

Analysis of Actors in the Management of C Quarry Mines: A Case Study of Watusampu and Buluri Sub-Districts, Palu City

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ABSTRACT: The management of Class C mining in Watusampu and Buluri involves various actors with interests that interact and influence each other. This study analyzes the configuration of actors—local governments, mining companies, local communities, and advocacy groups—and how their power relations, capacities, and interests shape the dynamics of mining governance. Using an actor-centered institutionalism and stakeholder analysis approach, this study identifies that weak inter-institutional coordination, imbalanced power relations, and minimal public participation are the main factors contributing to the low effectiveness of the implementation of Regional Regulation No. 13/2016. The findings highlight the need to strengthen the government's role as regulator, increase company accountability, and foster inclusive collaborative strategies.

KEYWORDS: Mining Governance, Actors, Stakeholders, Conflict Of Interest

INTRODUCTION

The growth of infrastructure development in Indonesia over the past two decades has created a surge in demand for construction materials, particularly sand and stone from Class C mining. Palu City, as the center of economic activity in Central Sulawesi, is a strategic area for the supply of these materials. The sub-districts of Watusampu and Buluri are known as two primary locations for sand and stone mining activity, supplying regional construction needs. However, the economic development of this sector has been accompanied by increasing ecological and social pressures, such as coastal erosion, road damage, air pollution, and declining environmental quality due to the intensity of mining truck traffic.

Institutionally, the governance of Class C mining in Palu City exists within a complex interaction between government actors, business actors, and the community. Although regulations such as Regional Regulation No. 13 of 2016 have established mechanisms for mining management and oversight, the implementation of this policy still faces structural and political obstacles. Mining management policies are determined not only by the regulatory framework but also by the dynamics of actor relationships, including economic interests, institutional capacity, and the distribution of power in the licensing and oversight processes.

An actor analysis approach is important because it can reveal how the interactions, interests, and resources of each actor influence mining governance practices. Studies on natural resource governance show that an unequal distribution of power often gives rise to informal practices, weak oversight, and low public participation (Schlager & Ostrom, 2019; Hilson, 2022). In the context of Watusampu and Buluri, these conditions are evident in the continued, poorly controlled mining activities, the potential for overlapping authority between the city and provincial governments, and the information gap between regulators, companies, and the community.

Furthermore, the presence of mining in these areas not only has ecological impacts but also has implications for the community's socio-economic structure. Some communities benefit from employment opportunities in the mining sector, while others suffer direct losses from pollution and environmental damage. This configuration indirectly creates conflicts of interest within the community, adding to the complexity of governance. Therefore, studies are needed that capture not only environmental impacts or formal regulations but also the patterns of relationships between actors that influence policy effectiveness.

This study aims to: (1) identify key actors involved in the management of C-grade mining in Watusampu and Buluri; (2) analyze the interests, resources, and power held by each actor; and (3) evaluate how interactions between these actors shape mining governance practices at the local level. By using the Actor-Centered Institutionalism framework and stakeholder analysis, this study provides a comprehensive understanding of how mining governance actually occurs in the field and opportunities for improvement.

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METHODOLOGY

This research uses a qualitative approach with an exploratory case study design to analyze the dynamics of actors in the management of C-type mining in Watusampu and Buluri Villages, Palu City. This approach was chosen because it allows researchers to deeply explore processes, power relations, and interactions between actors within a complex social context (Yin, 2020).

A qualitative approach was used to understand how actors—the city government, business actors, local communities, and interest groups—construct meaning, influence policies, and shape relationship patterns in sand mining management. This approach is relevant because mining issues involve power interplays that cannot be captured solely through quantitative data (Creswell & Poth, 2021). Furthermore, the analysis was conducted using an actor-centered institutionalism framework, which emphasizes that institutions and rules are not merely abstractions but are instead produced by the actions of actors with specific interests, resources, and strategies (Scharpf, 2021). This approach allows the research to identify how actors define problems and take positions within the policy arena.

The research was conducted in two sub-districts that are centers of C-type mining activity in Palu City: Watusampu and Buluri. The units of analysis included:

- (1) Palu City Government (relevant regional government agencies, particularly the Energy and Mineral Resources Agency and the Environmental Agency).
- (2) Mine owners and operators.
- (3) Local communities and coastal groups.
- (4) Provincial government and law enforcement officials.
- (5) Traditional leaders and other informal groups.

The location selection was purposive, considering the intensity of conflict, environmental impacts, and the high level of actor dynamics in the area (Etikan, 2020).

The data collection techniques in this research include:

- (1) In-Depth Interviews : Semi-structured interviews were conducted with 10-15 key informants to explore the perceptions, interests, and strategies of each actor. The interview method allows for an understanding of power relations, motivations, and negotiation processes between actors (Kallio et al., 2021). Key informants were selected through purposive sampling and snowball sampling, primarily to identify informal actors such as land brokers, heavy equipment operators, or sand hauling vessel owners operating without formal permits (Biernacki & Waldorf, 2020).
- (2) Field Observations : Observations were conducted to capture mining activities, environmental conditions, interactions between actors, and the monitoring process. Non-participant observation was used to enable researchers to understand daily practices at the mine site (Angrosino, 2020).
- (3) Document Study : Documents analyzed included Palu City Regional Regulations, mining permits, Environmental Impact Assessment (EIA) reports, Environmental Agency (DLH) reports, local news, and provincial policy documents. Document analysis helped explore how formal regulations were produced and how gaps emerged between policy texts and practices on the ground (Bowen, 2020).

Data were analyzed using thematic analysis with the following steps:

- (1) Transcription and initial coding
- (2) Identification of recurring themes related to actors, interests, resources, and power relations
- (3) Analysis of interactions between actors using the frameworks of actor-network analysis (Latour, 2020) and actor-centered institutionalism (Scharpf, 2021)
- (4) Development of an analytical narrative on actor dynamics and their implications for sand mining governance

Thematic analysis was chosen because of its flexibility in exploring complex socio-political phenomena (Braun & Clarke, 2021).

FINDINGS & DISCUSSION

1) Complexity of Actor Structures in Watusampu–Buluri Mine Management

The research findings indicate that the management of the C-type mining mines in Watusampu and Buluri is an arena with multiple actors, overlapping authority, and interactions heavily influenced by economic and political interests. This configuration can be understood through the framework of actor-centered institutionalism, which views policy outcomes as a consequence of strategic interactions between actors within specific institutional boundaries (Scharpf, 1997; 2021). Provincial government actors hold dominant authority because they are solely responsible for issuing permits, while city governments only have an oversight function. This separation creates an asymmetry of authority that directly contributes to weak control over mining activities.

This phenomenon is not an isolated case; literature from many developing countries shows that shifting authority to the provincial level without strengthening local institutional capacity often leads to governance fragmentation (Andrews et al., 2022), which further weakens environmental protection and public accountability.

2) Economic and Political Power of Mining Actors

a) Dominance of Economic Actors as Operational Controllers

Mining companies, heavy equipment owners, sand transportation operators, and local capital owners are the most operationally influential actors. They possess:

- (1) Logistical capacity
- (2) Worker mobilization capabilities
- (3) Patronage relationships with local elites
- (4) Access to licensing processes.

In many global cases, economic actors in the extractive sector form client-patron relationships with local officials (Hilson, 2022), which results in weakened enforcement and the normalization of informal practices. A similar situation was found in Watusampu, where several mine operators have close ties to local political figures.

b) The Role of Informal Actors in the Mining Network

Field findings identified the presence of "land brokers," private truck owners, and illegal sand collectors who play a significant role in the distribution chain. Literature on hybrid governance confirms that these informal actors often act as a bridge between formal regulations and field practices (Meagher, 2020; Titeca & De Herdt, 2021). In the Watusampu-Buluri context, informal actors create a parallel negotiating space outside government structures, yet they exert greater influence in determining mining intensity and community-operator relations.

3) Conflict of Interest and Institutional Fragmentation

Mining sector institutions in Watusampu exhibit patterns of vertical and horizontal fragmentation, involving sharply differing interests between:

- (1) The provincial government (oriented towards economic growth and mining fees)
- (2) The city government (oriented towards addressing environmental and social impacts)
- (3) The mine operator (oriented towards economic profit)
- (4) The local community (oriented towards sustainable livelihoods)

This fragmentation has been described by Peters (2021) as a condition in which policy structures are unable to operate coherently due to weak coordination, misaligned authority, and overlapping institutional mandates. The impacts are evident in:

- (1) Unclear oversight responsibilities
- (2) Slow response to community reports
- (3) Numerous operational "grey areas" exploited by informal actors.

4) Socio-Ecological Impacts and Unequal Risk Distribution

Research shows that coastal communities are the groups most burdened by ecological and social impacts, particularly:

- (1) Coastal abrasion and siltation
- (2) Decreased fishing catches
- (3) Water and noise pollution
- (4) Road damage due to mining truck traffic.

This phenomenon aligns with the findings of Torres et al. (2020) and Bendixen et al. (2021), which emphasize that intensive sand mining typically results in an unequal distribution of risks, with local communities bearing the majority of negative impacts, while economic benefits are concentrated among corporate actors and political elites. From a political ecology perspective (Walker, 2020), this reflects that mining conflicts are not simply technical issues, but rather the result of power relations that determine who benefits and who bears the burden..

5) Actor-Network Theory Dynamics

Using the ANT approach (Latour, 2020), the mining network in Watusampu demonstrates the relationships between human and non-human actors, such as: 1). Dump trucks; 2). Heavy equipment; 3). Operating permits (IUP); 4). AMDAL documents, and; 5). Rivers and coastlines as ecological entities.

Field findings indicate that:

- (1) Permits are the most decisive "non-human actors" : IUPs are the primary nodes in the network, as anyone with these documents automatically has the legitimacy to operate the mine. In ANT, this is called inscription, where a document has the power to regulate human behavior.
- (2) The "translation" process explains the interactions between actors : Four stages of translation are clearly evident:
 - a. Problematization: Mining is perceived as a development necessity.\
 - b. Interest: Operators build good relationships through small CSR activities.
 - c. Enrollment: The city government "steps in" as a supervisor, although without full authority.
 - d. Mobilization: The community mobilizes through protests and reports.

This network is unstable, full of negotiations, and generates dynamic conflicts of interest.

6) Enforcement Gap and Governance Challenges

Global studies indicate that the extractive sector is highly vulnerable to enforcement gaps (Sovacool, 2021). In the Watusampu case, this gap is evident in:

- (1) Minimal routine field inspections
- (2) Weak sanctions for violations
- (3) Limited accurate geospatial data
- (4) Lack of technology-based monitoring (drones, sensors, truck GPS)
- (5) Poor coordination between agencies.

These conditions make it difficult to eradicate illegal practices and ineffective environmental regulations.

7) Informal Negotiation Patterns as the Primary Governance Mechanism

Research found that mining governance in Watusampu proceeds more through informal negotiations than formal mechanisms. For example: 1). Negotiations between operators and community leaders for road access; 2). Spontaneous compensation provided to residents; 3). Adjustments to operating hours to avoid triggering protests, and; 4). Authorities' tolerance of certain mining operations due to political pressure.

This aligns with the concept of negotiated statehood (Titeca, 2021), where governance operates not based on formal rules, but rather through bargaining between actors.

CONCLUSIONS

This research confirms that the governance of Class C mining in Watusampu and Buluri is not solely determined by formal regulations, but is heavily influenced by strategic interactions between government actors, business actors, and local communities. The fragmentation of authority between provincial and city governments, weak oversight capacity, the dominance of economic actors and the existence of informal networks, create an enforcement gap that weakens environmental protection and hinders the equitable distribution of benefits. Coastal communities bear the greatest socio-ecological impacts, while the primary profits are concentrated among business actors and local elites. Improving governance requires institutional synergy, strengthened oversight capacity, consistent law enforcement, and increased public participation and information transparency in the licensing and oversight processes. This study recommends a holistic approach that addresses the dynamics of power relations to ensure more equitable and sustainable mining policies.

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