

Empowerment of Communities Affected by the Pangkalan Susu Coal Power Plant through Paralegal Training

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ABSTRACT

This research explores the social, economic, and environmental impacts of the Pangkalan Susu coal-fired power plant (PLTU) on the community in Tanjung Pasir Village, Pangkalan Susu District, Langkat Regency. Based on a qualitative method with a participatory action research (PAR) approach, the author collected data through focus group discussions (FGDs), interviews, and observations. The results showed that the presence of the coal-fired power plant had reduced the quality of life of the local community, increased unemployment, caused a decrease in the income of fishermen and farmers, and triggered various health problems due to fly ash and bottom ash (FABA). To address these conditions, the author implemented a paralegal training program to empower communities to understand and protect their rights. The training proved effective in improving the community's understanding of their legal rights and ability to use existing legal mechanisms. This program is expected to become a model intervention that strengthens the community's capacity to deal with the negative impacts of industrial activities.

Keywords: Coal power plant, socio-economic impacts, legal empowerment

INTRODUCTION

In the era of growing industrialization, social welfare issues in Indonesia are becoming more complex and diverse. One prominent issue is the negative impact of industrial activities on the surrounding community. Although industrial development contributes significantly to national economic growth, it cannot be denied that industrial activities often cause adverse impacts on the environment and the health of local communities. One concrete example is the operation of the coal-fired power plant (PLTU) in Pangkalan Susu, Langkat Regency, North Sumatra.

The coal-fired power plant in Pangkalan Susu has been operating for several years and has become a source of electrical energy. However, the existence of this PLTU also brings a number of serious problems. Air pollution resulting from coal combustion poses a health threat to the surrounding community. Dust and harmful particles released into the air cause an increase in cases of respiratory diseases such as ISPA. This narrative is supported by a study conducted by Harvard University, which highlights that air pollution from coal combustion can lead to an increase in premature mortality and respiratory diseases around PLTUs. This study provides strong empirical evidence of the significant negative impact of coal-fired power plants on human health.

In addition, the water used by residents for their daily needs is polluted by industrial waste, allegedly resulting in various health problems such as skin diseases. This condition is supported by findings stating that water polluted by PLTU waste contains heavy metals and other hazardous chemicals that have the potential to damage the health of the people who consume it and cause long-term impacts on the environment.

The environmental impact of this PLTU also affects people's livelihoods. Soil polluted by coal ash and waste reduces soil fertility, hampering agriculture, which is the main source of livelihood for most residents. Many fish in the waters around the PLTU are also dead or polluted, reducing the catch of fishermen. As a result, many families experience economic hardship as they lose their source of income.

In situations like this, the people of Pangkalan Susu often feel helpless. They do not know that they have the right to a healthy and clean environment in accordance with applicable laws and the right to compensation for their losses. This ignorance is compounded by limited resources, such as access to adequate legal services and support from the authorities.

Therefore, the author finds relevance and urgency in this issue. The research or findings above provide a strong scientific foundation to support actions to protect affected communities. The author, together with Yayasan Srikandi

Lestari, a non-governmental organization that assists the community, designed an intervention that aims to empower the Pangkalan Susu community through paralegal training.

The approach used by the author is based on professional social worker theory, which emphasizes the importance of active participation and collaboration among group members. There are three theories used in providing interventions to the community: empowerment theory, systems theory, and social change theory. The author also applied the groupwork method, which involves group work to achieve a common goal, so that trainees can support each other and learn from each other's experiences.

METHOD

This research uses a qualitative approach with a participatory action research (PAR) method. This approach was chosen because it aims to identify, analyze, and address the problems faced by the Pangkalan Susu community regarding the impact of PLTU operations on their social and environmental PAR allows researchers to work collaboratively with community members throughout the research process, from problem identification to solution implementation.

RESULT AND DISCUSSION

A coal-fired power plant (PLTU) is a fossil-fueled power plant that uses coal as the main fuel. Electricity generated in Indonesia is still very dependent on coal. The choice of coal as a fuel to generate electricity is because the price is quite cheap. However, the reckless use of coal not only has a negative impact on the environment but also on humans themselves. The entire process of using coal, both upstream and downstream, poses great risks and losses.

One concrete example of the impact of coal use is in Tanjung Pasir village, Pangkalan Susu sub-district, and Langkat district. Pangkalan Susu Coal PLTU is one of the largest PLTUs on the island of Sumatra, with a capacity of units 1 and 2 of 2x200 megawatts (MW) and units 3 and 4 of 2x210 megawatts (MW). This coal power plant began operating for the first time in 2015. Since the presence of the Pangkalan Susu coal power plant, the quality of life of the community has slowly begun to change and decline (Yayasan Srikandi Lestari, 2024). Various problems began to emerge, both in terms of social, economic, and environmental aspects.

Therefore, to understand the impact of the coal-fired power plant on the local community, the author collected data by conducting focus group discussions (FGDs) or interviews and observations. The purpose of the FGD is to explore the perceptions, experiences, and needs of the community related to the impact of the PLTU. Meanwhile, observations were made by directly monitoring air and water conditions, as well as socio-economic conditions such as unemployment rates and public health.

Based on the results of interviews and observations conducted by one of the communities, it was found that there were indeed many bad impacts felt by the community there. A housewife with the initials NY admitted that the presence of PLTU in their village made their situation even more sad and poor. Every day, they continue to be haunted by a sense of worry about the future of themselves, their children, and their families. This narrative was then reinforced by what was conveyed by MI, who was also a housewife. She said that those who used to have enough or more money now have less, and she has to take on many jobs to be able to fulfill her family's needs.

On the other hand, the fishermen also said that, which used to be before there was a coal-fired power plant, they very easily got 200–500 thousand rupiah in a day. Now, after the presence of the power plant, the income continues to decrease every year. Finding 50 thousand rupiah in one day alone is very difficult; even 200 thousand rupiah seems impossible for them to get at this time. In addition, the operational costs of fishermen also increased because they had to go to sea even further into the middle of the sea. In the past, they could catch a lot of fish within a short distance, but in the same place now, the fish are no longer there. Fishermen believe that this is because the Pangkalan Susu Coal Power Plant waste (bahang water)

discharged into the sea kills marine biota. Meanwhile, fish and shrimp farmers are experiencing the same thing. In the past, they were able to double their profits, but now they are actually losing money. In addition to expensive maintenance costs, the fish or shrimp they manage are dying, floating on top of the water. Eventually, many farmers went out of business and chose to look for other jobs.

In other conditions, farmers are also experiencing the same thing. Many farmers experience crop failure. Various problems begin to arise; production costs are also more expensive, but profits are small, and some are not profitable or do not return capital. Some farmers actually have to get into debt to borrow capital to farm again. Unpredictable climatic conditions and increasingly complex rice problems have made many farmers switch professions to become traders or odd-job workers.

In addition to economic conditions, there are health conditions that are no less concerning. Various disease problems arise and are suspected to be due to fly ash and bottom ash (FABA) from coal-fired power plants. From the data found, it was stated that there were 243 cases of itching, ISPA or shortness of breath in 42 cases, hypertension in 39 cases, and black lung in 4 cases (Mongabay, 2022).

Various diseases that afflict the community in Pangkalan Susu are caused by waste or fine particles (PM 2.5) generated from the Pangkalan Susu Coal Power Plant. FABA, or pollution produced, contains substances harmful to human health (Yayasan Srikandi Lestari, 2024).

In the midst of bad and difficult conditions for the people in Pangkalan Susu, anxiety and worry arise for them. Ironically, most of the people there do not know what is causing their current condition. The main point of concern is that some people do not know what their basic rights are, such as a clean and healthy environment, or what they can sue for in accordance with applicable laws.

In accordance with this context, the author has implemented the program by referring to three theories as a reference for program implementation, namely:

- Empowerment theory, which emphasizes the importance of increasing the capacity of individuals and groups to control their own lives and make decisions related to their well-being.
- Systems theory, which in social work sees individuals as part of various interacting systems, including family, community, and environment.
- Social change theory, which emphasizes the processes and mechanisms that lead to changes in social structures and social relationships.

Therefore, the author intervened by providing direct services to the community in the form of paralegal training. The purpose of this training is to provide strengthening and understanding for the community regarding the rights they have and how they can overcome problems legally. The author intervenes with a direct service approach, where the author is directly involved with individuals or groups to provide assistance, training, or mentoring that directly affects their daily lives. Through the paralegal training program, the author hopes to not only provide legal knowledge but also strengthen the community's capacity to understand and protect their rights related to the environment and social welfare.

The following are the stages of the intervention:

- Phase 1: Preparation

At this stage, the author and the rest of the team prepared training materials based on the results of the initial assessment that identified the main needs and problems of the affected communities. The training materials were developed to introduce the basic concepts of law, community rights related to the environment, and the advocacy process that they can do.

- Phase 2: Implementation

The author begins the training session every morning, starting with a greeting, focus training, and then an introduction to the topic of the day, such as environmental rights or relevant legal procedures. Each session is designed to be interactive and

participatory, involving case simulations and group discussions.

- Phase 3: Monitoring and Evaluation

Before the intervention begins, affected communities lack an understanding of their rights and relevant legal procedures. They often felt unable to deal with the legal challenges they faced, such as the environmental impacts of coal power plants. They also tended to resign themselves to their situation, believing that the government's project would not be challenged and that justice was an unattainable hope. However, after a number of training sessions, there was an improvement in their understanding of their legal rights and their ability to use existing legal mechanisms to protect their interests.

CONCLUSION

This research reveals the significant impact of the Pangkalan Susu coal power plant operation on the social, economic, and health lives of the community in Tanjung Pasir Village. Through the paralegal training program, the community now better understands their legal rights and has the capacity to fight for a healthy environment. This intervention shows that legal knowledge-based empowerment can be an effective solution to the challenges caused by industrial activities. It is hoped that these findings can serve as a reference for similar policies and interventions in other areas experiencing similar problems

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