

STAKEHOLDER INFLUENCE AND ENGAGEMENT FOR THE SUSTAINABLE MANAGEMENT OF CENTRAL JAVA POWER PLANTS

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Abstract

This study analyzes the relationship, influence, and dependence between actors in managing Central Java Power Plant (CJPP). This study's primary and secondary data will be analyzed using a prospective analysis method approach using the MACTOR analysis tool involving 14 actors and six targets. The MACTOR analysis results show that there are actors who have a strong influence and high dependence on the management of CJPP, namely the Ujungnegoro Village Government, Karanggeneng Village Government, Ponowareng Village Government, and PT. BPI. Research and Development Planning Agency (RnDAgency), Ministry of Manpower, PT. BPI and the Village Government of Ujungnegoro own very strong convergence to achieve common goals. Actors with strong differences from other actors are the NGOs Go Green and Research and Development Planning Agency (RnDAgency). This research can be used as a reference in formulating a sustainable CJPP management policy.

Keywords: Power Plant, MACTOR, management, sustainable.

1. Introduction

1.1 Introduce the Problem

The concept of sustainable development is a vital issue in both the micro and macro scope. Policies in encouraging development must apply the principle of sustainability, meaning that there must be a balance between nature and humans. Development that ignores the interaction between the two will incur high costs, resulting in a decrease in human welfare in the future. Indonesia is one of the countries that agreed to the Sustainable Development Goals (SDGs) in 2015 and is required to take real action in contributing to achieving the world's collective dream by 2030 determined to achieve 17 goals with 169 indicators to measure these achievements, world development required to involve all parties and be able to provide benefits for everyone (known as the principle of no one left behind).

One of the essential inputs in the sustainable development process is the energy supply which must be sustainable. Energy is the primary source of economic growth because many production and consumption activities involve energy as a primary input (Asghar, 2008). From a physical point of view, energy use boosts economic productivity and industrial growth and is central to modern economic operations. In addition, energy also boosts household consumption so that it

can boost the economy (Carfora, Pansini, & Scandurra, 2019). However, energy impacts the environment both on the effects of excessive use of natural resources and from the resulting pollutants (Rehman & Rashid, 2017). Indonesia is one of the countries that still rely on coal as a primary energy source. In 2019 the realization of coal use was 37.15% of the primary energy mix, 30% in the 2025 target, and 25% in the 2050 target (DEN, 2019). The construction of coal-fired power plants has also increased in Indonesia in order to meet national electricity needs.

Since 2016 the construction of a coal power plant, "Central Java Power Plant (CJPP)" located in Batang Regency, Central Java, Indonesia has been carried out. It is targeted to operate in 2020, which is projected to assist the National Electricity Company (PLN) to supply the Java-Bali electricity supply at 5.7% (Fikri, 2018). CJPP is a coal-fired power plant with a capacity of 2 x 1000 Mega Watt (MW). CJPP development requires an area of 326 ha. A total of 226 ha will be used for power blocks (project area), and 100 ha will be used for the construction of transmission networks and substations. The CJPP construction uses community agricultural land areas in 3 (three) villages in Ujungnegoro, Karanggeneng, and Ponowareng villages (Probondari & Rengga, 2018). The construction of CJPP uses Ultra Super Critical (USC) technology, namely clean and environmentally friendly coal combustion technology, and by using an exhaust gas processing system that minimizes emissions/dispersion to the environment (PT. BPI, 2016).

The development of CJPP will have a positive impact on people's income so that it can improve the economy. Besides, the electricity generated can be used to meet national electricity needs (Aji & Legowo, 2020; Pramanik, Purnomo, & Kasiwi, 2020; Suhadi, 2018). But on the other hand, the existence of CJPP will threaten the livelihoods of the community as fishermen because the number of fish catches has decreased since the construction of CJPP, besides other negative impacts caused by the existence of the CJPP, namely the threat of marine ecosystems and air pollution resulting from the operation of the CJPP.

The impacts can be minimized by unified and interrelated management between stakeholders. Actors or stakeholders are an important component not only determining how sustainable development goals can be achieved but also determining how the foothold in achieving these development goals. Therefore, this study aims to analyze the influence and interaction patterns of stakeholders in the sustainable management of CJPP.

1.2 Literature Review

The construction of CJPP has reaped pros and cons by the community since its construction was carried out. CJPP development is carried out as a step in creating new jobs for the community so that it can improve community welfare (Aji & Legowo, 2020; Pramanik et al., 2020). On the other hand, resistance has actually emerged since the construction of the CJPP. The community considers that the construction of the CJPP will cause problems for the environment, such as damaging marine ecosystems and damage to coral reefs and the occurrence of water pollution. In addition, dredging waste is a major problem for fishers which has an impact on the diminishing daily fishermen's livelihood results as a result of the construction of CJPP. In addition, the existence of CJPP had an impact on the Karanggeneng Village community, who were forced to sell their land. The future of the community will be affected because land-use change will result in the community losing their livelihoods as farmers. The CJPP development policy has an

impact on current and future conditions, namely increasing unemployment and poverty in Karanggeneng Village. However, the form of PT BPI's responsibility is the establishment of KUB for affected communities (Probondari & Rengga, 2018).

Besides having a negative impact, the CJPP development also has a significant positive impact on the community. The construction of the CJPP has an effect on improving the welfare of the people in Suak Puntong but does not affect the socio-culture of the community. CJPP participates in building the economy of the surrounding community so that it can have a positive impact on the economy. The existence of the CJPP in the community actually helps the community in various social activities, such as the CJPP providing educational assistance, living equipment, artistic activities, and assistance in building mosques. From this, it actually has a positive impact on the people of Suak Puntong (Triyanto, 2017).

Stakeholders play an important role in managing a project so as not to have a negative impact on the community. Harmony and collaboration between stakeholders increase the success of management and can achieve sustainable development. Stakeholders are defined as groups or individuals who can influence or be influenced by the achievement of company goals (Freeman, 1984; Maria & Rendtor, 2016). The interaction of stakeholders with a sustainable environment shows that there are factors that support the collaborative capacity of stakeholders in sustainable environmental projects. Convergence between stakeholders plays an important role in the success of sustainable management (Cadith, Shintaningrum, Rusli, & A.M, 2019; Mafruhah, Istiqomah, & Ismoyowati, 2019; Mafruhah, Supriyono, Mulyani, & Istiqomah, 2020). Stakeholder participation in projects and programs can be key to ensuring their long-term sustainability. Encouraging participation helps to build ownership and increases transparency and accountability, and thereby increases the effectiveness of development projects and policies (World Bank, 2009). Stakeholder participation and collaboration is important in policymaking because it can influence policy outcomes. Stakeholder analysis is arguably more important than ever because of the increasingly interconnected nature of the world. Stakeholder analysis is related to any public problem such as economic development, poor educational performance, natural resource management, crime, health, to issues of global warming and terrorism (Bryson, 2003). Public policy analysis tends to encompass a relatively broad view of stakeholders, including not only decision-makers and interests but also beneficiaries and payers, as well as future generations (Weimer & Vining, 2010). So that it is not the case that decision-makers are involved in public policy analysis, but the people who receive the benefits or impacts need to be involved because this is to find out the success of public policy itself.

2. Method

An important aspect of implementing sustainable development is the role of stakeholders. Analysis of the roles of each stakeholder and the relationship between stakeholders and objectives can provide results for making systematic and targeted policies. This can be analyzed using the MACTOR analysis tool. MACTOR stands for Method Acteurs, Objective, Rapports de Force which is later better known in English as the Matrix of Alliance, Tactics Objective, and Recommendations. MACTOR was developed by Michel Godet in 1999, which is a development of the 1979 model. The way MACTOR works is based on inter-actor influence. In other words, MACTOR analyzes the strength (relative strength) between actors or stakeholders and explores

the similarities and differences to the various problems and objectives to be achieved (Bendahana, Camponovo, & Pigneur, 2004; Fauzi, 2019; Jaziri & Boussaffa, 2010). The MACTOR technique is based on three main inputs in the form of a matrix. First, input to MACTOR is done via a positional matrix (known as IMAO or Matrix Actors Objective). The second input is an important issue for actors to be stored in the MAO matrix. It represents the importance of each issue for the stakeholder/actor. If this matrix is combined with other matrix positions, it will create a 2MAO matrix. The third input is the MID (Matrix of Influence Direct) matrix which describes the influencing variable (Fauzi, 2019). In this study, stakeholders consisted of 14 actors, namely (1) the Office of Marine Affairs, Fisheries and Livestock (Department of Marine and Fisheries) of Batang Regency, (2) the Environment Agency of Kab. Batang, (3) District Department of Labor. Batang, (4) Youth and Sports Department of Tourism, Youth, and Sports, Kab. Batang, (5) PT Bhimasena Power Indonesia (consortium CJPP), (6) Fishermen, (7) Entrepreneurs / Business Groups, (8) Ujungnegoro Village Government, (9) Karanggeneng Village Government, (10) Ponowareng Village Government, (11)) Research and Development Planning Agency Kab. Batang, (12) Greenpeace Indonesia, (13) NGO Go Green, (14) Environmental Academics. In the analysis using MACTOR, the main input besides the actor (stakeholder) is the goal (Objective); each actor has different goals, so that one actor with another actor will cause differences (conflict). The following are the objectives set in this study, (1) Labor absorption, (2) Household Income, (3) Fish Catching and Agricultural Production, (4) Environmental Preservation and Conservation, (5) Pollution, (6)) Community empowerment.

3. Results and Discussion

CJPP 2 x 1000 MW is a collaborative project between the government and the private sector in order to meet national electricity needs. CJPP 2 x 1000 MW is located in Batang Regency, to be precise in Ujungnegoro Village, Karanggeneng Village (Kandeman District), and Ponowareng Village (Tulis District) Batang Regency. The construction of the 2 x 1000 MW CJPP is part of the Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI), which is the driving force for the growth of economic corridors, especially in Java and Bali. The consortium in the CJPP development project, namely PT. Bhimasena Power Indonesia (BPI) is a joint venture company by three companies consisting of J-Power (34%), PT. Adaro Power (34%), and Itochu Corporation/Itochu (32%). The development of CJPP left a growing problem in the community, especially for people located in three villages, namely Ujungnegoro, Karanggeneng, and Ponowareng. Since the beginning, the discourse on the development of CJPP has created pros and cons in society. Some community groups think that the establishment of the CJPP will have a good impact, especially on the creation of new jobs, so that it has a positive impact on reducing the unemployment rate in the community. On the other hand, the construction of the CJPP also has a negative impact on those who work as farm laborers and fishers because it erodes agricultural areas and fishing locations as land for the CJPP project. So this requires the role of stakeholders in overcoming problems and creating sustainable management plans so that the negative impacts of CJPP development can be resolved.

3.1 Influence and Dependence of Actors in the Management of CJPP

The MACTOR method can explain the influence (influence) and dependence (influenced) between stakeholders. The level of influence and dependence between actors is described in four quadrants.

1. Actors who have a high level of influence and a low level of dependence (Influential Stakeholders) are in quadrant I.
2. Actors who have strong influence and a high level of dependence (Relay Stakeholders), the position of these actors is in quadrant II.
3. Actors who have a low level of influence and a high level of dependence (Dependent Stakeholders) are in quadrant III.
4. Actors who have low influence and low dependence on other stakeholders (Autonomous Stakeholders) are in quadrant IV.

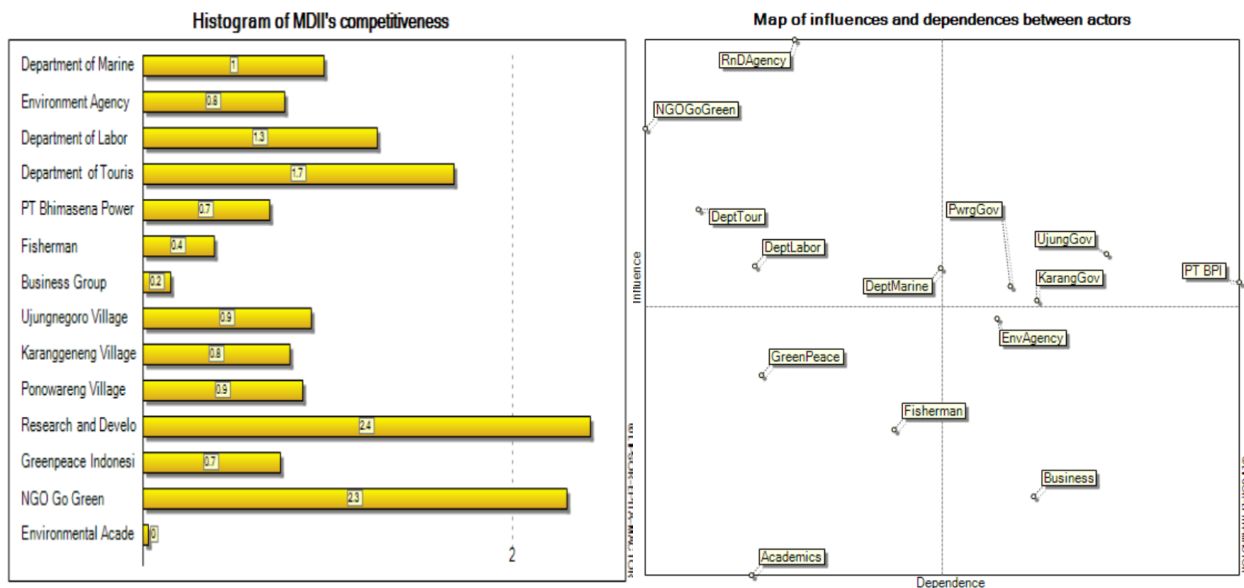


Figure 1. The Level of Influence and dependence of CJPP stakeholders

Figure 1 shows that the actors with a high level of influence and low dependence (Quadrant I) are Research and Development Planning Agency (RnDAgency), NGO Go Green (NGOGOGreen), Department of Tourism (DeptTour), Department of Labor (DeptLabor), and Department of Marine and Fisheries, (DeptMarine). Actors who have strong influence and high dependence (Quadrant II) are Ujungnegoro Village Government (UjungGov), Karanggeneng Village Government (KarangGov), Ponowareng Village Government (PwrgGov), and PT. BPI (PT BPI). Actors who have low influence and a high level of dependence (Quadrant III) are the Environmental Agency (EnvAgency) and Entrepreneurs/Business Groups (Business). Meanwhile, actors who have low influence and dependence are Greenpeace, fishermen, and

academics. Competitiveness between actors can be seen through the actor competitiveness histogram in Figure 1, which places Research and Development Planning Agency (RnDAgency) actors into actors with very high competitiveness when compared to several other actors. The role of Research and Development Planning Agency (RnDAgency) is vital for the sustainable management of CJPP because from the start of planning to its current implementation Research and Development Planning Agency (RnDAgency) has become planning, executing, and controlling agency for CJPP management in a sustainable manner so that the role played by Research and Development Planning Agency (RnDAgency) cannot be ignored. There are other actors who have high competitiveness, namely the NGO Go Green, the District Department of Tourism, Youth, and Sports. Batang, the Department of Labor (DeptLabor), and the Department of Marine and Fisheries (DeptMarine). The role of Go Green NGOs in managing CJPP in a sustainable manner through control and supervision of every activity carried out by CJPP so as not to damage natural resources, disrupt community activities, and provide benefits to the community. The successful management of CJPP in a sustainable manner certainly requires strong support and coordination between local governments. The Department of Tourism, Youth, and Sports, Department of Labor, and Department of Marine and Fisheries are government stakeholders who have high competitiveness. The high competitiveness of government stakeholders can encourage the success of CJPP management in a sustainable manner. The Department of Tourism, Youth, and Sports can maintain its resources so that tourism activities continue, the Department of Labor can control the implementation of the workforce system in the CJPP so as to reduce the number of unemployed, and the Department of Marine and Fisheries to maintain and control CJPP activities so that it does not have a negative effect on the marine and fisheries sector.

3.2 Convergence and Divergence between Actors in the Management of CJPP

The determination of the relationship between actors is expressed in the form of convergence and divergence mapping between actors. Convergence mapping (the tendency to synergize) between actors explains that the closer actors are to one another, the more intense the convergence is. Meanwhile, divergence mapping identifies the number of potential conflicts by looking at the hierarchy of goals from other actors, where each actor has the same or different goals. Convergence between actors can be categorized as very weak, weak, medium, strong, and very strong convergence. Figure 2 explains that the red line explains the relationship between the existence of a very strong force against several actors, including PT. BPI, Research and Development Planning Agency (RnDAgency), Ujungnegoro Village Government, and Academics. These four actors indicate that they can work together to achieve their goals. Meanwhile, actors with weak convergence are the Department of Labor and the Environment Agency. The Department of Labor has weak convergence because the Department of Labor only focuses on labor issues that exist in CJPP. The Department of Labor has yet to see other broader effects as a result of the construction of the CJPP.

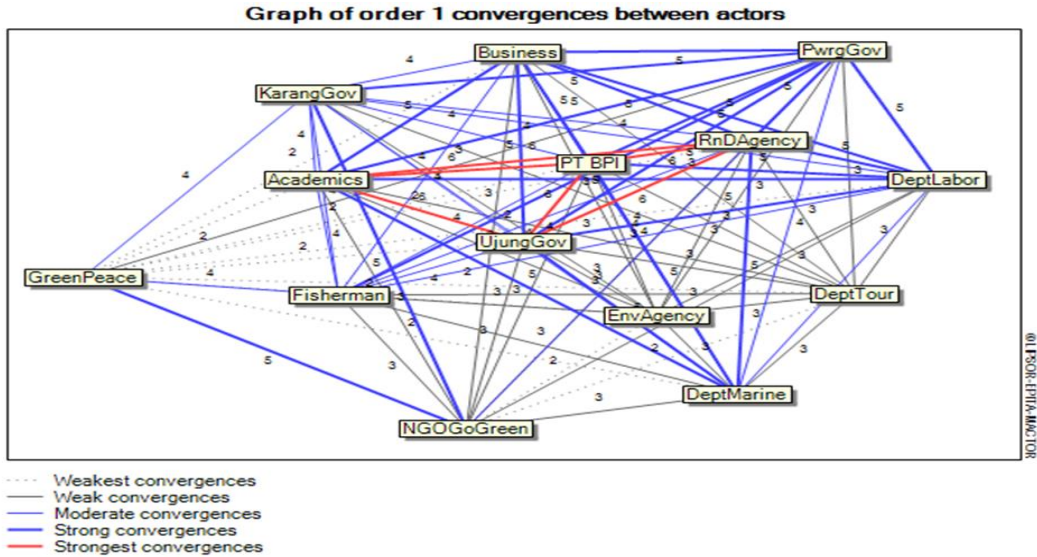


Figure 2. Convergence between actors against objectives

The position of the Environmental Agency is in an actor with weak convergence. The existence of distance between the Environment Agency and other actors is one of the reasons for this to happen. Besides that, at this time, the role and contribution of the Environment Agency are still mapped out in environmental issues, such as conservation and pollution control goals. The Environmental Agency has not focused its focus more broadly on the impact of CJPP on the economic and social life that exists in the community.

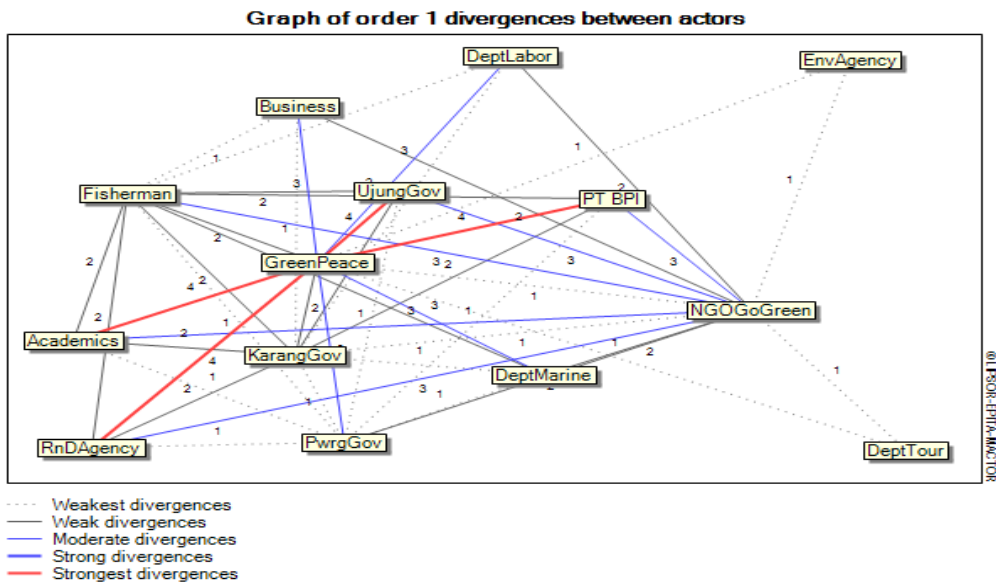


Figure 3. The divergence between actors against objectives

Divergence analysis between actors describes each pair of actors who have goals and do not hold the same position. At this stage, the possibility of conflict between actors is very high due to the number of different positions in each actor towards the stated goals. Figure 4.18 above shows the divergence mapping chart of one actor (IDAA), where it can be seen that Greenpeace actors have a very high level of divergence with several actors, including Research and Development Planning Agency (RnDAgency), PT BPI, Ujungnegoro Village Government, and Academics. Based on the narrative delivered during interviews and FGDs, the high divergence of Greenpeace actors was due to Greenpeace clearly and firmly declaring its rejection of CJPP to date because it can have negative effects on people's lives and the environment in particular. The very high divergence was also triggered by differences in visions/views of the CJPP development in Batang.

There are actors who have very weak divergences, namely the Environmental Agency and the Department of Labor. These two actors have very low intensity, and this causes the two actors to have different interests related to the stated goals.

4. Conclusion and Recommendation

The MACTOR analysis results show that there are actors who have strong influence and high dependence on the management of CJPP, namely the Ujungnegoro Village Government, Karanggeneng Village Government, Ponowareng Village Government, and PT. BPI. Research and Development Planning Agency (RnDAgency) is an actor with very high competitiveness when compared to several other actors. The role of Research and Development Planning Agency (RnDAgency) is vital for the sustainable management of CJPP because, from the start of planning to implementation, Research and Development Planning Agency (RnDAgency) has become the planning, executing, and controlling agency for CJPP management in a sustainable manner so that the role played by Research and Development Planning Agency (RnDAgency) cannot be ignored. There are four actors who have very strong convergence towards the existing objectives, namely Research and Development Planning Agency (RnDAgency), Department of Labor (DeptLabor), PT. BPI, and the Village Government of Ujungnegoro. Actors with strong divergences related to differences in interests with other actors in responding to different objectives are NGOs Go Green and Research and Development Planning Agency (RnDAgency). The goals of conservation (conservation) and pollution control have a very strong influence on increasing convergence and reducing divergence between actors. Meanwhile, the actors of PT BPI, academics, and RnD Agency have strong potential to work together by taking into account the convergence and divergence that occurs between actors.

This study recommends that all stakeholders work together through the alignment of work programs, especially in the management of CJPP and that all actors and communities need serious efforts in managing CJPP so that it can encourage the success of sustainable management.

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