

# Community Resistance to Development of The Semarang-Demak Sea Embankment Toll Road



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KEY WORDS	ABSTRACT
Community Resistance, Semarang-Demak, Sea Embankment, Toll Road	The Development of the Semarang-Demak sea embankment toll road (TTLSD) is a National Strategic Project (PSN) built to improve connectivity in the Pantura as well as to avoid tidal flood that occur in the Semarang area. However, this development has sparked controversy in the community, resulting in resistance to the construction of TTLSD, the issue must be studied more deeply. This research examines the emergence of community resistance to the development of TTLSD along with its forms and impacts. This type of research is qualitative with a case study research design. The results of the research show that the Tambakrejo community's resistance to the Semarang-Demak sea toll project is caused by economic losses including reduced fishing catches and damage to green mussel farming. Various forms of resistance have been carried out, such as solidarity actions demanding compensation for green mussel farming. This resistance made the community more aware of this issue, even though the community's demands were not met, the developer offered a solution, they offered 600 job vacancies and also the replacement of green mussel farmland media in the form of bamboo. Even though the people of Tambakrejo showed resistance to the construction of the sea highway through various forms of advocacy and negotiation, the development process continued without any significant intervention from the central government; Even though several mediation steps have been taken by local governments and developers, negative impacts on the local economy and community rights still persist, reflecting an imbalance in the decision-making process regarding infrastructure development.

## 1. INTRODUCTION

The transformation of the aquatic ecosystem and mangrove forests along the Semarang-Demak coast into the Semarang-Demak Sea Wall Toll Road (TTLSD) has created a critical issue that has attracted the attention of various parties, especially related to the detrimental environmental impacts. This toll road project was initiated by a government policy aimed at increasing infrastructure development to overcome flooding problems and encourage regional economic growth. However, the impact of this project is very significant for local

fishermen, who are now having difficulty catching fish. Land that previously functioned as ponds has been transformed into the ocean, causing a decrease in catches and narrowing of fishermen's fishing space. In addition, local communities are now facing the threat of increasingly frequent flooding, which is increasingly threatening their lives and livelihoods.

The chronology of community resistance against the construction of TTLSD began when the project was announced in 2018, when the community began to feel the negative impacts of the policy. Initially, resistance was carried out

conventionally through demonstrations and raising public opinion. One important symbolic action was the ceremony to commemorate the 79th anniversary of Indonesian independence which was held on the sea by the people of Tambakrejo Village, where around 60 residents used boats to voice their protests. This ceremony was not only an annual ritual, but also a symbol of the community's struggle against threats to their living space. Over time, the community realized the importance of expanding the reach of their resistance by utilizing information technology. In 2020, digital resistance began to emerge, with the use of social media as a tool to disseminate information and raise public awareness. Instagram accounts such as @malehdadisegoro and @walhijateng became the main platforms for conveying protests against the construction of TTLSD. Through this digital campaign, the community managed to reach a wider audience, both locally and nationally, so that the issues faced received greater attention.

To date, community resistance to the TTLSD project continues to grow, with a combination of conventional and digital strategies. Communities continue to organize demonstrations on the ground while also utilizing online platforms to discuss the impacts of this development, such as loss of livelihoods, damage to marine ecosystems, and increased flood risks. By combining these two approaches, communities are trying to attract public attention and create pressure on the government to listen to their voices. This study aims to evaluate the effectiveness of these resistance strategies and their impacts on public policy and the welfare of local communities.

The anatomy of community resistance to the construction of the Semarang-Demak Sea Wall Toll Road (TTLSD) shows a complexity and depth that involves more than just conventional and digital methods. In this context, conventional resistance carried out through demonstrations, symbolic actions, and mass mobilization is the initial foundation of this movement. The Tambakrejo Village community, for example, has carried out various actions in the field, such as holding an

independence commemoration ceremony on the sea to express their dissatisfaction. These actions have strong symbolic value, reminding the community and authorities of the importance of maintaining the living space and sustainability of the ecosystem they depend on.

However, along with the development of information technology, this resistance has expanded with the existence of digital strategies. Social media has become a powerful tool for the community to reach a wider audience and amplify their voices. By utilizing platforms such as Instagram, the community has succeeded in conveying the negative impacts of the TTLSD development more widely and deeply. This digital campaign not only disseminates information, but also encourages community participation in discussions about public policy and advocating for change. This shows that digital resistance not only functions as a communication tool, but also as a platform for mobilization and solidarity among activists.

In addition, the combination of conventional and digital resistance has created a powerful synergy, where both complement each other in building awareness and influence. Actions on the ground are often driven by discussions and campaigns that occur online, creating strong momentum for the movement. People can quickly organize actions based on the response and support they receive on social media, amplifying their message and influencing public opinion. Thus, the anatomy of this resistance includes not only methods, but also the interaction between various forms of advocacy, creating a holistic and integrated social movement in facing existing challenges. The following are examples of resistance activities both digitally and conventional. Conventional forms of resistance were carried out by the Tambakrejo Village Community.



Figure 1. Tambakrejo Village Community Protest

Source: Researcher documentation, 2024

Researchers conducted observations on August 17, 2024 by observing the form of rejection of the Tambakrejo Village community regarding the Semarang-Demak Sea Wall Toll Road Construction activity in their area. The rejection activities carried out by the community who were against the TTLSD Construction activity were very visible with the 79th Indonesian Independence Day commemoration ceremony on the sea, precisely at the green mussel fish aggregating device which is the source of livelihood for the majority of Tambakrejo residents today. This ceremony was attended by 60 residents using 13 boats. This ceremony began with a boat parade and ended at the green mussel fish aggregating device owned by the Tambakrejo fishing village cooperative. Although they routinely hold ceremonies to commemorate the Indonesian Independence Day, this time they did something different by holding a ceremony on the sea. This ceremony on the sea is not without reason, according to Zuki this is a way for the residents of the Tambakrejo Fishing Village to voice their harmony and concern about the current condition of their sea. In addition to the decreasing catch, according to him, the fishing space for fishermen is getting narrower day by day. Then what about the lives of Tambakrejo fishermen in the future, while Romadi is always the ceremony instructor, inviting Tambakrejo residents to fight to free themselves from the threat of sea grabbing and land grabbing

(eviction).

In addition, Iqbal Alma as the advocacy and campaign manager of WALHI Central Java said that Tambakrejo residents, the majority of whom work as traditional fishermen, must face various threats, ranging from the climate crisis, decreasing catches to the threat of losing fishing areas due to the pressure of city development interests. For example, on the left side of the Tambakrejo sea there will be a reclamation of the Tanjung Mas port, on the right side the Semarang-Demak sea wall toll road is being built and on the front of the Tambakrejo sea it enters the Tanjung Mas Port sea transportation area. So this ceremony on the sea is an expression that the living space of the Tambakrejo community is under threat. The following is an example of a digital resistance activity. The form of digital resistance was carried out by Instagram accounts named @malehdadisegoro and @walhijateng.



Figure 2, Protest by Walhi Central Java & Maleh Dadi Segoro Coalition Through Social Media  
Source: Researcher Documentation, 2024

Figure 2 is a protest carried out through the Instagram platform with the account names @malehdadisegoro, @walhijateng, @lbhsemarang, @koalisirakyatuntukhakatasair, @rujakcrus, and @walhinasional. The protest on Instagram media dissects all the impacts of the problems caused by the TTLSD Development. The form of rejection discusses ANDAL, the impacts include the loss of livelihoods of Tambakrejo residents, marine

biota cannot develop and then have an impact on the destruction of shrimp ponds, the risk of flooding is increasing, damage to the area due to the TTLSD project embankment, changes in sea water to the east worsen abrasion, wells that are affected by intrusion / cannot be used again. This is getting hotter because resistance from social media continues to be intensified.

Several previous studies have highlighted issues relevant to this study. Smith and Jones (2019), for example, in "Digital Activism and Environmental Change: Case Studies from Southeast Asia" examine how digital activism has been used in Southeast Asia to voice environmental issues and advocate for policy change. Dewi (2021) in "Transformation of Agricultural Land into Industry: Environmental Impact Study in Central Java" explores the impacts of the transformation of agricultural land into various forms of industry in Central Java, including its ecological and social impacts. In addition, Karim (2020) in "The Role of Government in Natural Resource Management: The Case of Shrimp Farming in Indonesia" analyzes the role and policies of government in natural resource management, with a focus on shrimp farming.

The research to be conducted is very relevant and urgent because it combines two important aspects, namely ecology and social movements. By identifying the impacts of TTLSD development and the role of social movements, this study not only adds to the academic understanding of these issues but also provides practical recommendations for the government, activists, and communities in overcoming the ecological crisis through technological innovation and public participation. Changes in TTLSD Development caused by government policies must be carefully examined to understand the extent to which these policies can be sustainable and do not harm the environment and local communities. In addition, the use of digital political media and conventional media in advocating environmental issues provides a new dimension in social movements. Movements such as the "Malih Dadi Segara" event that uses art performances and digital platforms to voice

protests show how social media and technology can be powerful tools in mobilizing public opinion and influencing policy. This study will evaluate the effectiveness of this strategy and provide guidance for activists and policymakers in using digital media for environmental advocacy. Thus, this study not only contributes to the academic literature on digital politics and social movements in the context of the environment in Indonesia, but also provides practical solutions that can be applied to overcome the ecological crisis faced. A comprehensive understanding of the interaction between government policies, environmental impacts, and the role of digital politics in advocacy can help create more effective strategies to maintain ecological balance and community welfare in the Semarang-Demak Coast.

## 2. METHOD

The research approach used in this study is a qualitative approach with a case study. According to Creswell (2013), a case study is a research method that emphasizes in-depth exploration of a phenomenon in a real-life context. This method is very relevant when researchers want to explore complex and dynamic events or phenomena, such as community resistance to the construction of the Semarang-Demak sea toll road in Tambakrejo Village. In this study, a case study will be used to understand the interaction between the community and the parties involved in the toll project, as well as the dynamics of resistance that emerge in the field.

The case study research process requires careful and structured observation. Researchers must have a clear observation plan, starting from the selection of participants, research locations, to the types of data to be collected. In the context of this research, observations are

focused on the activities of communities carrying out resistance, interactions between communities and project developers, and the use of social media as a means of disseminating information and mobilizing movements. This plan helps researchers collect relevant data and deepen their understanding of the phenomenon of resistance at the local community level.

Data collection in case study research is holistic and in-depth, where researchers utilize various data sources to build a comprehensive narrative. Data are obtained through in-depth interviews with key actors in community resistance, direct observations in the field, and documentation in the form of media reports and official records. In addition, in the digital era, social media is also an important source of data that can be used to analyze how community movements are formed, spread, and gain support. This approach allows researchers to see community resistance in a broader context, including social, economic, political, and environmental aspects.

### 3. RESULT AND DISCUSSION

#### **The emergence of resistance to the construction of the Semarang-Demak toll road in Tambakrejo and the actors involved**

The resistance of the Tambakrejo community to the Semarang Demak sea toll road construction project began with local concerns about the potential environmental and economic impacts. The project was planned to overcome tidal flooding and improve connectivity between Semarang and Demak. However, the Tambakrejo community, most of whom work as fishermen, feel that this development could destroy their livelihoods. The 42-hectare mangrove forest that is a natural habitat for marine products has been cleared, the construction site is located in a small-scale fishing area, limiting the reach of fishermen's

activities, and the productive green mussel cultivation area is threatened by the construction of the toll road, which has resulted in damage to the cultivation media and reduced green mussel harvests.



Figure 3, Land and Coastal Control Map of Tanjungmas Village, North Semarang District

Source: Central Java Environmental Forum, 2024 2024.

The image above explains the distribution of fish aggregating devices owned by residents of Tanjung Mas sub-district, where the fish aggregating devices owned by residents in the east are directly opposite the TTLSD development. Many residents feel that the development will worsen their conditions rather than improve them. They believe that this project benefits certain parties, especially developers and investors, rather than local communities who depend on the waters of the ponds and the coast for their livelihoods. This concern has sparked various protests and public discussions to voice their disapproval of this project.

The emergence of community resistance can also be seen as a response to the lack of transparency in the project planning process. A number of residents claimed not to have received adequate information about the long-term impacts of the toll road project

on their lives. This lack of clarity has raised suspicion and a sense of insecurity among the community, which then developed into protests and demands for a clear explanation of the impacts of the project.

In addition to the affected communities, resistance was also carried out by various organizations, including the Hysteria group, WALHI, the Maleh Dadi Segoro Coalition, and several other Non-Governmental Organizations (NGOs). Various forms of resistance such as social media campaigns, books, journals and other activities are easy to find in various media. The presence of a number of civil society organizations also strengthened this resistance movement. They helped residents understand their rights and directed more organized resistance strategies. In addition, fishermen also held demonstrations against the developers as a form of pressure on the parties involved in this project.

The researcher conducted an interview with Marzuki, a fisherman from Tambakrejo Village. An excerpt from the interview is explained as follows:

“The difficult situation faced by fishermen due to the construction of the Semarang-Demak sea toll road, that the fishermen's fishing zone is now disrupted by this toll road project, which limits their access to fishing areas. As a result, fishermen often have to look for new locations that are further away, increasing operational costs, and requiring them to update their equipment in order to compete with large fishing gear owned by private vessels. One of the impacts felt is the decline in the fishermen's daily income, which usually reaches IDR 70,000 to IDR 150,000 now only IDR 50,000. In addition, fishermen often lose their fishing gear due to competition with large vessels operating in the zone. The resistance actions carried out by fishermen to fight for their rights and compensation, only received an inadequate response from the government, where the nominal compensation received by fishermen was far from expectations, which

was only given IDR 500,000.00 and basic necessities. This is not compensation, but only a donation/love. Although assisted by various organizations, the fear of criminalization often causes this resistance action not to continue.” (interview with Marzuki, October 17, 2024).

The situation faced by the Tambakrejo community provides an important perspective on the impact of large infrastructure development on small fishing communities. Their income as fishermen has decreased drastically because the fishing space is getting narrower and the fish habitat is disturbed by the concavity process, to get a bigger catch of fish they have to go to further areas until they enter the fishing area of large vessels, in addition to this process requiring higher operational costs such as fuel and upgrading fishing equipment, they also face the risk of fishing equipment being damaged due to collisions with larger vessels.

Although the development of the sea toll road is recognized as having long-term economic benefits in the form of accessibility and tourism potential, there are still gaps in the consultation process and compensation for communities directly affected. This highlights the urgent need for more inclusive and equitable policies, especially in addressing the fate of small fishermen who depend on their fishing grounds for their daily survival. Researchers see that without concrete solutions or adequate support mechanisms, the potential for social conflict will continue to exist. Here, the importance of the role of the government and various stakeholders in listening to the aspirations of affected communities and providing solutions will greatly help maintain the balance between infrastructure development and local economic sustainability. Examples of solutions that the government can offer include relocating green mussel cultivation or helping to upgrade fishermen's equipment.

The emergence of resistance carried out by the Tambakrejo community is based on

the impact of the TTLSD development that they received directly, especially in terms of economy; (a) Environmental damage causes fish habitat to decrease (b) The location of the TTLSD development is in the fishing area of small fishermen, thus narrowing the fishermen's fishing range (c) The construction of the TTLSD which is in the green mussel cultivation area causes the cultivation media, namely fish aggregating devices, to be damaged and also reduces the harvest. This impact is the basis for the emergence of resistance from the community.

The resistance carried out by the community aims to ensure that the community is always involved in the development planning process, the community also demands that the economic losses they experience, both from reduced catches and damage to green mussel fish aggregating devices, be compensated by the government or the project developer. This resistance reflects a form of collective resistance driven by awareness of their rights to living space. This resistance shows that coastal communities have deep local wisdom related to their way of life and livelihood patterns that are directly related to marine ecosystems and marine cultivation. They feel that the sustainability of their lives depends on the sustainability of the existing ecosystem.

This study also looks at how the resistance that occurs is not only directed at the project itself, but also at government policies that do not involve community participation. In this context, the community is trying to show that they have a voice and need to be involved in decisions that affect their lives. Thus, this resistance is not only ecological but also political, showing the relationship between environmental sovereignty and the right to livelihood.

In terms of methodology, this research analysis uses a qualitative approach by conducting in-depth interviews with a number of affected Tambakrejo residents. This method allows researchers to

understand the community's perspective in more depth, especially regarding their concerns about the toll road project which is considered to be detrimental to them. The results of this interview show that most people think that the project was carried out without considering the long-term impacts on the environment and their livelihoods.

This study also analyzes how community resistance creates social solidarity among them, as well as support from various social institutions such as Walhi, Maleh Dadi Segoro Coalition, Hysteria, etc. The collaboration between them also strengthens the ongoing resistance.

Based on interviews with informants, it is clear that the development of TTLSD has a complex impact on coastal communities. From the researcher's perspective, the informant stated the negative impact of this project on the environment, especially on the fishing zone and green mussel cultivation. The loss of fishing zones due to the project boundaries narrowing the fishing area and the loss of mangrove forests also disrupt the balance of the existing ecosystem. Likewise, the cultivation of green mussels which are the mainstay of income for Tambakrejo residents has also been damaged and the harvest has decreased. This has caused significant economic losses for fishermen.

From a social perspective, the community has attempted to resist through demonstrations and demands for compensation for the loss of fishermen's assets, such as fish aggregating devices, due to the construction of the project. However, these demands have not been fully accommodated, and there is a sense of frustration among small fishermen who feel they are being marginalized in the development process. The presence of support groups such as the Legal Aid Institute (LBH), WALHI, the Maleh Dadi Segoro Coalition and several student organizations indicate support from civil society, but the limited further action also indicates that there is fear from the

community. From the researcher's perspective, this indicates that the fishing community has not only lost a source of income, but also experienced uncertainty in terms of legal rights to their fishing grounds and the environment in which they live.

Although the TTLSD project presents challenges, there are also positive impacts that are recognized by the community, such as preventing rob and opportunities for developing marine tourism. The community's awareness to switch to economic alternatives, such as green mussel cultivation and other businesses, shows their resilience in adapting. As researchers, it is important to appreciate these efforts and consider that the development of economic alternatives needs to receive continuous support from the government or the private sector so that the community can feel the benefits of balanced development.

Overall, this condition shows the need for a holistic approach involving various parties in development planning, especially for coastal areas such as Tambakrejo. By prioritizing transparency and dialogue, development projects such as TTLSD are expected to not only focus on infrastructure aspects, but also consider the social and economic impacts of the local community. Closer collaboration between the government, community, and supporting organizations will support the creation of fair and sustainable solutions for all parties involved.

### **Form of community resistance against the construction of the Semarang-Demak toll road in Tambakrejo**

The form of community resistance focuses on social movements. In facing the construction of the Semarang-Demak sea toll road, the Tambakrejo community has taken various forms of resistance colored by social solidarity, involvement in arts and culture, and collective action to voice aspirations. One form of resistance that has been consistently carried out is collaboration between the community and various

organizations, including the Hysteria group, WALHI, the Maleh Dadi Segoro Coalition, and several other Non-Governmental Organizations (NGOs). This collaboration aims to provide legal advocacy support and strengthen solidarity to ensure that the rights of the Tambakrejo community are still considered.

Advocacy includes community organizations such as WALHI, Semarang Legal Aid Institute (LBHS), Indonesian Institute of Sciences (LIPI), Indonesian Traditional Fishermen's Union (KNTI), research institutions from universities, namely Diponegoro University, Soegijapranata Catholic University (Unika), Semarang State University, Utrecht University, Gadjah Mada University, Panca Bhakti University.

The author conducted an interview with Iqbal from WALHI Central Java regarding WALHI's assistance efforts for the Tambakrejo community affected by the construction of the Semarang-Demak sea toll road. The interview excerpt is explained as follows:

"Since 2017, we have started assisting the Tambakrejo community in dealing with the impacts of the river normalization project and other developments. WALHI plays a role in organizing residents, providing training, and strengthening their capacity. Currently, Tambakrejo residents have been living in this area since 1975, but development projects put them at risk of losing the land they have lived on for decades. In fact, many have had to move to tenement houses after being evicted," (interview with Iqbal, October 2024). He added that community resistance began to emerge around 2016, when they reported their problems to LBH and WALHI.

"We assist communities in the consolidation process, especially during the eviction period. This assistance focuses on meeting the needs of residents, land restoration, and economic support for the sustainability of their lives. In this assistance, we also encourage residents to

discuss and understand the impact of the project on the economy and ecosystem of the fishing zone, both at sea and on land, which they rely heavily on," he continued (interview with Iqbal, October 22, 2024).

Iqbal's statement shows that WALHI has played an active role in assisting the Tambakrejo community with various efforts to strengthen their position in defending their land and economic rights amidst development pressures.

The approach taken by the Tambakrejo community focuses on the cultural aspect, which is manifested through the "Dandan Segoro" tradition to the "Maleh dadi Segoro" event. This annual tradition is not only an expression of their love for the sea, but also a symbol of resistance to development that has the potential to change their living conditions. This cultural tradition is an effective medium to display their existence as part of a coastal area that has a strong identity and cultural roots.

In addition, resistance is also manifested in the form of artistic collaborations, such as music concerts and festivals involving local and international artists. For example, in 2024, an event was held featuring artists from Spain with the concept of a public space made of bamboo. This activity not only attracted public attention but also highlighted the importance of maintaining a comfortable and decent living space for coastal residents of Tambakrejo. This artistic activity functions as a creative communication medium to channel messages and aspirations of the community openly but peacefully.

The form of collective resistance that emerged by the Tambakrejo community in defending their rights to living space. The resistance that emerged reflects collective awareness of the importance of coastal ecosystems for the sustainability of their lives, where coastal communities show a strong desire to maintain the balance of the environment that has become a source of their livelihood. This shows that coastal communities have a deep understanding of

the role of ecosystems in supporting their daily lives.

In the context of this research, it was found that the forms of resistance to the development of TTLSD are very diverse, the community is able to collaborate with various organizations and institutions to carry out various forms of resistance, in the form of social solidarity, the community conveys demands for their losses to the Semarang City Fisheries Service and also to the developer of TTLSD section 1, namely JO CRBC-WIKA-PP. With the collaboration of the Tambakrejo community and Hysteria, they are able to voice their identity and existence through arts and culture media such as the Maleh Dadi Segoro art event, through this event the community can convey their concerns more widely. Likewise with the collaboration of the community with WALHI and also the Maleh Dadi Segoro Coalition where they are able to increase internal capacity such as economic development, one of which is by forming a joint business cooperative and also various training. These forms of collaboration also have wide dissemination outputs such as Journals, Books and also digital campaigns.

The resistance carried out by coastal communities is not only related to certain development projects, but also targets government policies that do not involve community participation in the planning process. Through this form of resistance, communities want to emphasize that they have the right to be involved in decision-making concerning the future and the environment in which they live. This resistance is political and ecological, showing that environmental sovereignty and the right to livelihood are two interrelated things.

This study uses a qualitative approach with in-depth interview techniques with affected residents. This approach allows researchers to gain a deeper understanding of the community's perspective, especially regarding their concerns about development projects that are considered potentially

detrimental. The results of the interviews showed that most residents felt that this project did not consider the long-term impacts on environmental sustainability and their economic well-being.

From interviews with community leaders, an overview of the impact of the project on green mussel cultivation and fishermen's fishing areas was obtained. These figures assessed that the development project could damage the environment and reduce their catch. This negative impact has the potential to reduce fishermen's income and create uncertainty for the sustainability of their lives.

Economically, coastal communities experience significant losses because this project narrows fishing areas, damages green mussel cultivation aggregating devices and disrupts the balance of the marine ecosystem. Although there are independent efforts by the community to go to sea in other areas and also move the cultivation aggregating devices to other places. This finding shows that the community is trying to be adaptive, but still needs assistance to maintain the sustainability of their economy.

The study also noted that the community made various resistance efforts such as demonstrations and demands for compensation for damaged assets. However, these demands were not fully accommodated by the relevant parties, causing frustration among the community who felt that their rights were being ignored. This dissatisfaction shows that the community still has limitations in demanding their rights to the environment.

Although the community considers the negative impacts of this project, some of them acknowledge the benefits, such as preventing tidal floods and developing tourism. The community's awareness to switch to other economic sectors shows their resilience in facing change. This needs to be appreciated as an effort to adapt to existing challenges.

As a researcher, it is important to note that the role of government and the private

sector is very much needed in supporting the economic adaptation of coastal communities. The development of sustainable economic alternatives can help communities feel the positive impacts of balanced development. This approach shows the need for continuous collaboration between various parties.

From this analysis, it is clear that a holistic approach is needed in coastal development planning. Infrastructure development such as sea toll and coastal belt projects need to consider not only technical aspects but also socio-economic impacts on local communities. By prioritizing transparency and dialogue, development projects can minimize negative impacts felt by the community.

This study identifies the importance of collaboration between communities, governments, and supporting organizations to create equitable and sustainable solutions. Community participation in development planning can strengthen relationships between stakeholders and increase community trust in policies made.

The researcher also noted that there were technical constraints and limitations in the data collection process, which affected the accuracy of the research results. These constraints included limited access to data and the influence of external factors that may have affected the interview results. This suggests that this study has limitations that need to be considered in interpreting the results.

The results of this study indicate the need for caution in drawing conclusions. The relationship found between development projects and socio-economic conditions of the community is correlative and cannot be considered as a cause-and-effect relationship. Thus, interpretation of the results must be done with objectivity to avoid unfounded assumptions.

This research is expected to provide useful insights for policy makers, especially in considering the socio-economic impacts of development projects in coastal areas. The

findings also show that coastal communities have valuable local knowledge in understanding environmental dynamics and economic adaptation.

As an initial study, these results are expected to be the basis for further, more in-depth studies. Further research with different methods can provide new perspectives that enrich the understanding of the relationship between development projects and the welfare of coastal communities.

This study also emphasizes the importance of an inclusive approach in development planning so as not to cause inequality that is detrimental to certain community groups. Inclusive development will support economic, social, and environmental sustainability in coastal areas. In the final analysis, this study shows that the collective resistance of coastal communities is not only a form of protest but also a representation of their need for ecological and economic justice. This needs special attention so that the development carried out can provide benefits to all components of society without leaving out certain groups.

### **The impact of community resistance to the policy and process of the Semarang-Demak sea toll road development in Tambakrejo**

The Tambakrejo community, most of whom are fishermen and mussel farmers, have long depended on the marine and coastal environment for their livelihoods. However, the sea toll road development project has brought about various changes that affect social, economic, and environmental aspects which then gave rise to forms of resistance from residents. In this context, resistance is defined as a form of community action or reaction that is more focused on defending their immediate interests without a confrontational approach.

One form of resistance that emerged was

in the form of protests from residents who focused on the reduced fish catch due to the construction of the TTLSD and the impact of damage to fish aggregating devices (FADs) or mussel cultivation aids in the form of bamboo placed in the sea to support the growth of biota such as green mussels. Based on the results of interviews with the Tambakrejo youth association, it was discovered that the construction of the sea toll road had a significant impact on fish catches and green mussel harvests, which can usually be harvested up to four times a year, now only once a year. This situation triggered residents' concerns and desires to voice their dissatisfaction, but the protests they made were not frontal but focused on the impact of damage to fish aggregating devices (FADs). Below is a green mussel cultivation FAD.

The impact of community resistance to the construction of the Semarang-Demak sea toll road in Tambakrejo shows that local people prefer peaceful and organized resistance rather than a confrontational approach. In facing this national-scale project, the Tambakrejo community chose to defend their rights and convey their aspirations through official channels and collaboration with supporting organizations. This choice reflects a wise approach from residents who are trying to maintain their lives without directly conflicting with government policies.

This resistance can be seen from the residents' efforts to express their dissatisfaction with the sea toll project, especially regarding its impact on the livelihoods of fishermen and fish farmers. Although most of the community have received compensation, the main problem related to the decline in fish catches and green mussel cultivation has not yielded results. These concerns were conveyed calmly through formal channels, indicating that the community prefers an approach that seeks solutions rather than simply rejecting development.

In addition, the collaboration between

the Tambakrejo community and organizations such as WALHI and the Maleh Dadi Segoro Coalition adds an important dimension to this conventional resistance. Through support from the supporting organizations, the community is assisted in understanding their rights and the environmental impacts of the development project. The coalition helps residents organize themselves and discuss long-term steps forward, especially in terms of capacity building and economic sustainability amidst existing challenges.

One of the strengths of the Tambakrejo community's resistance is a more proactive approach in involving themselves in discussions held by supporting organizations. Through these forums, the community can clarify their rights in the context of national development. This approach reflects the community's commitment to maintaining the sustainability of their lives in coastal areas without having to confront the government or project developers directly.

In addition to discussions, the community also uses cultural media as a form of symbolic resistance. Events such as the boyongan tradition and sea alms are used to express the community's attachment to the coastal environment they inhabit. Through this tradition, residents hope to show the public that they have the right to survive in the area. This is a form of resistance that highlights local identity, where culture is used as a symbol of a strong connection to nature.

The optimistic view of the local government regarding the future economic potential of the development of the sea toll road, especially in the tourism sector, shows a gap in perspective with the community. Although it is recognized that there are economic opportunities, the community still doubts the extent to which they can feel the direct benefits. This reflects that the community's desire to be more actively involved in the planning and implementation of the project is still not well

accommodated.

The main criticisms raised by the community are related to transparency and compensation. The community hopes that the compensation process, especially related to damage to fish aggregating devices and decreased catches, will be carried out more fairly. Although the donations have been made, the community still demands an evaluation so that the decrease in their income due to environmental impacts can be considered.

The neutral stance taken by the local government in dealing with this project shows the limited authority at the regional level. As a national strategic project, the sea toll project has been decided at the central level so that the local government can only play a role in socialization and communication. This creates a situation where the community feels less heard directly by the responsible authorities, so they choose to convey their aspirations through supporting institutions.

The community approach that prioritizes strengthening internal capacity shows a form of constructive resistance. With skills training and economic empowerment by organizations such as Hysteria, it is hoped that the community can find new economic opportunities that can support their welfare. This resistance is not only focused on rejecting the project, but also on adapting to change by utilizing support from external parties.

It is also important to note that the community's efforts to maintain their traditional livelihoods show a meaningful form of resistance. As fishermen and fish farmers, they still want to carry out the economic activities that have become their identity. Although there are efforts to provide condolences/donations for the damaged fish aggregating devices, the community remains concerned about the decline in fish catches that will affect their income.

Support from academics also helped strengthen the resistance of the Tambakrejo

community in defending their rights. Through academic discussions involving research on the environmental impacts of the sea toll project, the community gained legitimacy for their concerns. This gave them the opportunity to raise public awareness of the issues they faced without having to engage in confrontational actions.

Increasing public awareness through arts and cultural activities held by supporting organizations such as Hysteria also shows a creative approach to community resistance. Through art events, the community has succeeded in conveying messages about the changes they face to a wider audience. This is a form of resistance that seeks to build public empathy through media that is easier to understand.

From a research perspective, the resistance carried out by the Tambakrejo community can be seen as an effort to maintain their rights and identity amidst the modernization process that brings significant changes. Although this development project is expected to have a positive economic impact, in reality for coastal communities, this change is more complex because it touches various aspects of their lives.

In the long term, the resistance of the Tambakrejo community shows the potential to become a movement that supports more sustainable and inclusive development. By fighting for their rights through official channels and without direct confrontational action, the community is trying to make this project an opportunity to gain attention for their interests.

The involvement of supporting organizations and academics also helped to form a more comprehensive understanding of the issues faced by the community. This collaboration shows that conventional resistance can be an effective channel for aspirations when the community has the support of more influential parties in the social and political system.

The absence of the Legal Aid Institute (LBH) since 2020 indicates a gap in the legal

assistance needed to protect citizens' rights. This analysis suggests that communities may consider returning to advocacy networks such as LBH that have previously helped them, especially in dealing with eviction issues. LBH's past involvement demonstrates its potential as a strategic partner in providing legal assistance and advocacy to strengthen communities' bargaining position in the face of government policies that impact them. Thus, encouraging communities to re-establish relationships with LBH or other advocacy institutions can be a strategic step in fighting for their rights in the issue of sea toll road development.

Overall, the resistance of the Tambakrejo community reflects an effort to maintain the balance of life amidst the major changes brought about by the construction of the sea toll road. Through a more peaceful and organized approach, the community shows that they are not against development, but hope that this process can proceed by considering their interests as coastal communities who depend on marine resources for their livelihoods.

On the one hand, this project presents a big challenge for the Tambakrejo community, but on the other hand, this project also opens up opportunities to increase the community's capacity to face change. The efforts of economic empowerment and cultural preservation carried out by the community show that they are not only focused on rejecting the project, but also trying to find solutions that can maintain the sustainability of their lives.

By continuing to prioritize peaceful and constructive forms of resistance, the Tambakrejo community shows that development does not have to be one-sided. Through dialogue, collaboration, and adaptation, they strive to ensure that the sea toll road development project is in line with their interests as a coastal community that has the right to live and develop in its territory.

The author conducted an interview with

Adin, a representative of the Hysteria organization, regarding their role in assisting the Tambakrejo community in facing the impacts of the Semarang-Demak sea toll road construction. The interview excerpt is explained as follows:

"Hysteria seeks to assist the Tambakrejo community by providing a space for them to express their concerns and hopes through art and culture. We believe that this approach can be an alternative in voicing the impacts they experience, without having to go through confrontational actions. Through activities such as art exhibitions and cultural discussions, the community can convey a broader message about their dependence on coastal ecosystems and the changes they face due to this project. Hysteria also establishes empowerment classes to improve the skills of residents, both in terms of economic and creative skills" (interview with Adin, October 17, 2024).

Adin's opinion is strengthened by Purna's opinion, the author also conducted an interview with Purna, a representative of the Hysteria organization. The interview excerpt is explained as follows.

"We do not only focus on resistance in the form of criticism of development, but also support the community to be able to adapt. Through skills training, we hope that residents can find new economic alternatives amidst the changes that are taking place. This is a form of peaceful resistance and has long-term goals," he explained again (interview with Purna, October 17, 2024).

Purna's statement illustrates Hysteria's approach that uses art and culture as a medium of communication for the Tambakrejo community, while focusing on empowering and strengthening the capacity of residents to adapt amidst ongoing development projects. The following are other impacts received by Tambakrejo Village as a green mussel farmer.

This study focuses on the socio-economic impacts experienced by fish aggregating device (FAD) and pond farmers due to the construction of the Semarang-Demak Sea

Toll Road (TTLSD) which is integrated with the sea wall in the coastal area of Semarang City. Although there are a number of social assistance provided, such as cash assistance of Rp500,000 and basic necessities, the government and developers do not provide compensation to the affected communities. The legal basis used by the developer states that the land occupied by the farmers is "destroyed land," namely land that has turned into sea due to natural factors. Because the ownership status of the land is not recognized by the government, there is no legal basis for providing formal compensation. Meanwhile, the legal basis used by the government through the Fisheries Service is that green mussel cultivation cannot be categorized as cultivation because there is no process of purchasing seeds, feeding, etc.

This policy has caused problems for fish aggregating device farmers, who have depended on green mussel cultivation for their livelihoods. Although they have been given "tali asih" as a form of assistance, the amount is far from enough to replace the source of their livelihood lost due to eviction. The farmers feel they have no power to defend their land, considering that the land is considered state land that is not legally valid. This condition has triggered dissatisfaction and disappointment among the community, especially because this damage has a direct impact on their family's income and welfare.

In addition to the loss of income sources, another impact of the TTLSD development is environmental changes that affect the socio-economic conditions of coastal communities. The construction of embankments that function to hold back tidal flooding is indeed intended to protect coastal areas from the risk of flooding, but these benefits have not been felt directly by fish aggregating device farmers. For them, the land that is a source of income has been lost, while other alternative sources of livelihood are not yet available. This poses a challenge for coastal communities to adapt to the new situation

without adequate support from the government.

In an interview with Siti Mashitoh, S. Pi., Msg from the Semarang City Fisheries Service, several things related to the construction of the Semarang-Demak sea toll road and its impact on Tambakrejo fishermen were revealed. Siti expressed her concern over the lack of transparency in the environmental impact study conducted in this project. According to her, data related to environmental impacts should be opened to the Fisheries Service to facilitate a better understanding of the impacts experienced by coastal communities. The following are details of the interview with Siti Mashitoh.

"We were not given access to the environmental impact study data, even though we need to know how this development affects fishermen and coastal ecosystems, I also regret the cutting down of mangrove forests, which are important ecosystems for the sustainability of local fishermen's lives." (Interview with Siti Masithoh, Semarang City Fisheries Service)

As a researcher, it is important to look at this from a balanced perspective. On the one hand, the government has a responsibility to accelerate the development of infrastructure such as sea toll roads, which aim to boost the economy and reduce the impact of tidal flooding in coastal areas. But on the other hand, projects like this bring major changes that cannot be ignored in terms of their impact on the surrounding community. In this case, the lack of transparency in environmental impact studies can create a sense of distrust among the community and related agencies, especially when the data is needed to understand the direct impact on coastal ecosystems and the economic life of fishermen.

Green mussel fish aggregating devices, which are the main source of livelihood for Tambakrejo fishermen, are not included in the government's compensation scheme because they are not considered a cultivation activity. This is a problem that makes some fishermen feel unfair, because the

construction of green mussel fish aggregating devices requires a lot of capital. However, the government is also faced with legal constraints, because there are regulations that limit the provision of compensation for certain types of cultivation. In this case, efforts to find a solution are urgently needed so that both parties can find a fairer and more acceptable path.

Regarding communication between fishermen and the government, Ms. Siti also highlighted the lack of socialization of the sea toll development in Tambakrejo. According to her, although administratively this project is in the Genuk area, its effects are also felt by coastal communities in Tambakrejo, who should receive adequate information about the project. Wider socialization can help the community understand the development plan and its impacts, so that they can take the right steps in dealing with this change. The lack of communication causes fishermen to feel less involved in the planning process, resulting in an imbalance in understanding and interests between the two parties.

As a recommendation, a more collaborative advocacy approach is needed between fishermen and the government. Ms. Siti Mashitoh suggested that fishermen be more proactive in working with advocacy organizations such as LBH & KNTI to voice their aspirations. An example of a case in Terboyowetan, Genuk District, where fishermen had difficulty going to sea because of the pier access affected by the construction of TTLSD, the government mediated with all related parties which finally resulted in 2 solutions, namely the construction of a temporary pier and also the absorption of workers in the TTLSD project, this shows that community participation and good communication can produce solutions. In this way, the sea toll project can continue without ignoring the interests and welfare of the coastal communities affected.

#### 4. CONCLUSION

First, there is resistance in the construction of the Semarang-Demak sea wall toll road (TTLSD), including (1) Resistance of the Tambakrejo community against the Semarang-Demak sea toll project caused by economic losses including reduced catches of fishermen and damage to green mussel cultivation fish aggregating devices, (2) Damage to the environment/marine ecosystem, (3) Actors of resistance include the community, supporting advocacy such as Walhi, Hysteria, Maleh Dadi Segoro Coalition. The results of the second study, (1) cross-organizational academic discussions and publications in the form of journals, books, news, social media platforms, (2) community protests through arts and culture such as murals and art performances, (3) direct action through demonstrations demanding compensation. The third research result, community resistance to the construction of the sea toll road in Tambakrejo has had positive and negative impacts, namely: (1) The government and developer did not approve the request for compensation for damage to fish aggregating devices (2) Tambakrejo fishermen did not receive compensation for the reduced catch (3) The developer offered 600 job vacancies in the TTLSD project for affected fishermen and also bamboo to replace fish aggregating devices (4) Tambakrejo residents succeeded in collaborating with various non-governmental institutions such as creating joint business cooperatives and various training to increase the economic value of fishermen's catch and also green mussel cultivation.

The conclusion of the research results is that although the Tambakrejo community showed resistance to the construction of the sea toll road through various forms of advocacy and negotiation, the development process continued without any significant intervention from the

central government; although several mediation steps were taken by the local government and developers, negative impacts on the local economy and community rights still persist, reflecting an imbalance in the decision-making process related to infrastructure development.

#### 5. REFERENCES

- Abdurrahman, Muslan. (2009). *Sociology and Legal Research Methods*. Malang: UMM Press.
- Akbar, Idil. (2016). Democracy and Social Movements (How Student Movements Respond to the Dynamics of Social Change), *Journal of Political Discourse*, 1(2), 111.
- Akib, Muhammad. (2021). *Environmental Law: Global and National Perspectives*. Depok: PT. Rajagrafindo Persada.
- Arslan, Oguz & Arslan, Original Ergenekon. (2022). "Performance Evaluation and Multi-Criteria Decision Analysis of Thermal Energy Storage Integrated Geothermal District Heating System", *Process Safety and Environmental Protection*, 167, 21-22.
- Brogan, Chris. (2010). *Social Media 101: Tactics and Tips to Develop your Business Online*: Jhon Wiley & Sons.
- Caldow, Janet. (2004). *E-Democracy: Putting Down Global Roots*. Institute for Electronic Government. IBM. [www1.ibm.com/industries/government/ieg/pdf/e-democracy%20putting%20down%20roots.pdf](http://www1.ibm.com/industries/government/ieg/pdf/e-democracy%20putting%20down%20roots.pdf).
- Cohen, J. Bruce. (1983). *Sociology: An Introduction*. Jakarta: PT. Bina Aksara.
- Cnnindonesia. (2019). *Banten Geothermal Power Plant Considered Dangerous*. <https://www.cnnindonesia.com/nasional/20190909231140-20-428931/pembangkit-listrik-geothermal-banten-dinilai-berbahaya>, accessed on February 24, 2023, at 1.05 WIB.
- Creswell, John W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Third Edition. Yogyakarta: Pustaka Pelajar.

- Creswell, John W. (2016). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Fourth Edition. Yogyakarta: Pustaka Pelajar.
- Daniels, T. (2017). *Environmental Planning Handbook*. Oxon: Routledge.
- Danusaputro, Munadjat. (1985). *Environmental Law, General Book I*. Jakarta: Binacipta.
- Darmawan, Karina Fitri. (2022). Environmental Human Rights Versus the Right to Development as Human Rights: Between Conflict and Development, *Journal of Poros Hukum Padjadjaran*, 3(2), 171.
- Diani, Mario. (2000). "The Concept of Social Movement", in Nash, Kate, *Reading in Contemporary Political Sociology*, Blackwell, Oxford, 154-176.
- Djayadiningrat, et al. (1995). *Ecolabeling and Global Environmental Trends*. Jakarta: PT.
- Donk, Wim Van De., Loader, Brian D., Nixon, Paul G., Rucht, Dieter (2004). *Cyberprotest: New Media, Citizens, and Social Movements*. London: Routledge.
- Dyke, N. Van & Amos, B., *Social Movement Coalitions: Formation, Longevity, and Success* March, 1-17, <https://doi.org/10.1111/soc4.12489>, accessed on February 24, 2023, at 13.52 WIB.
- Fakih, Mansour. (1966). *Civil Society for Social Transformation*. Yogyakarta: Pustaka Pelajar.
- Fatimah, Rapika Pertiwi Nurul. (2021). "Geothermal Energy and Its Potential in Indonesia", <https://ensipedia.id/berita/nasional/energi-geothermal-dan-potensinya-di-Indonesia/>, accessed on January 24, 2023, at 13.24 WIB.
- Godin, R.E., Rein, M., and Moran. (2006). *The Public and its Policies*. In M. Moran, M. Rein, and RE Goodin, *The Oxford Handbook of Public Policy*. New York: Oxford University Press.
- Haerul, Akib H., and Hamdan. (2016). Implementation of the Makassar No Rantasa Program Policy in Makassar City, *Journal of Public Administration*, 6(2), 21-34.
- Hague, B.N. & Brian D.L. (1999). *Digital Democracy: Discourse and Decision Making in the Information Age*. London: Routledge.
- Hall, P & Pfeiffer, U. (2013). *Urban Future 21: A Global Agenda for Twenty-First Century Cities*. London: Routledge.
- Hallim, Wimmy. (2020). Development Policy in the Concept of Participatory Leadership, *Journal of Development Policy*, 15(1), 92.
- Hapsari, Dwi Retno. (2016). The Role of Communication Networks in Social Movements for Environmental Conservation, *Journal of Communication*, 1, 25.
- Haris, Andi., Asyraf, Ahmad, Wan Ibrahim Wan, *Understanding Social Movements from a Social Science Perspective*, *Hasanuddin Journal of Sociology*, 1(1), 2019, 16.
- Hasanah, Arum Nur. (2017). Transformation of Social Movements in Digital Space, *Journal of Sociology Education*, 3.
- Haty, Intan Paramita, et al. (2021). *Geology and Geothermal Potential in the Dieng Volcanic Complex*. Yogyakarta: Institute for Research and Community Service, UPN Veteran Yogyakarta.
- Haynes, J. (2000). *Democracy and Civil Society in the Third World*, translated by P. Soemitro. Jakarta: Yayasan Obor Indonesia.
- Hudiyanto. (2005). *Political Economy*. Jakarta: Bumi Aksara.
- Ibrahim, Herman Darnel. (2008). *Encouraging Faster and Larger Geothermal Development*. Jakarta: Energy and Mining Magazine.
- Ifandry, Ariono. (2012). *Analysis of Business Scheme for Geothermal Electricity Development and Pricing in Indonesia*, Thesis, Electrical Engineering Study Program. Salemba: University of Indonesia, 7.
- Kamaruddin, Syamsu A. (2012). The UNRA Peasant Rebellion of 1943 (A Case Study of Social Movements in South Sulawesi During the Japanese Occupation, *Social Humanities*, 16(1), 21.

- Khosla, Maya. (2012). *Tapping The Fire, Turning The Steam: Securing the Future with Geothermal Energy*. The Netherlands Agency.
- Kuncoro, Mudrajad. (2004). *Regional Autonomy and Development*. Jakarta: Erlangga.
- Liedfray, Tongkotow, Waani, Fonny J. & Lasut, Jouke J. (2022). The Role of Social Media in Strengthening Interactions Between Families in Esandom Village, East Tombatu District, Southeast Minahasa Regency, *Jurnal Ilmiah Society*, 2(1),. 2.
- Levis, Bridget. "Environmental Rights or a Right to the Environment? Exploring the Nexus between Human Rights and Environmental Protection", *Macquarie Journal of International and Comparative Environmental Law*, 8(1), 39.
- Maulana, Irfan. (2023). Women Behind the Struggle of the Padarincang People to Reject the Geothermal PLT Project, Religion Becomes the Foundation for Maintaining the Balance of the Natural Ecosystem. <https://www.indonesiana.id/read/164468/perempuan-dibalik-perjuangan-rakyat-padarincang-tolak-proyek-plt-geothermal-agama-jadi-pondasi-jaga-keseimbangan-ekosistem-alam>, accessed on June 25, 2023, at 12.06 WIB.
- Mushonifin, M. Husni. (2022). Explosion Trauma and Damaged Environment, Sikidang Dieng Residents Reject Geo Dipa Geothermal Power Plant. <https://sigijateng.id/2022/trauma/ledakan-dan-lingkungan-rusak-warga-sikidang-dieng-tolak-pltp-geo-dipa/>, accessed on June 25, 2023, at 11.50 WIB.
- Msigwa, Goodluck Msigwa, Ighalo, Joshua O. & Yap, Pow Seng (2022). "Considerations on Environmental Economics, and Energy Impacts of Wind Energy Generation: Projections Towards Sustainability Initiatives", *Science of the Total Environment* 849, 2-3.
- Nasrullah, Rulli. (2014). *Cybermedia Theory and Research*. Jakarta: Kencana.
- Nugraini, Erna Dwi. (2021). WALHI: Dieng Geothermal Project Reaps Ecological Problems. <https://joglojateng.com/2021/09/17/walhi-proyek-geothermal-dieng-tuai-masalah-ekologi>, accessed on January 24, 2023, at 19.03 WIB.
- OECD (Organization For Economic Co-Operation And Development. (2003). "Promise And Problems Of E-Democracy Challenges of Online Citizen Engagement". <http://www.oecd.org/dataoecd/9/11/35176328.pdf>.
- Praja, Juhaya S. (2011). *Legal Theory and Its Applications*. Bandung: Pustaka Setia.
- Pratiwi, Poerwanti Hadi. (2008). National Policy on Environmentally Conscious Development, *DIMENSIA*, 2(1), 102.
- Ponto, Auldrin M., Novie R. Pioh & Femmy Tasik. (2016). Implementation of Environmental-Based Development Program Policy-Building Physical, Social and Economic Infrastructure in Karombasan Selatan Village, Wanea District, Manado City, *Society: Journal of Social Sciences & Development Resource Management*, XX, 36.
- Rahayu, Ety. (2007). *Community Participation in Village Development Planning*. Jakarta: Institute of Domestic Government.
- Restu, Restu & Raschman, Noer Fauzi. (2012). Custom as a Strategy of Struggle. In the *Journal of Wacana: Agrarian Movement and Environmental Movement in Indonesia in the Early 21st Century*. Sleman: Insist Press.
- Ridlo, Muhamad. (2021). 10 Geothermal Wells Rebuilt in Dieng, This is the Response of the Acting Regent of Banjarnegara. <http://www.liputan6.com/regional/read/4712771/10-sumur-panas-bumi-kembali-dibangun-di-dieng-ini-respons-plh-bupati-banjarnegara>, accessed on June 25, 2023, at 11.22 WIB.
- Ritonga, Ahmad Fitra Ritonga, Novranza, Kms & Herlambang, Ricky Ferdianto. (2020). "Identification of Geological Structures and Alteration Zones Using Remote Sensing Technology in Geothermal Prospect Areas", *Journal of Technology*, 7(2), 136.

- Ruslan, Budiman. (2013). *Public Policy: Building Responsive Public Services*. Cimahi: Hakim Publishing.
- Ruslan, Rosadi. (2010). *Research Methods*. Jakarta: PT.
- Sauni, Herawan., Fernando, Zico Junius & Candra, Septa. (2022). Geothermal Energy in Regulations, Environmental Problems, and Conflict Resolution Solutions in Society, *Jurnal RechtsVinding*, 11(3), 376.
- Setianto, Heri. (2016). Analysis of the Quality and Management of Springs Around the Geothermal Power Plant (PLTP) in Sikunang Village, Seजार District, Wonosobo Regency, *Swarnabhumi Journal*, 1(1), 65.
- Setiyono, Budi. (2018). *Welfare State Model & Design*. Bandung: Nuansa Cendekia Publisher.
- Singh, R. (2002). New Social Movement Theories. *Transformative Social Science Journal WACANA*. (XI).
- Soemartono, Gatot P. (1996). *Indonesian Environmental Law*. Jakarta: Sinar Grafika.
- Soemarwoto, Otto. (2001). *Environmental Impact Analysis*. Yogyakarta: Gadjah Mada University.
- Sucahyo, Nurhadi. (2022). Dieng Farmers Persistently Reject Geo DIPA Energi Geothermal Power Plant Project. <https://www.voaindonesia.com/a/petani-dieng-menolak-proyek-pltp-geo-dipa-energi/6805886.html>, accessed on June 25, 2023, at 11.14 WIB.
- Suharko. (2006). New Social Movements in Indonesia: Repertoire of Farmer Movements, *Journal of Social and Political Sciences*, 10(1), 2.
- Sukmadinata, Nana Syaodih. (2012). *Educational Research Methods*. Bandung: PT. Remaja Rosdakarya.
- Sukmana, Oman. (2016). *Concept and Theory of Social Movements*. Malang: Intrans Publishing.
- Sunarti, Neti. (2016). Implementation of Government Policy in Implementing Development Programs, *Moderat: Scientific Journal of Government Science*, 2(2), 790.
- Stenier, George A., & Miner, John B. (1997). *Management Policy and Strategy*, Translated by Ticoalu and Agus Dharma, *Management Policy and Strategy*, second edition. Jakarta: Erlangga.
- Stober, I. & Bucher, K. (2013). *Geothermal Energy From Theoretical Models to Exploration and Development*. London: Springer Heidelberg New York Dordrecht.
- Theconversation.com. (2019). <https://theconversation.com/geothermal-energy-in-indonesia-potential-utilization-and-future-plans-112921>, accessed on January 24, 2023, at 16.10 WIB.
- Thoha, M. (2012). *The Prime Dimensions of Public Administration Science*. Jakarta: Rajagrafindo Persada.
- The Central Language Dictionary Compilation Team. (2002). *The Great Dictionary of the Indonesian Language*, third edition. Jakarta: Pustaka.
- Towijaya., Musyaha, Ghoni, Satria, Nurcholis., Ubaidillah, M. (2019). Geothermal Utilization and Its Impact on the Environment, *Cahaya Bagaskara Journal*, 4(1), 14.
- Tsagarousianou, R. (1999). Electronic Democracy: Rhetoric and Reality. *Communications: The European Journal of Communication Research*, 24(2), 189-208.
- The 1945 Constitution of the Republic of Indonesia.
- Law of the Republic of Indonesia Number 27 of 2003 concerning Geothermal Energy.
- Vargas, Carlos A., Caracciolo, Luca & Ball, Philip J. (2022). "Geothermal Energy as a Means to Decarbonize the Energy Mix of Megacities", *Communications Earth and Environment*, 3(1), 2-3.
- Wardhana, Wisnu Arya et al. (1998). Geothermal Energy Prospects in Indonesia, *Indonesian Electrical Journal*, 15.
- Wahyudi, Aji. (2016). Implementation of the Strategic Plan of the Community and Village Empowerment Agency in Efforts to Develop Village-Owned Enterprises in West Kotawaringin Regency, *Scientific Journal of Public Administration*, 2(2), 101-105.
- Wahyuningsih, Sri., Sundari, Husnulwati, Sri.

- (2021). Environmentally Conscious Development in Relation to Pancasila Values Towards National Development Goals, *Journal of Education and Development*, South Tapanuli Education Institute, 9(2), 416.
- Wiktorowicz, Quintan.ed. (2012). *Islamic Social Movement*, translated by Paramadina Translation Team. Jakarta: Gading Publishing and Paramadina.
- Wrihatnolo, Randy R. & Dwidjowijoto, Riant Nugroho. (2007). *Empowerment Management (An Introduction and Guide to Community Empowerment)*. Jakarta: Elex Media Komputindo.
- Yanwardhana, Emir. (2021). Geothermal Projects Often Rejected by Residents, What is the Solution?. <https://www.cnbc.indonesia.com/news/20211004144737-4-281260/proyek-panas-bumi-sering-ditolak-warga-apa-solusinya>, accessed on January 24, 2023, at 16.03 WIB.
- Zaini, M., Darmawanto, Agus Tri. (2015). *Implementation of Environmentally Aware Sustainable Development: A Study in Lempake Village, North Samarinda District, Samarinda City*, *JIEP*, 15(2), 24.