collective commitments, conducive leadership, institutional reform, and strengthening organizational strengths and weaknesses. Institutional capacity ultimately affects an organization's performance. It encompasses human resources, knowledge, processes, physical resources, infrastructure, technology, financial resources, strategic leadership, program management, and inter-organizational relationships.

Matachi (2006:4) emphasizes that institutional strengthening should focus on three levels:

1. Individual Capacity: This includes knowledge, skills, values, attitudes, health, and awareness, developed through education, training, and on-the-job learning.
2. Organizational Capacity: This involves human resources, physical resources, intellectual resources, organizational strategy, production technology, and leadership systems that influence the organization's performance.
3. Environmental Capacity: This refers to the systems and frameworks needed to form and implement policies beyond individual organizations, including political, economic, legal, and social systems.

Strengthening capacity at these levels ensures the effectiveness and responsiveness of an institution in achieving its goals. At the individual level, capacity building focuses on recruitment, competency mapping, training, job placement, and creating a conducive work environment. At the organizational level, capacity building involves improving management instruments to enhance the functionality of organizational structures and processes. At the environmental level, institutional reforms are needed to modify the "rules of the game" and create a more efficient and effective framework for policy implementation.

In the context of the *Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah (GPBLHS)* program, institutional capacity building extends beyond individual and organizational levels, requiring additional strategies to optimize local government capabilities in Ciamis Regency. The program's focus is not solely on individual behaviors but also on systemic and organizational changes that support sustainable environmental practices in schools. By fostering stronger connections between local governments, schools, and other stakeholders, this approach aims to create a cohesive and adaptive strategy for environmental education and policy implementation.

In conclusion, while capacity building at the individual and organizational levels is widely recognized, effective institutional strengthening in the context of environmental programs like GPBLHS requires attention to broader systemic and environmental factors, as well as innovations in policy and governance. This comprehensive approach ensures the sustainability and success of such programs at the regional level.

## **METHOD**

The object of this research is the strategy for strengthening institutional capacity in the implementation of the School-based Environmental Awareness and Culture Movement Program (GPBLHS). The subjects of this study are middle schools (SMP) in Ciamis Regency. The research method used is a case study, which is a qualitative approach aimed at exploring a particular case in depth by gathering diverse sources of information (Patton, 2011; Moleong, 2007; Lincoln & Guba, 2014).

Data collection techniques include literature review, observation, and in-depth interviews. Due to the researcher's geographical constraints and time efficiency, the sample selected represents one school from each of the 27 districts in Ciamis Regency. The data analysis technique follows 12-step classification. The next step involves conducting a SWOT analysis to identify internal factors, including strengths and weaknesses. Additionally, external factors are analyzed to determine opportunities and threats that impact the strengthening of institutional capacity in implementing the GPBLHS program at the middle school level in Ciamis Regency.

## **RESULTS AND DISCUSSION**

### **Institutional Strengthening in the Implementation of the Environmental Care and Culture Movement Program in Schools (GPBLHS) at the Junior High School level in Ciamis Regency**

Institutional strengthening in Environmental Care and Culture Movement Program in Schools (GPBLHS) requires approaches from various scientific disciplines such as organization, psychology, sociology, anthropology, law and economics to produce a comprehensive analysis. Institutional experts focus on codes of ethics, rules, structure, function and management of organizations. The GPBLHS program at Ciamis Regency Middle School includes curriculum learning, extra-curriculum, implementation of environmentally friendly behavior, networking, campaigns, publications, and empowerment of Adiwiyata Cadres to form students' characters who care about the environment. Environmental education is encouraged by Law No. 32 of 2009 to change people's behavior and build awareness in environmental conservation.

#### **1. The Individual Level**

Individual capacity, including knowledge, skills and work ethics, is crucial in increasing the productivity and efficiency of public services. Fostering discipline and work awareness is essential to achieve organizational goals effectively. Formal and non-formal education programs provide a foundation for developing apparatus competencies, although improvements in sustainable development strategies are needed. Evaluation of the implementation of the GPBLHS Program in Ciamis Regency shows the need to integrate individual capacity with organizational needs to achieve optimal vision and mission goals.

#### **2. The Organization Level**

In implementing the Environmental Care and Culture Movement Program in Schools (GPBLHS) at the Ciamis Regency Middle School level, efforts to create a conducive work culture for work personnel are the main key in achieving program goals effectively and sustainably. A conducive work culture creates an environment where employees feel motivated, collaborate effectively, and contribute optimally to achieving common goals.

The importance of developing structured standard operating procedures (SOP) cannot be overlooked. SOP is a clear guide for every

employee in carrying out their duties, ensuring that every step is carried out in accordance with established procedures. This not only ensures consistency in program execution, but also increases operational efficiency and reduces the risk of errors.

Apart from that, the formation of an effective monitoring team is very necessary to monitor and evaluate the implementation of SOPs on a regular basis. This team will be responsible for ensuring that each program activity is carried out with discipline and in accordance with established standards, thereby minimizing potential deviations and improving the quality of the results produced.

The leadership's visionary attitude and character are the determining factors in strengthening this conducive work culture. A school principal or visionary leader has the ability to formulate an inspiring and clear vision related to the implementation of GPBLHS. This vision not only serves as a guide in directing the long-term goals of the program, but also motivates all staff and students to actively participate in maintaining the school environment.

The integration of a conducive work culture with visionary leadership will create a work environment that is dynamic, creative and responsive to change. This not only improves the quality of the GPBLHS program, but also has a significant positive impact on the school environment and society as a whole. Thus, collaboration between structured SOPs, strict supervision, and visionary leadership will be a strong foundation in maintaining the sustainability and success of the GPBLHS Program in Ciamis Regency Middle Schools.

### 3. The Environmental Level

Capacity building refers to the ability to carry out tasks or work so as to produce the desired goods or services. It includes skills, understanding, attitudes, values, interpersonal relationships, behavior, motivation, resources, and conditions that enable individuals, organizations, or broader systems to achieve stated development goals.

Capacity development, or capacity building, is a process in which individuals, groups, or organizations increase their ability to improve performance efficiently, effectively, and responsively. Efficiency means optimizing the use of time and resources to achieve certain results, while effectiveness measures the extent to which expected goals are achieved. Responsiveness reflects the ability to adapt needs and capabilities well.

At the operational level, effectiveness is seen from the achievement of predetermined goals, where a well-designed system provides quality information for informed decision making. Information technology makes a major contribution to increasing organizational effectiveness and efficiency, by supporting communication, education, information management and business activities.

Institutional strengthening in the implementation of environmental programs in junior high schools in Ciamis Regency reflects optimal integration of various aspects of capacity, information technology and stakeholder commitment. This shows commitment to



increasing effectiveness, efficiency and responsiveness to achieve predetermined strategic goals.

### **Factors Causing the Ineffectiveness of Institutional Strengthening in the Implementation of the Environmental Care and Culture Movement Program in Schools (GPBLHS) at the Middle School Level in Ciamis Regency**

The Movement for Environmental Care and Culture in Schools (GPBLHS) at the junior high school level in Ciamis Regency faces several significant challenges that hamper its effectiveness. First, limited human resources and budget support are crucial. Adequate support from qualified experts is needed to manage this program optimally. In addition, the uneven quality of human resources affects the overall implementation of program activities. Second, the lack of coordination and communication between Regional Apparatus Organizations (OPD) causes a lack of synergy in program implementation. Weak coordination between relevant stakeholders also becomes an obstacle in preparing plans and implementing programs well. Third, a weak level of supervision over program implementation can hinder the achievement of the desired goals. Supervision that is not optimal can cause deviations in program implementation and reduce accountability for implementing activities. Fourth, partnership commitment between stakeholders that is not yet solid can hamper program efficiency. Strong cooperation is needed between the government, private sector and society to support sustainable program implementation. By overcoming these challenges, it is hoped that the GPBLHS Program in Ciamis Regency can run more effectively and have a significant positive impact on the environment and local communities.

### **Strategy for Strengthening Institutions in the Effective Implementation of the Movement for Environmental Care and Culture in Schools (GPBLHS) at the Middle School Level in Ciamis Regency**

In developing capacity at various levels, especially in the implementation of the Environmental Care and Culture Movement Program in Schools (GPBLHS) at the junior high school level in Ciamis Regency, there are several important aspects that must be considered. First, individual capacity is the main key in ensuring the effectiveness of this program. The individuals involved must be equipped with adequate knowledge, skills and attitudes related to the environment. This includes a deep understanding of environmentally friendly behavior and how to implement it in everyday life.

Apart from individual capacity, institutional strengthening is also very crucial. Institutions here include not only formal organizational structures, but also the norms that regulate interactions and activities in schools. Institutional strengthening ensures that all activities related to GPBLHS can run smoothly and in coordination. This involves the formation and empowerment of Adiwiyata Cadres, who play an

important role in leading and driving this movement at the school level.

Furthermore, organizational capacity is the foundation that enables schools to adapt and survive in facing the challenges of an ever-changing environment. Organizations that have strong capacity are able to manage resources efficiently and direct their initiatives in accordance with the mission and vision that they have set. This includes school environmental management, the Adiwiyata award program, and the integration of environmental values in the curriculum and extracurricular activities.

Finally, environmental capacity refers to the ability of schools to understand and manage the impact of their activities on the surrounding environment. This includes efforts in water conservation, energy, waste management, and biodiversity protection. By strengthening capacity at all levels, it is hoped that GPBLHS will be able to not only become an ordinary school movement, but become a model of sustainable environmental education and have a positive impact on the surrounding community.

Overall, capacity development in the GPBLHS context requires commitment and collaboration from all related parties, both at the individual, organizational and environmental levels. Only with a holistic and sustainable approach can schools play an active role in supporting environmental sustainability and building a young generation who cares about the future of our earth.

## **CONCLUSION**

The implementation of institutional strengthening for the GPBLHS at the junior high school level in Ciamis Regency is lacking in individual and organizational capacity, with insufficient resources, budget, supervision, and private sector involvement. However, capacity at the environmental level is effectively implemented. Key challenges include limited human resources, budget constraints, poor coordination among Regional Apparatus Organizations, weak supervision, and insufficient commitment from stakeholders. The strategy for institutional strengthening involves enhancing individual, organizational, and environmental capacities. A notable finding is the importance of leadership commitment and active participation from school communities for effective implementation.

## **REFERENCES**

- Akib, M. (2012). Wewenang Kelembagaan Pengelolaan Lingkungan Hidup di Era Otonomi Daerah. *Jurnal Media Hukum*, 19(2).
- Bose, P. (2008, July). Strengthening institutions: Panacea for tribal forest governance in India. In *Governing Shared Resources: Connecting Local Experience to Global Challenges, 12th Biennial Conference of the International Association for the Study of Commons, Cheltenham* (pp. 14-18).
- Bustomi, T., Suryadi, S., SP, E. Y., Erlangga, H., & Irawan, A. (2021). Penguatan Kelembagaan Kebijakan Pengembangan Desa Wisata

- Dengan Memanfaatkan Potensi Wisata Di Desa Legok Jawa Kecamatan Cimerak Kabupaten Pangandaran. *Community Engagement and Emergence Journal (CEEJ)*, 3(1), 97-103.
- Fadlillah, U., Ngabekti, S., & Lisdiana, L. (2018). The Adiwiyata School's Role in the Development of Character Caring for the Environment (A Case Study at the Junior High School 6 Tuban). *Journal of Innovative Science Education*, 7(1), 53-61.
- Gould, R. K., Krymkowski, D. H., & Ardoin, N. M. (2018). The importance of culture in predicting environmental behavior in middle school students on Hawai'i Island. *PLoS One*, 13(11), e0207087.
- Gandara, R. (2008). *Capacity Building Dosen pada Jurusan di Perguruan Tinggi Badan Hukum Miliki Negara*. Bandung: Alfabeta.
- Jeronen, E., Jeronen, J., & Raustia, H. (2009). Environmental Education in Finland--A Case Study of Environmental Education in Nature Schools. *International Journal of Environmental and Science Education*, 4(1), 1-23.
- Keban, Y. T. (2009). "Good Governance" dan "Capacity Building" sebagai Indikator Utama dan Fokus Penilaian. *Jurnal Perencanaan Pembangunan*.
- Landriany, E. (2022). Implementasi Kebijakan Adiwiyata dalam Upaya Mewujudkan Pendidikan Lingkungan Hidup di SMA Kota Malang. *Jurnal Kebijakan dan Pengembangan Pendidikan*, 2(1), 82-88
- Lincoln, Y. S., & Guba, E. G. (2004). *Naturalistic Inquiry*. California: Sage.
- Matachi, A. (2006). *Capacity Building Framework. Ethiopia: UNESCO/ICBA*. United Nations Economic Commission for Africa.
- Mirza, D. (2022). Mewujudkan Masyarakat Berkarakter Peduli Lingkungan Melalui Program Adiwiyata. *Sosio Didaktika: Social Science Education Journal*, 2(1), 31-37.
- Moleong, L. J. (2007). *Metodologi Penelitian Kualitatif*. Bandung: Remaja Rosdakarya.
- Morrison, T. (2019). *Actionable Learning-A Handbook for Capacity Building Through Case Based Learning*. ADB Institute.
- Nurwaqidah, S., & Ramli, M. (2019). Environmental literacy mapping based on adiwiyata and non adiwiyata at junior high school in Ponorogo. *KnE Social Sciences*, 179-190.
- Patton, M. Q. (2011). *Metode Evaluasi Kualitatif*. Yogyakarta: Pustaka Pelajar.
- Peraturan Menteri Lingkungan Hidup Nomor Tahun 2006 Tentang Program Sekolah Berbudaya Lingkungan.
- Peraturan Menteri Lingkungan Hidup Nomor 02 Tahun 2009 Tentang Pedoman Pelaksanaan Program Adiwiyata.
- Peraturan Menteri Lingkungan Hidup Nomor 5 Tahun 2013 Tentang Pelaksanaan Program Adiwiyata.
- Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor 52 tahun 2019 Tentang Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah

- Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor 53 tahun 2019 Tentang Penghargaan Adiwiyata.
- Petrigna, L., Thomas, E., Scardina, A., Rizzo, F., Brusa, J., Camarazza, G., ... & Bellafiore, M. (2022). Methodological considerations for movement education interventions in natural environments for primary school children: A scoping review. *International journal of environmental research and public health*, 19(3), 1505.
- Philbin, A. (2006). *Capacity Building in Sosial Justice Organizations*. New York: Ford Foundation.
- Simba, D., Mukose, A., & Bazeyo, W. (2014). Institutional capacity for health systems research in East and Central African Schools of Public Health: strengthening human and financial resources. *Health research policy and systems*, 12, 1-10.
- Somwaru, L. (2016). The Green School: a sustainable approach towards environmental education: Case study: A cooperation between the Suriname Conservation Foundation (SCF) State Oil Foundation for Community Development and the Suriname Waste Management Foundation (SUWAMA). *Brazilian Journal of Science and Technology*, 3, 1-15.
- Sugiyono. (2012). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Syahza, A. (2019). The Strategy of Environmental School through the Program of National Adiwiyata School in Pekanbaru (High School Level). *Interdisciplinary Journal of Environmental and Science Education*, 15(1), e02204.
- Undang-Undang Nomor 32 Tahun 2019 tentang Perlindungan dan Pengelolaan Lingkungan Hidup.