

GOVERNING THE INFRASTRUCTURE IN INDONESIA: AN EMPIRICAL EVIDENCE FROM THE SULEWANA HYDROPOWER PLANTS OF LAKE POSO, CENTRAL SULAWESI

M Nur Alamsyah¹, Agus Chandra², Muhammad Arief³

¹ ORCID: 0009-0003-0039-2481

³ ORCID: 0009-0005-2025-8986

^{1,2,3} Universitas Tadulako

Jl. Sukarno Hatta, KM 9, 94119, Tondo, Palu, **Indonesia**

ABSTRACT

This article aims to analyze collaborative management of flood-affected communities due to the overflowing of Lake Poso in Central Sulawesi Province. This is an implication of increasing the capacity of the Sulewana Hydroelectric Power Plant to generate electricity by raising the lake's surface water. How is the involvement of stakeholders together, namely the government, companies, communities and indigenous peoples groups seen through Emerson's collaborative governance concept. The collaborative governance consists of three dimensions of assessment, namely collaboration dynamics, collaborative action, and impact and adaptation. Research with a qualitative approach uses data collection techniques through interviews, documentation, and literature studies. collaboration of stakeholders consisting of the local government, Poso district level, sub-districts, villages, the company PT Poso Energi, and affected communities and indigenous peoples' organizations. The collaboration that has been carried out has not been complete in resolving the problems and demands of the affected community. This condition is caused by the dynamics of collaboration between stakeholders, and the solutions offered have not met community expectations. Optimization of authority at each level of local government has not gone well, placing the government's facilitation function, especially at the district and village levels. The lack of openness of companies in the cooperation carried out has caused community acceptance of the results of the collaboration to be unsatisfactory. The position of the hydroelectric power plant as a vital object related to energy provides dominant power to the company, although there is an inseparable bond between the affected community and the government at every level is an inseparable bond in the Pomona traditional community. The solutions provided are only limited and temporary; the community's implications due to the overflowing lake are permanent and long-term.

Keywords: collaboration, community, development, local government, governance, Poso

INTRODUCTION

The government was formed to realize the achievement of human civilization goals through development programs for the community. To achieve this goal, the government must be able to mobilize various elements to organize development and maintain a social order system. This is so that people can live reasonably in the context of national and state life. The development carried out not only provides benefits and progress but also problems. This article will show how the government tries to carry out its role in ensuring welfare through partnerships and collaboration in development by cooperating with the private sector. This development has other impacts on society, the environment, and culture. Collaboration is believed to be the best alternative way to meet the goals of each stakeholder involved, although, in the context of this study, it did not run optimally. Collaborative governance is present as it is known today to be able to bring together and unite various public and private stakeholders in a collective forum with public institutions to be involved in consensus-oriented decision-making (Ansell & Gash, 2008). A good governance system is a necessity for a country to carry out its duties and roles as a public service at various levels of government. So it is the government's responsibility to be present and coordinate various conditions in an area that befall the community creatively (Ansell, 2016).

The development of good governance, and collaborative governance has become the latest interesting phenomenon or trend to be studied by Ansell and Gash. Is one way to respond to the desires of stakeholders involved in the implementation of development so that both the surrounding environment and society are stable. The existence of collaboration also shows that achieving a goal cannot be achieved alone but requires cooperation from other parties and also shows that a goal or problem is shared ownership (Emerson & Nabatchi, 2015).

This happens, Collaboration related to the overflowing of Lake Poso attracts various parties

to get involved with the wide impacts caused to the community and socio-cultural life around Lake Poso. This happens because the parties have their respective authorities to get involved with each other. Lake Poso is a source of livelihood for the surrounding community (Schrauwers, 2000). Apart from being economic, Lake Poso is also an important part of social history as a determining part of the formation of Sulawesi Island, which is believed to be the result of the lifting of the ocean (Siruyu, 2020). The history makes this lake one of the ancient lakes among 10 other lakes in the world and is estimated to be more than 2 million years old. It is not surprising that the phenomenon caused by the object of Lake Poso attracts attention because it has many connections in it (Litha, 2020).

Various studies on how the government, in the process of collaborating with various other stakeholders, show good achievements because they are considered strategic (Qin et al., 2024; Us Salehin, 2024). Generally, studies related to the development of hydroelectric power plants as a renewable energy source always provide advice on the importance of calculation and caution in its implementation (Sharma, 2024; Smith, 2024). Existing studies only talk about the impact and do not see how solutions are provided to deal with it, and how each related actor relates to each other in finding the best way to address the impact. Initial studies on the construction of the Sulewana Hydroelectric Power Plant by PT Poso Energi show many advances and benefits felt and obtained by both the government and especially the community at the investment location (Chaudhary, 2024). The problem of concern arises when the hydroelectric power plant capacity development project is carried out by dredging the lake bed and raising the surface water (Kayupa, 2015). The overflowing lake water has caused direct and indirect impacts on the social, economic, and cultural life of the community (Khanal et al., 2024; Tandapai & Torore, 2024), as happened in 16 villages around Lake Poso.

This study focuses on how to optimize collaborative governance by all stakeholders, which is not seen by other studies. The superiority of PT Poso Energi as one of the national vital projects amid the

energy crisis places it in a strong bargaining power with various related actors. Collaboration is carried out not only by prioritizing modern organizational patterns that are effective and efficient but also by using traditional patterns with deliberations that are always carried out in *Banua Mpogombo* (traditional meeting hall) as a symbol of the greatness of the local Poso community. The interaction of various formal and informal structures is a treasure trove of wealth in solving various societal problems.

LITERATURE REVIEW

The concept of collaborative governance is a new way of managing government that directly involves stakeholders outside the government or state, oriented towards consensus and deliberation in the collective decision-making process (Emerson & Gerlak, 2014). This process aims to create or implement public policies and public programs that will satisfy and create public trust (Beshi & Kaur, 2020). Collaboration is also interpreted as an activity that is fundamentally located in the management of social networks. Social networks are the relationships between communication nodes of stakeholders (Booher & Innes, 2002). Based on the definitions, it can be concluded that the theory of collaboration is an analysis of the governance process from the perspective of social networks.

The collaborative governance model requires all stakeholders to be involved in the dialogue. Stakeholders in this case represent themselves in expressing their interests. The existence of incentives, interdependence, and trust are important prerequisites for inclusion, but active inclusion management is also very important. The inclusion that takes place must also be strategic, with selective activation of each participant depending on the functional and pragmatic choices made (Ansell et al., 2020).

The focus of collaboration by various actors involved in handling the impact of lake overflow for the need to increase the capacity of the Sulewana Hydroelectric Power Plant is on public policy and issues. Public institutions have a large orientation in policy-making, goals, and processes. Collaboration

is interpreted to achieve a degree of consensus among stakeholders. Collaborative governance requires the realization of social justice in fulfilling public interests (Hardi, 2020). According to Ansell and Gash, this perspective on collaboration is an instrument used to overcome a problem because collaboration is a shared ownership of the problem (Arrozaaq, 2016). Various actors have different perspectives on seeing a problem.

It is not easy to create an understanding between the roles of these actors. Collaborative management acts as a mediator so that actors can formulate a common understanding of a problem. This definition describes a process, management structure, and formulation of public policy decisions involving actors from various levels, both from government and/or public, private, and community agencies (Emerson et al., 2012). It is further stated that the collaboration process in governance consists of three dimensions, namely dynamics, actions, impacts, and adaptations, as shown in the figure below.

Since mid-2020, when the trial for raising the water level of Lake Poso was carried out until now, the people on the edge of Lake Poso have experienced losses. This phenomenon is interesting to understand with the Emerson scheme (Fig. 1), namely, how the Collaborative Governance Regime framework includes the dynamics of collaboration, involvement, impact, and adaptation in the context of a broader system. A deep understanding of this framework can help optimize collaboration and achieve better results for all parties involved. The dynamics of this collaboration occur in the context of the capacity and capabilities of stakeholders involving the Regency, sub-district, village, and sub-district governments, as well as the company PT. Poso Energi, Indigenous communities, and affected communities. The adaptation and impacts that occur will affect the broader context system for each outcome expected by the actors. Actor adaptation is carried out to respond and adjust to the impacts that occur as the final result in community acceptance. Stakeholder involvement is the first step in the collaboration process. Actions taken by stakeholders will have certain impacts even though they are not necessarily to their wishes.

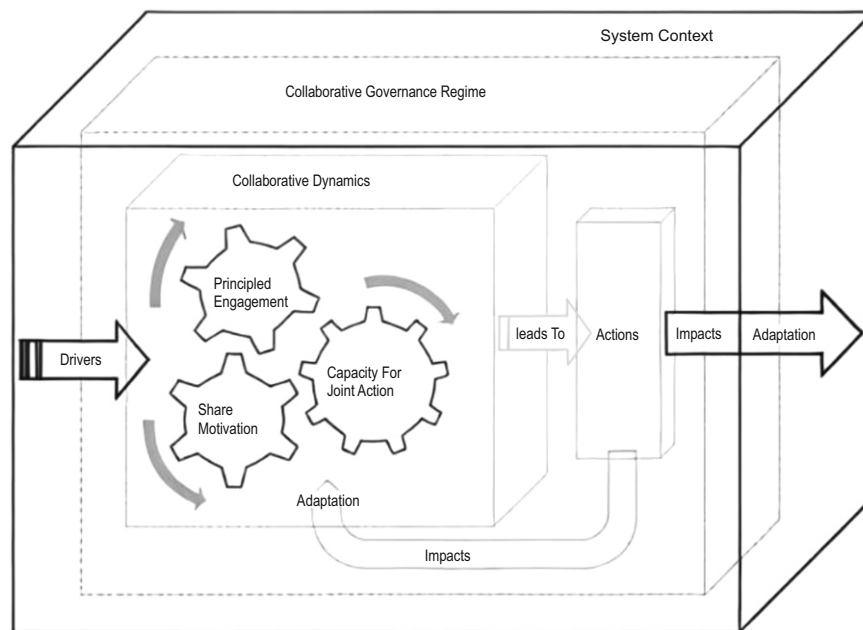


Fig. 1. Integrative Framework for Collaborative Governance
Source: Emerson et al. (2012).

The condition of rice fields, plantations, and livestock cannot be managed due to the elevation that has not receded (Alzahra, 2022). Elevation is an increase in the surface of an object that is higher than the surrounding objects to support the potential water-carrying capacity of the rotating turbine at PT Poso Energi. This impact began with the trial activity of the Poso 1 hydroelectric dam water gate in July 2020, which aimed to obtain data on water requirements for the operation of the Poso 1 hydroelectric turbine, which will operate in January 2022. The Poso 1 hydroelectric power plant, with a capacity of 130 MW, and the new power plant will complement the Poso 2 hydroelectric power plant, which has been operating since 2012. So that the total maximum capacity of both reaches 515 MW (Litha, 2022).

Problems then arose after the trial ended, facts on the ground showed that there was still affected land, and if the Poso Lake water cycle did not return to normal, the rice fields could not be managed, so long-term handling was needed. This phenomenon of impacts that have further implications requires intense collaboration between the Community in mutually beneficial handling. For this reason,

each stakeholder has an attachment to the problems faced together, to be able to face them, so that they can achieve common goals (Alamsyah et al., 2023).

Due to this flood, many livestock in the form of cows and buffaloes have also died due to the loss of grazing land, so the community hopes to find a solution. The government as a liaison between the community and various interests related to the interests of the community has a constitutional mandate to resolve these challenges as a result of development (Alamsyah, 2009). The development of global electrical energy needs with increasingly limited fossil energy sources, makes the potential of lake water a strategic choice, although this planning has not considered assessing the impact (Novitasari et al., 2023). Data on the area of rice fields affected by the rise in the water level of Lake Poso is around 426 ha (Litha, 2021). In addition to rice fields, it also damages people's gardens, submerges settlements, and kills livestock due to being submerged in overflowing water. This data is initial information before a decline occurs due to climate change (Novitasari et al., 2023).

After a review by the government through the Field Agricultural Extension Workers (Penyuluh Pertanian

Lapangan/ PPL) and Poso Energy, which was verified together, the data on the area of submerged land was around 260 ha. Data on the number of dead buffaloes was 94, and the number of cows was 16. The role of the government in terms of decision-making and policies is also needed because it refers to the regulations of Law No. 19 of 2013 concerning the Protection and Empowerment of Farmers (*UU No. 19 Tahun 2013 Tentang Perlindungan Dan Pemberdayaan Petani*, 2013). Collaboration is very important in providing objectives from the conditions faced, although several studies have shown that it is less successful. This process is to find solutions to problems faced in society (Hardi & Hawing, 2022).

How far the role of the government determines how the solution is, this role can be seen from the government's attitude in resolving it. Government collaboration is expected to be able to overcome the problems of the affected communities on the outskirts of Lake Poso. Since PT Poso Energy has been operating in Poso Regency, the company has always contributed to the development of Poso Regency, but in terms of resolving the problem of losses experienced by affected farmers, there has been no meeting point between the community and the company. Compensation by the company is given in stages to the owners of buffalo and cows that died in the grazing land and then to the submerged agricultural land.

The provision of compensation is not by the expectations of the community and the government with the assumption that the company has a different calculation method than the community. The harvest results according to information from the community and the Poso Lake Indigenous community obtained from the calculations of the Poso Regency Agriculture Service that each harvest around the lake produces 2.5 tons but is compensated for every 100 with 10 kg of rice. Another incalculable loss is the destruction of the eel ecosystem which is part of the socio-economic cycle of the community around the lake. PT Poso Energy should be responsible for resolving the problem as an impactor, and the local government, as a regulator, can play a role in finding solutions.

The compensation prepared by the company is far from the impact of the losses experienced by the community due to the policy of raising the lake's water level. Some people accept it because they have been in debt due to the agricultural production process that was carried out, which then failed due to an overflow of funds. Likewise, the economic mechanism that lives in the Pomona community related to eel fishing, which is part of the chain of life of the community around the lake, was lost due to damage to its ecosystem due by the company's operations. Partnerships through collaboration play a major role in determining and implementing policy implementation in the regions. This condition requires the importance of understanding how partnerships can provide important values to understand the principles of modern governance (Huxham et al., 2000). Especially in the context of studies related to environmental impacts caused by national strategic investments related to energy in the Poso Energy Company.

MATERIALS AND METHODS

This study uses a qualitative approach to facilitate an empirical description of collaborative phenomena in handling the impacts caused by the overflow of Lake Poso. Collaborative resolution due to the increase in the lake's water level for the needs of the Sulewana Hydroelectric Power Plant. This method can help to examine human problems and the social phenomena they face (Creswell & Creswell, 2017). Data uses observations through eyewitness reports, direct recording in the field, secondary data from government agencies such as BPS, the environmental service, the Poso agricultural service, the village government, the records of the Lake Poso Indigenous Community, and the mass media. Primary data was also obtained through in-depth interviews with informants from PT Poso Energi, the Poso Indigenous Community, the village government, sub-districts, and the agricultural service, the location of this study was the area around Lake Poso which was affected by the flood covering 16 villages 1 sub-district and 4 sub-districts. Data analysis uses the analysis method

according to (Miles et al., 2014), namely non-linear and interactive analysis, consisting of three main activity flows that are interrelated and take place simultaneously, namely data condensation, data presentation, and conclusion.

RESULTS AND DISCUSSION

Poso is one of the oldest regencies in Central Sulawesi province. This administrative area is not only known for its stunning natural beauty but also rich in long history (Siruyu, 2020; Yuniawati, 2019). Megalithic sites scattered in various regions present an astonishing ancient civilization, especially in the Bada Valley and Besoa Valley (Marzuki et al., 2024). This area, when viewed on a map of Indonesia, is in the central part that connects tourist destinations

in Sulawesi, namely Toraja, the Togean Islands, and Bunaken in Manado (Fig. 2).

The phenomenon of overflowing lake surface water due to the optimization of hydroelectric power plants is a strategic opportunity for the development of friendly energy sources which then have an impact on the environment and society (Alzahra, 2022; Wirachandra et al., 2024). The condition of the government being divided in responding to issues and determining support options is unique in the collaboration that occurs. Every action taken by each stakeholder related to handling the impact produces different goals. This Collaborative System occurs in the customary area of the Pomona Community, where the mechanism is carried out not only by prioritizing modern organizational patterns with effective and efficient formal power structures but also by using

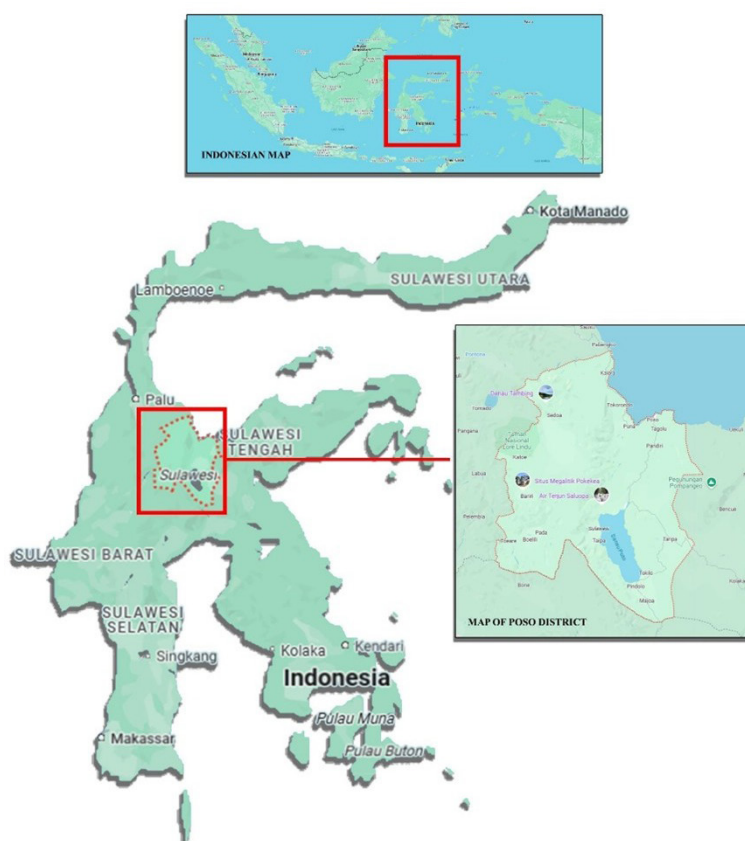


Fig. 2. Poso on the map of Indonesia

Source: Mapcarta, <https://mapcarta.com/15607118>.

traditional patterns with deliberation, including the church (Kulas & Tangkude, 2024) using *Banua Mpogombo* as a symbol of the greatness of the local Poso community. The interaction of various formal and non-formal structures is a treasure trove of wealth in solving various societal problems.

Collaboration Dynamics

The practice-based knowledge that has been carried out becomes an integrative framework for collaborative governance. This framework will establish a series of dimensions that include the larger system context, collaborative governance regimes, and internal collaborative dynamics and actions that occur so that they can have an impact on goals and be able to adapt throughout the collaborative system. Collaborative governance always prioritizes flexibility, creativity, and orientation driven by demand for policy and program development, as well as its compliance with the values of deliberation and transparency (Gash, 2022). The dynamics of collaboration include three indicators as pillars to explain how these dynamics take place and occur, including the movement of the Joint principle, motivation, and capacity to take joint action. The interaction between these three things greatly determines how a dynamic occurs in a collaboration that will be carried out. Collaboration as a strategy often crosses work unit boundaries or even agencies, allowing individuals from various backgrounds and expertise to join in efforts to achieve better results that can be achieved.

Movement of shared principles

The movement of shared principles can be seen from who the actors involved are, how often they hold meetings through face-to-face or virtual dialogues, and how the relationships are established between organizations. Handling the affected community on the outskirts of Lake Poso involves stakeholders consisting of government institutions at various levels, related companies, and the community, both as ordinary citizens and the customary community of Lake Poso. The embodiment of the movement of shared

principles has four basic process elements. Through this iterative process, collaborating stakeholders can develop common goals and joint actions to achieve the goals that have been set. The three basic elements include:

First, Disclosure, in government collaboration in handling the affected community on the outskirts of Lake Poso involving various stakeholders starting from collaboration, namely the Government through the Poso Regency Agriculture Service, PT. Poso Energy and the Village/Kelurahan government, as well as involving community leaders and affected communities.

Second, Deliberation, in handling the affected community, stakeholders determine a joint agreement by holding a joint discussion. In this case, the government as a mediator that facilitates meetings between the affected community and PT. Poso Energy.

Third is determination. In the technical collaboration, the government and the company play a role in facilitating meetings with the community. Meetings are held periodically, namely every 3 months, and the meetings are facilitated by the Government and the Company the Government's decision is based on what is agreed upon by the affected farmers with the company, and for technical matters in the field, the government is assisted by agricultural extension workers (PPL) who work together with the Poso Energy company field officers and are facilitated by the affected village government.

Shared Motivation

Shared Motivation is a self-strengthening cycle consisting of four elements, namely shared trust, understanding, internal legitimacy, and commitment (Emerson et al., 2012). This shared motivation can also be said to be social capital to strengthen or accelerate the process of principled involvement. Here are four elements of shared motivation in government collaboration in handling affected communities on the outskirts of Lake Poso:

First, Shared Trust, over time a sense of mutual trust will be established between the collaboration actors so that they feel that other stakeholders can

be trusted. In this collaboration, the government acknowledges that the Poso Energy company can be trusted because the company acknowledges that they will be responsible until this problem is resolved, in addition, the company is also willing to replace the losses experienced by farmers so that the community also has trust in the company and related to data collection, the company also needs assistance from the government through agricultural extension workers in the field.

Second, Shared Understanding, understanding means mutual understanding which specifically refers to the ability to understand and respect the positions and interests of other stakeholders even when there are differences of opinion. In handling the affected communities on the edge of Lake Poso, stakeholders admit that building a shared understanding takes quite a long time, especially in determining the nominal compensation that must be paid. From the results of the researcher's investigation, the affected community stated that the compensation costs offered were very far in comparison to what they got from the harvest, which from one area could produce up to 40 kg and the compensation given by the company in stage one was worth 10 kg / are and in stage two 15 kg / are. Although many people accepted the compensation, there were still people who refused. This then became a consideration for stakeholders for smooth collaboration.

Third, Internal Legitimacy, internal legitimacy comes from within each stakeholder who recognizes that they are interdependent with each other. In government collaboration in handling the affected communities on the edge of Lake Poso, there is indeed a dependency between parties. However, the one who feels a direct connection is the impact giver, namely the Company, because the company needs the capacity owned by the government as the owner of the authority. On the other hand, the community also has a dependency on the government as a facilitator and collaborator and companies that are expected to take responsibility, because if this problem is allowed to drag on, it will disrupt the relationship between the community and the government and

with companies that will be affected by economic and political problems.

Fourth, Commitment, strong trust, and strong legitimacy lead to the creation of a bond of mutual commitment. In this case, the government and companies are committed and strive to ensure that the handling of the affected community is resolved immediately. The company also promises to provide long-term compensation so that the community can earn income to support their economy.

Capacity to Take Collective Action

The capacity for collective action is conceptualized as a combination of four elements, namely: procedures and mutual agreements, leadership, knowledge, and resources. All collaborative frameworks (Emerson et al., 2012) recognize the importance of formal and informal rules and protocols. Most also identify leadership as the most important element. These four elements must be sufficient to achieve the goals that have been mutually agreed upon. In handling the affected community on the outskirts of Lake Poso the four elements can be seen as follows:

First, Procedures and Joint Agreements, the procedure for handling the affected community on the outskirts of Lake Poso begins with a joint discussion involving stakeholders. In the joint discussion that was carried out, the first thing discussed was the solution offered after the solution was accepted by the community, and the next was about the technical implementation. The technicalities that had been mutually agreed upon began with data collection, after data collection. The data obtained was then verified by both parties, the government and the company, and the next step was the distribution of compensation costs. After the activity was carried out, a gradual evaluation was carried out. In this case, compensation payments are short-term handling so long-term handling will be discussed again in the meeting agenda involving stakeholders.

Second, Leadership, in handling the affected community on the outskirts of Lake Poso, leadership in this collaboration is divided into several levels, namely facilitators and mediators from the local

government and the company who then form a group of implementing activities in the field consisting of Field Agricultural Extension Workers (PPL) and Field Officers from the Company. The affected community, they are represented by advocates consisting of the local village/sub-district government and Non-Governmental Organizations (NGOs).

Third, Knowledge and collaboration require aggregation, sorting, and rearranging of data and information that will later be shared. In this study, it is conceptualized by providing understanding to each stakeholder and the affected community. In this case, communication is very important because if there are obstacles in communication problems, it will affect the smoothness of collaboration. The government and the company are trying to build communication with the affected community by conducting socialization and coaching the community regarding handling the impact on the outskirts of Lake Poso.

Fourth, Resources, adequate budget support, and other resources play an important role in the success of a collaboration. Resources can be in the form of funding, time, technical and logistical support, administrative assistance, and skills needed for analysis or implementation. In handling the affected community, the company provides a budget of approximately 9 billion for compensation payments to the affected community, which is a form of corporate responsibility, and for human resources in the form of workers who work in the field to collect data until distribution.

Collaborative Actions in Handling Affected Communities

Conceptually, collaborative actions are a cyclical process. Collaboration thus requires interaction that requires good communication, shared understanding carried out by implementing shared principles (principled engagement), shared motivation, and the capacity to take joint action. Collaboration process is very important to know how it runs according to expectations, by looking at indicators that try to reveal the complexity of the relationships between the actors

so that the collaboration process in handling the impact of the overflow of Lake Poso water into the production areas of the community around the lake can be known.

Collaboration reflects the dynamics of collaboration to determine the success or failure of a collaboration can be seen from collaborative actions. In practice, collaborative actions generally begin with instrumental goals, namely encouraging actions that cannot be achieved if done alone, so other stakeholders must be involved to handle a problem. Collaboration as a strategy will also be able to trigger creativity and innovation towards the problems faced. This condition is possible by bringing together various perspectives and approaches, collaboration allows teams to solve problems in new and unconventional ways. Open discussion and support between various stakeholders can inspire fresh ideas and more effective solutions (Ariyani, 2021).

Shared trust in collaboration, found various factors that directly or indirectly form trust. There is an interdependent relationship between each collaboration actor so that shared trust is formed as a collaboration (Ariyani et al., 2020). One of the problems related to collaborative actions in handling the elevation of the Poso Lake water is the dependence on other parties, especially on PT Poso Energy. The national strategic business process attached to the PLTA gets priority from both the central government and local governments, including the interests of the community towards companies that are considered as solutions to national problems. The implementation of real collaboration lies in the dynamics, to mobilize shared principles, shared motivation, and capacity to take joint action.

To see the level of success of collaborative actions carried out in dealing with the impact of the disaster, various institutions between governments at different levels, Companies, and Communities are involved. Collaboration brings together shared understanding influenced by shared trust. In actors who know the characteristics and expertise of other actors, a good understanding occurs, this can be seen based on the Fig. 3.

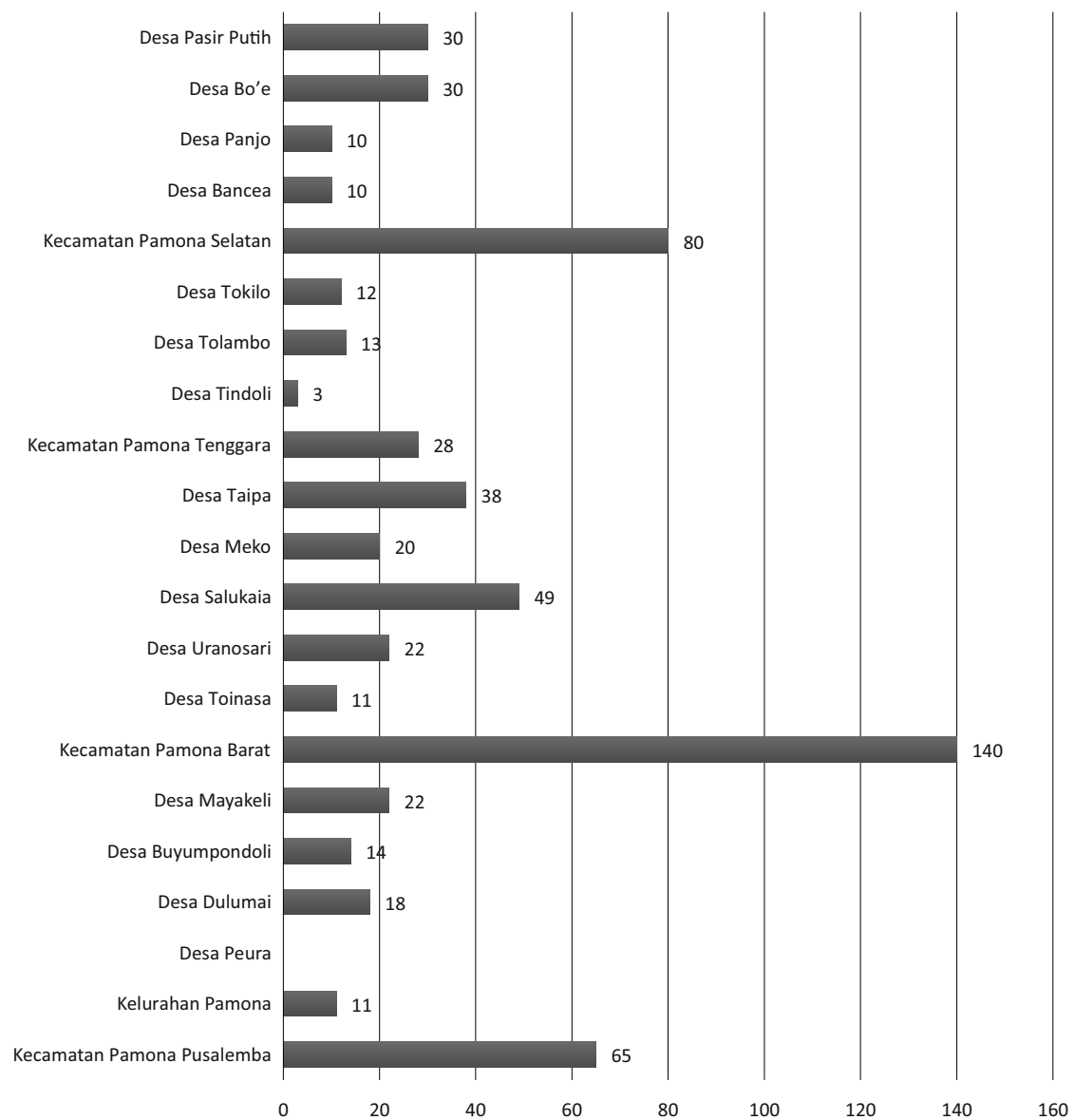


Fig. 3. Amount of Compensation Given to Affected Communities

Source: Public Relations of Poso Energy Hydroelectric Power Plant, 2024.

Based on the data from Fig. 3, if confirmation is made to the community, the data is not entirely accurate because based on the calculation of data in the field, it shows that the number of people who received it is not appropriate. In addition, compensation based on the documentation of the implementation of activities published by the company in each village is 100%, but in reality, there is one village,

namely Meko Village, whose success percentage only reaches 30%, for Peura Village, the researcher did not obtain information because there is no documentation in the publication from the Poso Energy company. Conceptually, a collaborative action reflects the dynamics of collaboration. To find out the government's collaborative actions in handling affected communities on the outskirts of Lake Poso, it can be

described in the form of a percentage of success as shown in Table 1.

The data in Table 1 is data obtained from the results of reports from affected communities who are members of the Lake Poso Indigenous Community Alliance/ Masyarakat Adat Danau Poso (MADP). However, the data is still being reviewed by the company in collaboration with the government, especially the district government. The sub-district and village/ sub-district governments are more biased towards the community who are part of the indigenous community and their families. The fundamental issue in a collaboration is a common view of the goals to be achieved. One of the phenomena that emerged in solving the problem of the impact of rising lake water levels which caused damage to the conditions of the community around Lake Poso is the data on affected residents. The data presented by the Company assumes that by calculating the entire amount of financing as CSR (corporate social responsibility) that has been issued, it includes all villages and sub-districts that have received it so far as in Fig. 3.

This is different from the claim submitted by the Poso Lake Indigenous Community (MADP) which has data on the number of people and even the area of land affected by the community. There are different perspectives between the community, the company, and the position of the role played by the government. The government is present solely as a bridge needed

by the community and the company to find common ground. However, as indicated by Marx's conception which states that bureaucracy when dealing with the capitalist bourgeoisie will side with them more than side with the interests of the wider community or the proletariat (Kellner, 2023; Lekkas & Souitaris, 2023).

The Poso Lake Indigenous Community is an institutionalization of society that is present to represent the community even though it does not receive broad support from the entire village community. However, its existence is an important element for the occurrence of dialogue and collaboration that, although unequal, can provide color. Regarding the number of villages that are recorded, this community institution records the following data (Fig. 4).

The image above shows the availability of Data from the Indigenous Community of Lake Poso. The coverage of data on the affected area is supplemented by the area of rice fields, including gardens, due to the rising surface water of the lake. Based on the area of each village, it is true that there are conditions of loss both materially and non-materially in the Community, which are the responsibility of the Company PT Poso Energi. Thus, the problem of handling the affected community is not to the expectations of many parties, such as the affected community, the indigenous community of Lake Poso, the Village Government, and the sub-district.

The company has different views regarding the impact that the company can bear on the affected

Table 1. Total of Households and Land Area of Affected Communities

Sub-district	Village	Number of affected families	Population	Affected land area (Ha)	
				Rice fields	Garden
Pamona Puslemba	Buyum pondoli	9	1930	448	0
	Peura	25	1171	497	0
	Pamona/ Tentena	13	5413	483	0
	Tonusu	31	1654	0	3081
Pamona Barat	Meko	83	3519	5756	0
	Toinasa	1	2507	150	0
Pamona Selatan	Bancea	18	1814	1438	0
	Pendolo	18	2122	754	0
Total		198	20130	9526	3081

Source: Poso Lake Indigenous Community (MADP), 2024.

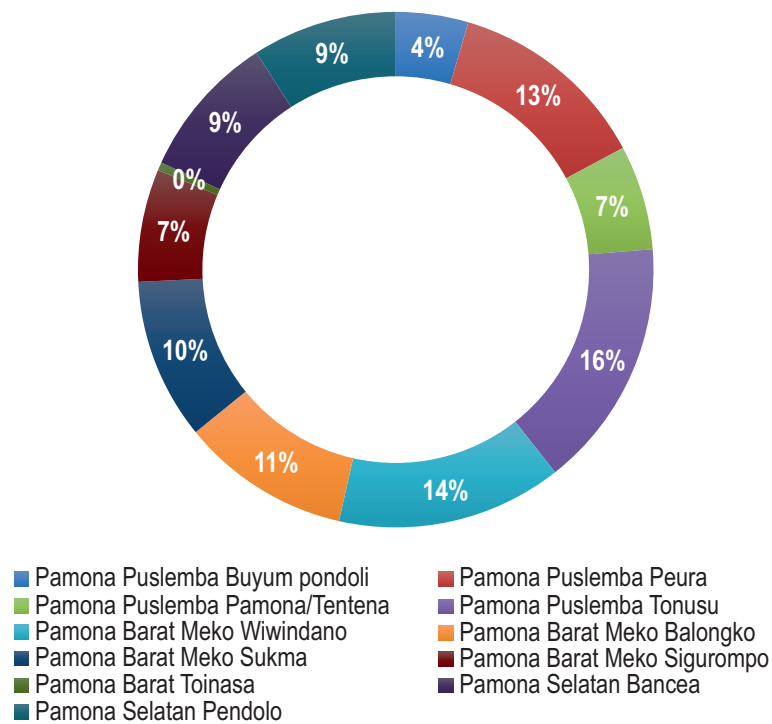


Fig. 4. Number of Villages and Sub-districts Affected
Source: Indigenous Community of Lake Poso, 2024.

victims. The coastal area of Lake Poso is fertile land that is used by the community as an agricultural, livestock, and fisheries production area. The rise in the lake water level to provide a large water discharge to turn the hydroelectric turbine, technically PT Poso Energi's investment will be very profitable, but for the community, it will lose its production area.

For the coastal communities of the lake who have long lived side by side with the life of the lake, this condition also eliminates the cultural process that has been part of their lives. The replacement pattern carried out with the CSR approach is certainly not enough for people who have lost the area which is also the soul of their lives. The materialistic way of calculating compensation based on lost economic potential will of course bring dissatisfaction to some of the affected communities. The existence of free riders is a reality that is difficult to stop in a collaborative transaction mechanism like this. Parties who only calculate the profit and loss of the incident that occurred and choose to be more cooperative tend to be part of the community that supports the company.

Collaboration with the dynamics and dimensions of the movement of shared principles, shared motivation, and the capacity to take joint action is ongoing despite dissatisfaction in society. In general, these dimensions indicate that all stakeholders have sufficient capacity to be able to collaborate. This can be seen from the description of the results above so that optimally this can be a trigger for the success of a collaborative goal. This condition certainly requires principles that allow the dialogue to reach a point as a goal through fair consensus. The first principle is universality where the parties involved act rationally, provide assessments at the same level, and are willing to accept the consequences that arise. The second is the principle of norm validity where the priority of norms is placed on something that can be mutually accepted. The third is the principle of consequences where all parties are willing to accept even the worst possibilities. This discourse ethics view is an important foundation for the practice of deliberative democracy. Deliberative itself is rooted in the word *deliberation*, which means "consultation", and "consideration",

Table 2. Collaboration Achievement Matrix in Handling Affected Communities

Dimensions/ Dynamics of Collaboration	Result
Common Principal Movement	
1. Disclosure	The collaboration process involves local government stakeholders, namely the Department of Agriculture, Sub-districts, Villages/Kelurahan, and Poso Energi as well as the community from various elements.
2. Deliberation	Implementation of collaboration, the government works together with companies to facilitate meetings with affected communities and hold joint discussions to find solutions.
3. Determination	Intensive meetings once every three months for technical matters in the field related to data collection, data verification, and compensation distribution. The handover was carried out by Agricultural Extension Officers and Energy Post Officers as well as village/sub-district governments.
Shared Motivation	
1. Shared Trust	The high level of effort by the Government, the Poso Energy Hydroelectric Power Plant and the Community to build mutual trust through statements that all stakeholders are reliable and competent.
2. Shared Understanding	All stakeholders understand the roles of other stakeholders.
3. Internal Legitimacy	There is recognition of interdependence on each other because the government has the authority to make decisions and companies have a sense of responsibility for the impacts they cause.
4. Shared Commitment	Stakeholders are committed to working together so that the impact handling problem is resolved immediately.
Capacity to undertake Collective Action	
1. Joint Procedures and Agreements	The procedures that have been mutually agreed upon by stakeholders regarding the implementation of Collaboration start from data collection for affected communities, data verification, to the distribution of compensation costs.
2. Leadership	Leadership is divided into several levels of local government and companies as facilitators and mediators, and advocates consisting of village/sub-district governments as well as NGOs and the community.
3. Knowledge	Knowledge is obtained from socialization and coaching.
4. Resources	Resources are sufficient, the compensation budget comes from the Company as a form of accountability and human resources as field workers come from PPL and the company's field officers.

Source: own elaboration.

or in Indonesian society, is equivalent to the term “deliberation or Musyawarah”. In other words, the principles that underlie dialogue in discourse ethics are none other than the practice of deliberation itself. Simply put, deliberation is a fair way to reach consensus (consensual justice).

Impact and Adaptation

As explained regarding the impact and adaptation of collaboration, this study obtained the results that

after the design, the implementation of the collaboration went well, the impact of this collaboration refers to the consensus, and the affected community agrees with the handling mechanism offered. It is recorded that until now, the affected farmers have received the compensation assistance offered, and for long-term handling, the community is currently waiting for the realization of the proposed program. Each village on the outskirts of Lake Poso that is affected has different program requests according to the characteristics and needs of its community.

The data in Fig. 1 is data obtained from the results of reports from affected communities who are members of the Lake Poso Indigenous Community Alliance/ Masyarakat Adat Danau Poso (MADP). However, the data is still being reviewed by the company in collaboration with the government so data was obtained on the affected areas on the outskirts of Lake Poso, consisting of 16 villages and 1 sub-district consisting of Pomona Village, Peura Village, Dulumai, Buyumpondoli, Mayakeli, Toinasa, Uranosasi, Salukaia, Meko, Taipa, Tindoli, Tolambo, Tokilo, Bancea, Panjo, Bo'e, Pasir Putih. The affected locations are rice fields and plantations, and livestock grazing locations in Tokilo village. Although short-term handling has been realized, the company understands that short-term handling will not completely solve the problem. Currently, PT. Poso Energy continues to coordinate with the district government and the local village government affected before realizing the long-term program according to community proposals. Currently, the government's collaboration with PT. Poso Energy is still coordinating with the district government and the local village governments affected. This strategy must be carried out before there are efforts to realize long-term programs according to community proposals (Izfaldi & Kristina, 2022). This collaboration can produce short-term and long-term handling efforts.

The approach through collaboration on the impact of rising water levels or the management of hydroelectric power plants to increase the water discharge of the Poso Lake for the short term for the company has been declared complete. Although short-term handling has been realized, the company understands that short-term handling will not completely solve the problem. The current conditions due to the impact on the community, especially those who are more cooperative, hope that the company PT Poso Energi and with government supervision, will focus on handling the realization of long-term programs. Environmental management that has an impact like this is important for the existence of reputation mechanisms and policy interventions to encourage the realization of sustainable development (Cao et al., 2024).

Conclusions

This study related to the collaboration process found one finding that is a context that is not presented in other studies, especially by using the collaboration model offered by Emerson et al. Although the collaboration study for handling affected communities on the outskirts of Lake Poso went well procedurally, the results of the collaboration output have not fully resolved the problems of the affected communities. The actions and roles of the regional government which has the authority of regional autonomy are not able to play the role of an optimum mediator and facilitator in involving companies/private parties who have responsibility for the problem. This condition is influenced by the status of the Sulewana Hydroelectric Power Plant project which is a national strategic project. The implication is that the problem of handling affected communities on the outskirts of Lake Poso which is positioned as joint ownership is dominated by the company as a national vital object in the context of providing electricity.

This study also found that the collaboration process did not go as well as the expected conceptual orientation because it encountered several obstacles. External influences that entered and influenced collaboration from both the government, the community, and the company hampered the collaboration. Difficult and limited communication where the company did not coordinate enough with the government in the related villages in the technical implementation in the field. The ongoing compensation payment solution is considered to only be able to handle short-term problems. Collaborative output to meet the demands and needs of the community through long-term solutions has not been realized.

REFERENCES

- Alamsyah, M. N. (2009). Birokrasi Lokal Dalam Tantangan Akselerasi Pembangunan Sulawesi Tengah [Local buruecracy in the challenges of accelerating development in central Sulawesi]. *Academica: Majalah Ilmu Sosial Dan Ilmu Politik*, 1(2), 28555.

- Alamsyah, M. N., Nawawi, M., & Sisrilnardi, S. (2023). Government Collaboration in Combating Schistosomiasis in Bada. *International Journal of Social Science, Education, Communication and Economics (Sinomics Journal)*, 1(6), 855–868. <https://doi.org/10.54443/sj.v1i6.97>
- Alzakra, I. L. (2022, October 14). Dampak Lingkungan pada Operasional PLTA Poso di Sulawesi Tengah [Environmental impacts of the Poso Hydroelectric power plant operation in central Sulawesi]. *Medium*. <https://medium.com/@inslarasati/dampak-lingkungan-pada-operasional-plta-poso-di-sulawesi-tengah-fcd657e7822d>
- Ansell, C. (2016). *Collaborative governance as creative problem-solving*. Cambridge University Press.
- Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. <https://doi.org/10.1093/jopart/mum032>
- Ansell, C., Doberstein, C., Henderson, H., Siddiki, S., & 't Hart, P. (2020). Understanding inclusion in collaborative governance: A mixed methods approach. *Policy and Society*, 39(4), 570–591. <https://doi.org/10.1080/14494035.2020.1785726>
- Ariyani, N. (2021). Faktor—Faktor yang Mempengaruhi Partisipasi Pemangku Kepentingan pada Pengembangan Kawasan Wisata Kedung Ombo [Factors influencing stakeholder participation in the development of the Kedung Ombo tourism area]. *Jurnal Pariwisata Terapan*, 4(2), 147–162. <https://doi.org/10.22146/jpt.60678>
- Ariyani, N., Fauzi, A., & Umar, F. (2020). Model hubungan aktor pemangku kepentingan dalam pengembangan potensi pariwisata Kedung Ombo [Model of stakeholder relationships in developing the tourism potential of Kedung Ombo]. *Jurnal Ekonomi dan Bisnis*, 23(2), 357–378. <https://doi.org/10.24914/jeb.v23i2.3420>
- Arrozaq, D. L. C. (2016). *Collaborative Governance (Studi Tentang Kolaborasi Antar Stakeholders Dalam Pengembangan Kawasan Minapolitan Di Kabupaten Sidoarjo [Study on collaboration between stakeholders in the development of the minapolitan area in Sidoarjo Regency])*. Universitas Airlangga.
- Astuti, R. S., Warsono, H., & Rachim, A. (2020). *Collaborative governance: Dalam perspektif administrasi publik [Collaborative governance: Public administration perspective]*. Program Studi Doktor Administrasi Publik, Fakultas Ilmu Sosial dan Ilmu Politik, Universitas Diponegoro Press. <https://books.google.co.id/books?id=I5KwzWEACAAJ>
- Beshi, T. D., & Kaur, R. (2020). Public Trust in Local Government: Explaining the Role of Good Governance Practices. *Public Organization Review*, 20(2), 337–350. <https://doi.org/10.1007/s11115-019-00444-6>
- Booher, D. E., & Innes, J. E. (2002). Network Power in Collaborative Planning. *Journal of Planning Education and Research*, 21(3), 221–236. <https://doi.org/10.1177/0739456X0202100301>
- Cao, F., Zhang, L., Wu, W., Han, S., Wu, Z., & Wu, Y. (2024). Challenging the nexus of power: The gaming dilemma of collaboration between government and enterprises in environmental management. *Heliyon*, 10(1), e23472. <https://doi.org/10.1016/j.heliyon.2023.e23472>
- Chaudhary, D. (2024). Hydropower Development and Economic Growth in Nepal: Challenges and Prospects. *Journey for Sustainable Development and Peace Journal*, 2(1), 1–18. <https://doi.org/10.3126/jsdpj.v2i1.63236>
- Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.
- Emerson, K., & Gerlak, A. K. (2014). Adaptation in collaborative governance regimes. *Environmental Management*, 54, 768–781. <https://doi.org/10.1007/s00267-014-0334-7>
- Emerson, K., Nabatchi, T., & Balogh, S. (2012). An Integrative Framework for Collaborative Governance. *Journal of Public Administration Research and Theory*, 22(1), 1–29. <https://doi.org/10.1093/jopart/mur011>
- Emerson, K., & Nabatchi, T. (2015). *Collaborative governance regimes*. Georgetown University Press.
- Farmers Protection and Empowerment Law, 19 (2013). <https://peraturan.bpk.go.id/Details/38893/uu-no-19-tahun-2013>
- Gash, A. (2022). Collaborative governance. In Ch. Ansell, & J. Torfing (Eds.), *Handbook on theories of governance* (pp. 497–509). Edward Elgar Publishing.
- Hardi, R., & Hawing, H. (2022). Collaborative Governance and Hoax Politics in The Era of Covid-19 in Makassar City. *Journal of Government and Political Issues*, 2(1), Article 1. <https://doi.org/10.53341/jgpi.v2i1.24>
- Huxham, C., Vangen, S., Huxham, C., & Eden, C. (2000). The Challenge of Collaborative Governance. *Public Management: An International Journal of Research and Theory*, 2(3), 337–358. <https://doi.org/10.1080/147190300000000021>

- Izfaldi, & Kristina. (2022, September 20). PT Poso Energy susun program jangka panjang bagi warga terdampak PLTA [PT Poso Energy develops long-term programs for residents affected by the hydroelectric power plant]. *Antara News Palu*. <https://sulteng.antaranews.com/berita/254965/pt-poso-energy-susun-program-jangka-panjang-bagi-warga-terdampak-plta>
- Kayupa, O. O. (2015). Dampak sebelum dan sesudah pembangunan pembangkit listrik tenaga air (PLTA) terhadap kondisi sosial dan ekonomi masyarakat di Desa Sulewana Kecamatan Pamona Utara Kabupaten Poso [Impacts before and after the construction of a hydroelectric power plant/PLTA on the social and economic condition of the community in Sulewana Village, Nort Pamona Poso regency]. *EJournal Katalogis*, 4(11), 217–227.
- Kellner, M. (2023). *Against Capitalism and Bureaucracy: Ernest Mandel's Theoretical Contributions*. BRILL.
- Khanal, R., Duan, Y., Ramsey, T. S., Ali, S., & Oo, K. H. (2024). Impacts of livelihood assets on hydropower displacees' livelihood strategies: Insights from the Tanahu hydropower project in Nepal. *Heliyon*, 10(14). <https://doi.org/10.1016/j.heliyon.2024.e34485>
- Kulas, F. P., & Tangkude, R. (2024). GKST dan Isu Ekologi Danau Poso Dalam Ruang Publik [GKST and the ecological issues of Lake Poso in public spaces]. *UEPURO: Jurnal Ilmiah Teologi dan Pendidikan Kristiani*, 3(1), 1–19.
- Lekkas, C.-K., & Souitaris, V. (2023). Bureaucracy Meets Digital Reality: The unfolding of urban platforms in European municipal governments. *Organization Studies*, 44(10), 1649–1678. <https://doi.org/10.1177/01708406221130857>
- Litha, Y. (2020, September 6). *Peneliti: Pengerukan dan Bendungan PLTA Merusak Habitat Danau Poso [Reserchers: Hydroelectric power plant dreging and Dam Destroy the habitat of Lake Poso]*. <https://www.voaindonesia.com/a/peneliti-pengerukan-dan-bendungan-plta-merusak-habitat-danau-poso/5455723.html>
- Litha, Y. (2021, November 25). *Masyarakat Adat Desak Poso Energy Turunkan Elevasi Air Danau Poso [Indigenous communities urge Poso Energy to lower the water level of Lake Poso]*. VOA Indonesia. <https://www.voaindonesia.com/a/masyarakat-adat-desak-poso-energy-turunkan-elevasi-air-danau-poso-/6327312.html>
- Litha, Y. (2022, January 2). *2 Tahun Terendam, Ratusan Petani Danau Poso Ingin Kembali Menggarap Sawah [After 2 years of flooding, hundred of Lake Poso farmers want to return to working their rice fields]*. VOA Indonesia. <https://www.voaindonesia.com/a/tahun-terendam-ratusan-petani-danau-poso-ingin-kembali-menggarap-sawah/6378656.html>
- Marzuki, M., Rusdin, A., Hatta, I., Hapsa, H., & Badollahi, M. Z. (2024). Disaster Mitigation of Tourism Destinations in the Megalithic Area of Lore Lindu National Park in Poso Regency, Central Sulawesi Province. *Journal of Public Representative and Society Provision*, 4(3), 47–64. <https://doi.org/10.55885/jprsp.v4i3.455>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd Edition). Sage.
- Novitasari, D., Sarjiya, Hadi, S. P., Budiarto, R., & Deendarlianto. (2023). The climate and land-use changes impact on water availability for hydropower plants in Indonesia. *Energy Strategy Reviews*, 46, 101043. <https://doi.org/10.1016/j.esr.2022.101043>
- Poso pada peta, Indonesia [Poso regency on a map Indonesia]*. (2025). <https://id.toponavi.com/64771>
- Qin, Y., Wang, F., Zhang, S., Tu, Y., Chen, C., & Yang, Y. (2024). Impacts of cascade hydropower development on aquatic environment in middle and lower reaches of Jinsha River, China: A review. *Environmental Science and Pollution Research*, 31(42), 54363–54380. <https://doi.org/10.1007/s11356-024-34764-y>
- Schrauwers, A. (2000). *Colonial 'reformation' in the highlands of Central Sulawesi, Indonesia, 1892–1995*. University of Toronto Press.
- Sharma, K. M. (2024). Sustainable Development of Hydropower: Environmental Impacts and Mitigation Strategies. *Indian Journal of Renewable Energy*, 1(2), 15–19. <https://doi.org/10.36676/energy.v1.i2.13>
- Siruyu, P. (2020, July 26). *Danau Poso, Danau Purba Bukti Terbentuknya Pulau Sulawesi & Potensi Geopark [Lake Poso, an ancient lake, evidance of the formation of Sulawesi Islan and Potential geopark]*. <https://www.mosintuwu.com/2020/07/26/danau-poso-danau-purba-bukti-terbentuknya-pulau-sulawesi/>
- Smith, D. (2024). The social impacts of dams and hydro-power. In F. Vanclay, & A. M. Esteves (Eds.), *Handbook of Social Impact Assessment and Management* (pp. 51–66). Edward Elgar Publishing.
- Tandapai, A., & Torore, M. R. (2024). Siapa Yang Berkuasa? Relasi Kuasa Antara Toponyilo Dan Korporasi Dalam Proyek Pengerukan Danau Poso [Who has power? The power relations between Toponyilo and

- corporations in the Lake Poso dredging project]. *UEPURO: Jurnal Ilmiah Teologi Dan Pendidikan Kristiani*, 3(1), 111–121.
- Us Salehin, M. (2024, January 29). *Overview of the Hydropower Perspective of Bangladesh*. Social Science Research Network. <https://doi.org/10.2139/ssrn.4709543>
- Wirachandra, A., Poedjirahajoe, E., & Purwanto, R. H. (2024). The Impact of the Poso Energy Hydropower Plant on Lake Poso Aquatic Ecosystem in Central Sulawesi. *Jurnal Ilmu Kehutanan*, 18(2), 188–200. <https://doi.org/10.22146/jik.v18i2.11467>
- Yuniawati, D. Y. (2019). Budaya Austronesia Protosejarah Di Kawasan Lembah Behoa, Sulawesi Tengah: Tinjauan Atas Tinggalan Megalit [Protohistoric Austronesian culture in the Behoa Valley Region, central Sulawesi: a review of megalitic remains]. *dalam Jejak Austronesia Di Indonesia*, 136.

