

Typology of Stakeholder Interaction and Factors Influencing the Management of Ijen Crater Nature Tourism Park

Loetvy Wahyuningtiyas¹, Syavitri Sukma Utami Rambe², Alifan Cahyana³

Urban and Regional Planning, Faculty of Engineering, Universitas Jember, Jember, Indonesia
E-mail: loetvyw@unej.ac.id

DOI:
<https://doi.org/10.38043/telsinas.v8i1.6129>

Received:
09 February 2025

Accepted:
29 Maret 2025

Publish:
25 April 2025

ABSTRACT: The Ijen Crater Nature Tourism Park (Ijen Crater TWA) is one of the tourist destinations with the enchanting blue fire that is quite famous in East Java and even internationally. Ijen Crater has a crater lake with a very low pH, making it one of the largest acidic lakes in the world. It also has significant mineral resource potential in the form of sulfur. Not only that, but Ijen Crater is also part of the Ijen UNESCO Global Geopark. The Ijen Crater TWA is administratively located in Bondowoso and Banyuwangi Regencies, but its management is carried out by the Natural Resources Conservation Agency (BKSDA). The distribution of economic benefits tends to be unbalanced because direct fees in the form of entrance ticket sales go to the central government as Non-Tax State Revenue (PNBP). The management plan for Ijen Crater TWA is included in several development and spatial planning plans, such as the Spatial Planning (RTRW) of Bondowoso Regency, the Spatial Planning of Banyuwangi Regency, and the Long-Term Management Plan for Ijen Crater TWA. Based on these conditions, research was conducted on the typology of stakeholder interactions and the factors influencing their management using a qualitative abductive approach and pattern-matching analysis technique. The research aims to identify the interactions occurring in the Ijen Crater TWA area with the various roles held by stakeholders and to identify the factors influencing them. The research results show that the interactions in managing Ijen Crater TWA include coalitions, coordination, cooperation, networking, and coexistence. The findings from the research can be used as a consideration in developing governance strategies in infrastructure planning to spatial planning in conservation areas involving multiple stakeholders.

Keyword: *Interaction; Stakeholder; Pattern Matching*

I. INTRODUCTION

Stakeholder involvement is important in shaping the direction and policies of the organization, but it also becomes a key element in facing emerging challenges and opportunities [1]. The involvement of stakeholders plays a crucial role in an organization's strategic decision-making process. The impact of such involvement is influenced by the dynamics of relationships among stakeholders, contextual factors, and effective communication [2]. A collaboration formed between the government, the private sector, and the community in planning a program or project can demonstrate how these shared interests can create broader sustainability [3]. Based on this, it is important to research and understand the interactions among stakeholders in managing an area.

The Ijen Crater Nature Tourism Park is located in the Ijen Mountain area, the border between Banyuwangi Regency and Bondowoso Regency. Mount Ijen holds much potential, one of which is the beauty of the natural phenomenon of blue fire. The beauty of the blue fire from Ijen Crater has the potential to attract tourists, and there is also the potential for sulfur to be utilized as an industrial material, which can provide economic benefits for the surrounding community. The Ijen Crater Natural Park is located in an area with an active volcano. Mount Ijen is prone to volcanic eruptions. Not only is Gunung Ijen prone to volcanic eruptions, but it is also susceptible to landslides and fires.

The Mount Ijen area comprises a nature reserve and a nature tourism park. The area of the nature tourism park on Mount Ijen is approximately ± 305.29 hectares. The authority responsible for managing the conservation areas and The Ijen Crater Nature Tourism Park areas is the Ministry of Environment and Forestry (KLHK), with the execution of its duties delegated to the East Java Natural Resources Conservation Agency (BKSDA). BKSDA East Java is responsible for managing the Ijen Crater TWA

area, including collecting tourism fees. The Ijen Crater TWA area directly borders the forest area, which is managed under the authority of the Perhutani Regional Division of East Java. The construction and management of tourist facilities in the Ijen Crater TWA area fall under the authority of BBKSDA. The large hall has developed tourist facilities such as parking lots, ticket counters, inspection posts, rest areas, prayer rooms, cafeterias, road paving, camping grounds, health posts, service and information posts, a tourist information centre, search and rescue posts, parking lots, and other facilities. Other stakeholders have built several facilities, such as the TIC or interpretation room. Several supporting facilities for the natural tourism of Ijen Crater built in the TWA area were carried out through an MoU, where the completed buildings will later be handed over to the BBKSDA as the manager and state property.

Managing the natural tourism park area in Mount Ijen faces several obstacles. First, the wealth of natural resources in the area is under the authority of the East Java BBKSDA. As a result, the Bondowoso and Banyuwangi Regency Governments cannot optimally utilize the natural resources in the Ijen area, only receiving indirect benefits from the Ijen Crater tourism. Although there are fees from the tourist area, the district government does not benefit from these fees, which go directly into non-tax state revenue (PNBP). This condition has become a source of dissatisfaction for the district government because no distribution of tourism fees can increase their regional income.

The Ijen-Baluran area has been designated as a national strategic tourism area by the Ministry of Tourism through Government Regulation (PP) 50 of 2011. In addition, access to Ijen, namely the Paltuding-Banyuwangi Road, will be designated as a national strategic road by the Ministry of Public Works and Public Housing (PUPR). This determination demonstrates the government's commitment to developing the tourism potential in the area and improving its accessibility. In Presidential Regulation (Perpres) 80 of 2019, there is a cable car construction project as a supporting facility for Ijen Crater tourism. The cable car construction program is listed in the presidential regulation, but its implementation on the ground has not yet been realized. In the Ijen area, there are plans from the central government and various activities carried out by the East Java Provincial Government, Bondowoso Regency Government, and Banyuwangi Regency Government. Various programs planned for the Ijen Crater TWA area require effective multi-stakeholder management to strengthen the synergy between different parties in designing, building, and maintaining tourism infrastructure in the Ijen Crater, thereby producing projects that not only support the tourism sector but also preserve environmental sustainability and provide socio-economic benefits to the local community.

Many programs with various issues in the natural tourism park area of Mount Ijen make the location interesting to study. The programs designed in such a way by various stakeholders do not deny that specific interests are indirectly embedded in these programs. The involvement of several stakeholders in managing and utilizing the potential of the Ijen Crater Nature Tourism Park is very interesting to map, as it can provide new insights into the stakeholders' interactions in the area's management. Additionally, the involvement of various stakeholders will impact overlapping policies due to many interests and interactions that have not yet been built synergistically.

Many studies have been conducted on the Ijen Crater Natural Tourism Park, and various studies have been related to interactions. Based on the researchers' analysis, no study has yet focused on stakeholder interactions in managing the Ijen Crater Nature Tourism Park. Research related to stakeholder interactions conducted by several researchers ([4]; [5]; and [6]) focuses on aspects of waste management, conflict resolution, and public service management. Various studies have also been conducted in Mount Ijen ([7];[8];[9]; and [10]) covering aspects of the environment, disaster management, tourism, and economics. Based on previous research in the Ijen Mountain area, to the best of the researcher's observation, the study of stakeholder interactions at the Ijen Crater TWA has not yet become a primary focus in the literature review conducted by the author.

II. LITERATURE REVIEW

Social interaction in community life is divided into associative and dissociative relationships. Associative relationships are more positive, as they can strengthen group bonds and foster cooperation. In contrast, disassociative relationships are the opposite, as they can weaken group bonds and even lead to division. Associative relationships in social interaction are cooperation, acculturation, accommodation,

and assimilation. Dissociative relationships can take the form of conflict, disputes, competition, and controversy [11][12]. Interactions are categorized into two: competing for resources or cooperating for mutual benefit in utilizing them [13].

Interaction becomes seven types or the "seven-stage model" [14]. The seven types are coexistence, networking, cooperation, coordination, coalition, collaboration, and coadunation. Coexistence or no interaction occurs when there are stakeholders. However, all decisions are made independently because there is no communication, no exchange of information, no exchange of resources, and no mutual roles. Networking occurs when communication is minimal, and the roles of each stakeholder are uncertain, so the final decision-making remains independent. Cooperation is an interaction that occurs with the mutual sharing of information and each party's roles becoming somewhat clear, but decision-making is still done independently. Coordination involves exchanging information and resources with frequent communication so that some decisions are made collectively. Coalition is carried out by stakeholders by sharing opinions/ideas and resources, and decision-making is done collectively by all members. Collaboration has begun to form a system among members, and all forms of decision-making are done by consensus. Coadunation is carried out by sharing information and enhancing the capacity of each member, in addition to having a system and structure that is integrated with the roles of each stakeholder. Based on that classification, it is interesting to research how the interactions occur in managing the Ijen Crater tourist park, which is located in two districts.

Based on Government Regulation Number 34 of 2006 concerning Roads, it explains that the Regional Government and the Government have the authority in road management. The Government has authority in the general management of roads and the national road management. The general management of roads includes regulation, guidance, construction, and macro supervision by national policy. If we refer to those regulations, then the Paltuding-Banyuwangi road falls under the authority of the Government because, indicatively, the Paltuding-Banyuwangi road located in Mount Ijen will be designated as a national strategic road. This program is stated in the Ministerial Decree (Kepmen) of Public Works 567/KPTS/M/2010.

One of the obstacles in managing national parks is land conflict. The various community activities and development in the national park will hinder the managers from realizing its management and turning it into a sustainable conservation area. The designation of national park areas will pose a specific obstacle for local governments in implementing development plans because it will be considered contrary to development planning regulations and the regional budgeting system, which prohibits allocating activities and budgets in work areas funded by the state budget [15]. The success of managing conservation areas, particularly National Parks, can be measured by achieving three main conservation goals. These goals include the preservation of ecological processes that support life-sustaining systems for sustainable development (protection of life resources), the maintenance of genetic diversity and various types of ecosystems (conservation of genetic resources), and the sustainable management of biological natural resources to ensure their continued existence. However, conservation areas, including national parks throughout Indonesia, face various challenges that can threaten their sustainability. One of the main challenges is the overlapping interests of various parties and the differing understandings of national parks' functions, positions, and roles in the eyes of the community and other stakeholders. These differing interests often trigger conflicts that impact the overall effectiveness of national park management [16]. According to Fisher, conflict arises when community goals are misaligned, is unavoidable, and often drives creativity. Before a conflict occurs, the two parties have differences or discrepancies in goals, which ultimately trigger the conflict [17]. Community-based natural resource conflicts can occur at the local level and often involve actors from regional, national, and even global levels. These conflicts can begin with individual disputes over land use and disagreements between community groups regarding land and forest control [18]. Conflicts can be reduced through the implementation of effective and sustainable governance.

Hague & Harrop explain governance as activities in joint decision-making where government institutions may not play a primary role. Hague and Harrop explain that governance refers more to the activities, processes, or qualities of a government/power. Governance can also involve oversight of all activities and the government's or other institutions' effectiveness [19]. Healey explains that the governance system in society or communities refers more to the joint management of a particular problem

or condition for the common good. Governance involves the relationship between rules and actions in responding to events/incidents within a political group and the principles in allocating the resources possessed by that group. The political group referred to is an institution/agency/stakeholders/organization with a common interest. Governance can be realized through collaborative planning because it is more open to the community and focuses on managing changes in environmental conditions, which often involve various stakeholders that frequently experience conflicts. Governance is not just for the government; everyone can get involved in various ways to manage matters of common interest [20].

The management of nature tourism parks must integrate innovation, efficiency, and sustainability principles in the construction industry to support environmental protection efforts by minimizing ecological impact, optimizing resource utilization, and creating environmentally friendly infrastructure that aligns with nature conservation [21]. The management of natural resources in nature tourism parks located in border areas is influenced by physical, political, economic, and cultural factors. One thing to note is that these factors are interconnected, although one factor will dominate the management of resources in border areas. Four interrelated factors influence the management of border area resources. The four factors are physical, political, economic, and cultural [22]. These factors can either hinder or support resource management implementation in border areas. Physical, cultural, political, and economic factors may also influence the management of resources in the Ijen Crater TWA. This is because Ijen Crater TWA serves as the administrative boundary between two districts with significant natural resource potential.

III. METHODS

The research focuses on the role of power and interests held by stakeholders, which influences the presence or absence of interaction in developing the Ijen Crater TWA. In the research, the observation unit refers to the source of data or information that can provide insights [23]. In this study, the observation units include stakeholders involved in managing the natural tourism park at Mount Ijen. The Ijen Crater Nature Tourism Park is located on the border of the two districts, specifically in Tamansari Village, Licin District (Banyuwangi Regency) and Kalianyar Village, Ijen District (Bondowoso Regency) (Figure 1). Meanwhile, the unit of analysis is information from sources and field observations regarding stakeholders' interactions in the area's management.

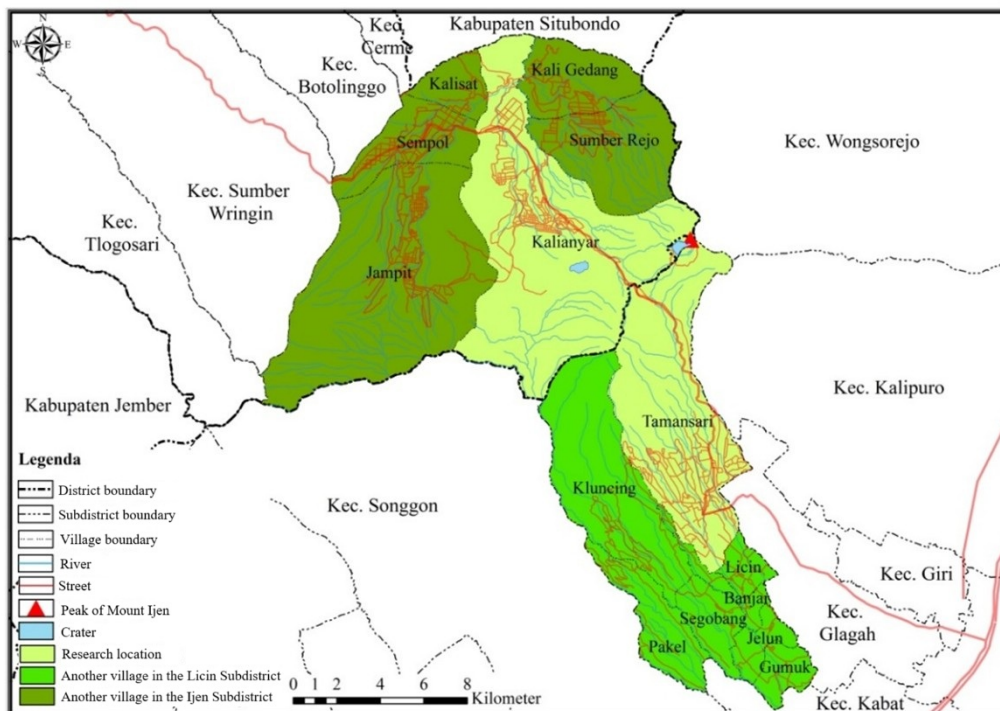


Figure 1. Research Location Map

The unit of information is data that contains information obtained by researchers through interviews or field observations. The research will use an abductive qualitative approach with a case study method. The abductive approach is a reasoning method similar to deductive reasoning. The research chose this approach to collect data on managing the Ijen Crater TWA. The goal is to explore and generate new findings or modify existing theories. The abductive approach in data collection is useful for exploring phenomena or social issues and identifying themes and patterns that emerge from the data [24]. The abductive approach can combine several theories that align with the research findings, build new theories, or modify existing theories in the research.

The qualitative approach is used in the research because several aspects of analyzing the management of the Ijen Crater nature tourism park are difficult to conduct with a quantitative approach. This approach is more suitable for understanding the complexity and nuances of the phenomenon being studied. Another consideration in using a qualitative approach is that the qualitative research process is more dynamic in addressing social issues or phenomena occurring in the field. This approach allows researchers to be more flexible in adjusting methods to the conditions that develop during the research [25]. The qualitative approach is suitable for still unclear or ambiguous cases, allowing researchers to understand the social situation deeply. The aim is to obtain a clearer and more comprehensive picture of the phenomenon being studied [26]. Based on that explanation, this research uses a qualitative approach to understand better the management of the Ijen Crater nature tourism park. The focus is on the interaction among stakeholders in the area's management to better understand the dynamics and identify the factors influencing these interactions.

The research was not conducted on all stakeholders. The research uses sampling techniques in data collection in the field. The sampling technique chosen in the research is purposive sampling. Purposive sampling was conducted to select informants, in this case, stakeholders, who can provide information related to the management of Ijen Crater TWA. The number of samples that served as informants in the research amounted to 21 sources: the Bondowoso Regency Government, the Banyuwangi Regency Government, the East Java Natural Resources Conservation Agency (BKSDA), Perhutani, and the community. The collected data is rechecked for its validity to ensure that the data is accurate. The data verification was carried out using triangulation techniques. The data were analyzed more deeply and descriptively to understand the interests and activities of each stakeholder so that the typology of interactions formed from the management of Ijen Crater TWA could be identified. The output generated from the analysis will be followed by pattern-matching stakeholder roles to serve as input for the management factors analysis stage (Figure 2).

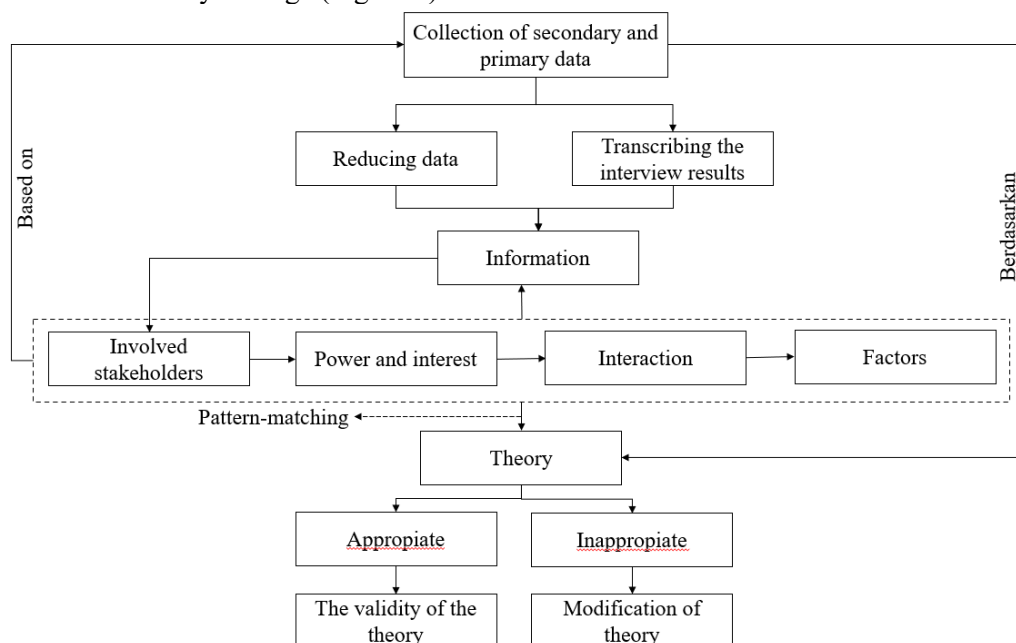


Figure 2. Flow of Data Analysis Techniques

Table 1. Informant Coding

| Code | Informant |
|--------|---|
| PBS-01 | Regional Development Planning Agency (Bappeda) of Bondowoso Regency |
| PBS-02 | Regional Development Planning Agency (Bappeda) of Bondowoso Regency |
| PBS-03 | Regional Disaster Management Agency (BPBD) of Bondowoso Regency |
| PBS-04 | Environmental Agency (DLH) of Bondowoso Regency |
| PBS-05 | Environmental Agency (DLH) of Bondowoso Regency |
| PBS-06 | Public Works, Water Resources, and Construction Development Agency of Bondowoso Regency |
| PBS-07 | Tourism, Youth and Sports Agency (Disparpora) of Bondowoso Regency |
| PBW-08 | Regional Development Planning Agency (Bappeda) of Banyuwangi Regency |
| PBW-09 | Regional Development Planning Agency (Bappeda) of Banyuwangi Regency |
| PBW-10 | Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi Regency |
| BB-11 | Perhutani Forest Management Unit (KPH) of West Banyuwangi |
| PS-12 | Nature Conservation Agency (BKSDA) V of Banyuwangi |
| PBW-13 | Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi Regency |
| PBS-14 | Regional Disaster Management Agency (BPBD) of Banyuwangi Regency |
| PBW-15 | Culture and Tourism Agency of Banyuwangi Regency |
| BO-16 | Perhutani Forest Management Unit (KPH) of Bondowoso |
| PS-17 | Natural Resources Conservation Agency (BBKSDA) of East Java Province |
| M-18 | PT. Candi Ngerimbi Workers |
| M-19 | Nusantara Plantations (PTPN) XII Post Guard |
| M-20 | Trolley Workers |
| M-21 | Sulfur miners |

IV. RESULTS AND DISCUSSION

Typology of Stakeholder Interactions

Based on field observations, the stakeholders involved in the management of the Ijen Crater Nature Tourism Area (TWA), besides the East Java BBKSDA, include the Bondowoso Regency Government, the Banyuwangi Regency Government, private sectors, State-Owned Enterprises (BUMN), Regional-Owned Enterprises (BUMD), and the community. The researcher classifies these stakeholders to facilitate identifying the management of Ijen Crater TWA. The classification is divided into several categories: central government, provincial government, district government, state-owned enterprises (BUMN), regional-owned enterprises (BUMD), private sector, and the community (Table 2.).

Table 2. Stakeholders involved in the management of Ijen Crater TWA

| Classification | Stakeholder |
|-----------------------|---|
| Central government | a) Ministry of Environment and Forestry |
| | b) Natural Resources Conservation Agency (BBKSDA) of East Java Province |
| | c) Ministry of Tourism and Creative Economy |
| | d) Ministry of Public Works and Public Housing |
| | e) Coordinating Ministry for Economic Affairs |
| Provincial government | a) Regional Development Planning Agency (Bappeda) of East Java Province |
| | b) Culture and Tourism Agency of East Java Province |

| Classification | Stakeholder |
|-----------------------------------|--|
| Regional government | c) Public Housing, Settlement Areas, and Public Works Agency of East Java Province |
| | a) The Bondowoso Regency Government <ul style="list-style-type: none"> - Regional Development Planning Agency (Bappeda) of Bondowoso Regency - Tourism, Youth and Sports Agency (Disparpora) of Bondowoso Regency - Regional Disaster Management Agency (BPBD) of Bondowoso Regency - Public Works, Water Resources, and Construction Development Agency (DBMSDABK) of Bondowoso Regency - Environmental Agency (DLH) of Bondowoso Regency - The Ijen Subdistrict Government |
| State-Owned Enterprises (BUMN) | b) The Banyuwangi Regency Government <ul style="list-style-type: none"> - Regional Development Planning Agency (Bappeda) of Banyuwangi Regency - Regional Disaster Management Agency (BPBD) of Banyuwangi Regency - Culture and Tourism Agency (Disparbud) of Banyuwangi Regency - Public Works, Spatial Planning, Housing, and Settlements Agency (DPUCKPP) of Banyuwangi Regency - Environmental Agency (DLH) of Banyuwangi Regency |
| | a) Perum Perhutani East Java Regional Division <ul style="list-style-type: none"> - Perhutani Forest Management Unit (KPH) of Bondowoso - Perhutani Forest Management Unit (KPH) of West Banyuwangi |
| Regional-Owned Enterprises (BUMD) | b) Nusantara Plantations (PTPN) XII |
| | c) The State Electricity Company (PLN) Main Distribution Unit (UID) for East Java |
| Private sector | d) BNI |
| | e) Mitratel (PT. Dayamitra Telekomunikasi Tbk.) |
| The community | a) Jatim Bank |
| | a) PT. Candi Ngerimbi |
| | b) PT. Sura Parama Setia |
| | c) Djarum Foundation |
| | d) PT. Metco |
| | a) Tour guide |
| | b) Trolley Workers |
| | c) Sulfur miners |
| | d) Food and Beverage Seller |
| | e) Souvenir seller |
| | f) Forest Village Community Institution (LMDH) |

The researchers also mapped the actors in managing the Ijen Crater TWA based on the stakeholders' level of interest and power/influence. Based on Figure 1, it can be seen that the stakeholders play an important role in both interest and influence in managing the Ijen crater TWA. Mapping the interests and influence of stakeholders is used by researchers to understand how they interact with one another. Interactions in the management of Ijen Crater TWA mostly occur at the central level, or between parties with influence and power over the area (Figure 3.). This is because Ijen Crater TWA and its surroundings

are under the central government's authority, so policies and planning are largely carried out at the central level. The district government only plays a role in developing infrastructure that supports tourism activities in the Ijen Crater TWA area.

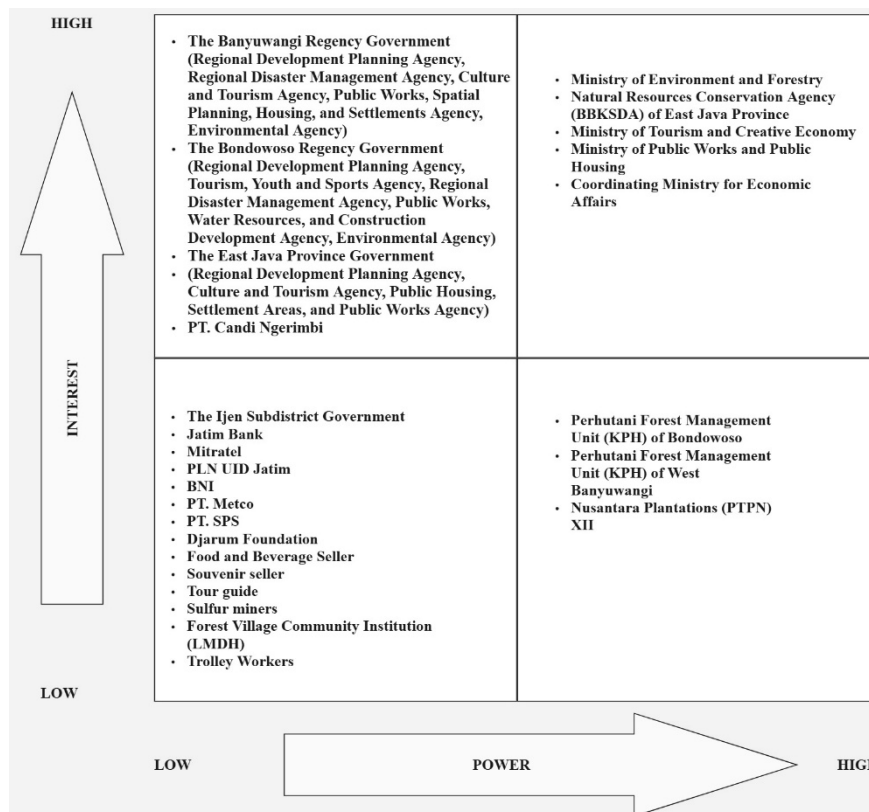


Figure 3. Mapping of stakeholders involved in the management of the Ijen Crater TWA area

Stakeholders at the central level are responsible for creating policies and development plans for the Ijen Crater TWA. Coordination between the Coordinating Ministry for Economic Affairs and the Ministry of Environment and Forestry is important to implement the programs outlined in Presidential Regulation No. 80 of 2019. One of the planned programs is constructing a cable car at Ijen Crater TWA, which will be carried out in collaboration with a third party, PT. Sura Parama Setia (SPS). The East Java BBKSDA also coordinates with the Ministry of Environment and Forestry (KLHK) because BBKSDA is the successor to KLHK in managing Ijen Crater TWA. They formulate area development plans and site designs based on the Ministry of Environment and Forestry regulations. All policies and regulations formulated by The East Java BBKSDA align with the regulations set by the Ministry of Environment and Forestry.

In the technical agencies located in the province, activity coordination is carried out with Bappeda as the regional planning and development coordinator in East Java. Every regulation or policy made by the provincial government is based on documents established by the central government. So that all forms of policy align with the central government's regulations. Each agency in the East Java Government works according to its authority, duties, and functions, but there is still coordination among them. This is also done at the district level. The technical agencies located in Banyuwangi Regency and Bondowoso Regency coordinate in determining activities and policies together with the regional Bappeda.

The policies formulated by the district government refer to the regulations issued by the East Java Provincial Government. The Bondowoso and Banyuwangi Regency Governments, supporting the Ijen Crater tourism, collaborate and coordinate with the East Java BBKSDA. The Culture and Tourism Agency and the Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi Regency are collaborating with the East Java BBKSDA for the management of Ijen Crater tourism and the development of supporting infrastructure such as tourist information centre (TIC) and water networks.

The Public Works, Spatial Planning, Housing, and Settlements Agency also communicates with the KPH of West Banyuwangi when developing roads that pass through forest areas. BPBD of Banyuwangi Regency communicates with the East Java BBKSDA and KPH of West Banyuwangi regarding the construction of disaster facilities, such as evacuation route signs located in the jurisdiction of those parties.

The Bondowoso Regency Government manages the Ijen Crater tourist area by building supporting facilities around the destination. As the technical authority responsible for disaster management, the Bondowoso District Disaster Management Agency (BPBD) communicates with the Ijen Subdistrict when planning to build supporting facilities such as signboards and evacuation route markers leading to the Ijen Crater tourist destination. The Ijen Subdistrict Government, as an extension of the Regency Government, will convey this matter to the area management.

The Tourism, Culture, Youth, and Sports Agency of Bondowoso Regency collaborates with KPH of Bondowoso in providing facilities such as parking areas, prayer rooms, TIC, toilets, and several kiosks located in the Perhutani-owned area at Paltuding Post. The Tourism, Culture, Youth, and Sports Agency communicates with the local community around TWA, which will open businesses in the kiosks provided by the Bondowoso Regency Government. During the data collection in the field for managing the facilities built by the Bondowoso Regency Government in collaboration with KPH of Bondowoso, there is still no mutual agreement on the profit-sharing from these activities. The community uses the stands for free, and the regional government has set no tariff. The Environmental Agency coordinates with KPH of Bondowoso and the East Java BBKSDA to maintain environmental sustainability in the Mount Ijen area. This was conveyed by the source as follows:

“According to the PBS-04 source, the BKSDA is important in managing the Ijen Crater Nature Park. Many venues must be protected for direct management in collaboration with the Bondowoso Regency Government and the BKSDA. In addition, in maintaining the biodiversity present in Ijen Crater TWA, the directly responsible parties are BKSDA, Perhutani, and the local government represented by the Ijen District”

BBKSDA East Java collaborates with several parties to manage the Ijen Crater Nature Tourism Area. BBKSDA collaborates with Mitratel, a subsidiary of Telekomunikasi Indonesia, to provide telecommunication networks for the community and tourists in the Ijen Crater tourist area. BBKSDA East Java also collaborates with PLN UID East Java in providing electrical networks and supporting facilities for Ijen Crater tourism, such as toilets, with BNI and Djarum Foundation.

The Ijen Crater is the most acidic in the world, making Mount Ijen rich in mineral resources with high sulfur content. The East Java BBKSDA manages sulfur in collaboration with PT. Candi Ngrimbi. The community members engaged in activities in the TWA Kawah Ijen area as sulfur miners, trolley workers, and tour guides have obtained permission from the management to access the area. The community members who establish businesses in the Ijen Crater TWA area must rent or collaborate with the East Java BBKSDA. The community members who open stands in the KPH Perhutani Banyuwangi Barat area must enter into a cooperation agreement with Perhutani and LMDH within a specified period.

Figure 4 shows that in the management of the Ijen Crater Nature Tourism Area, stakeholders interact through coalitions, coordination, cooperation, networking, and even do not interact. In managing Ijen Crater TWA, there is no interaction between the Banyuwangi Regency Government and the Bondowoso Regency Government because they manage their areas according to administrative boundaries and engage in activities to support tourism in Ijen Crater. The lack of interaction among stakeholders will impact the policies formulated for infrastructure management in the Ijen Crater Tourism Park. The policies that are made tend to be fragmented, where the policies created by the local government may not be integrated with existing area management or conservation policies, which can lead to conflicting or non-supportive policies. That can hinder achieving sustainable management goals in the Ijen Crater Tourism Park.

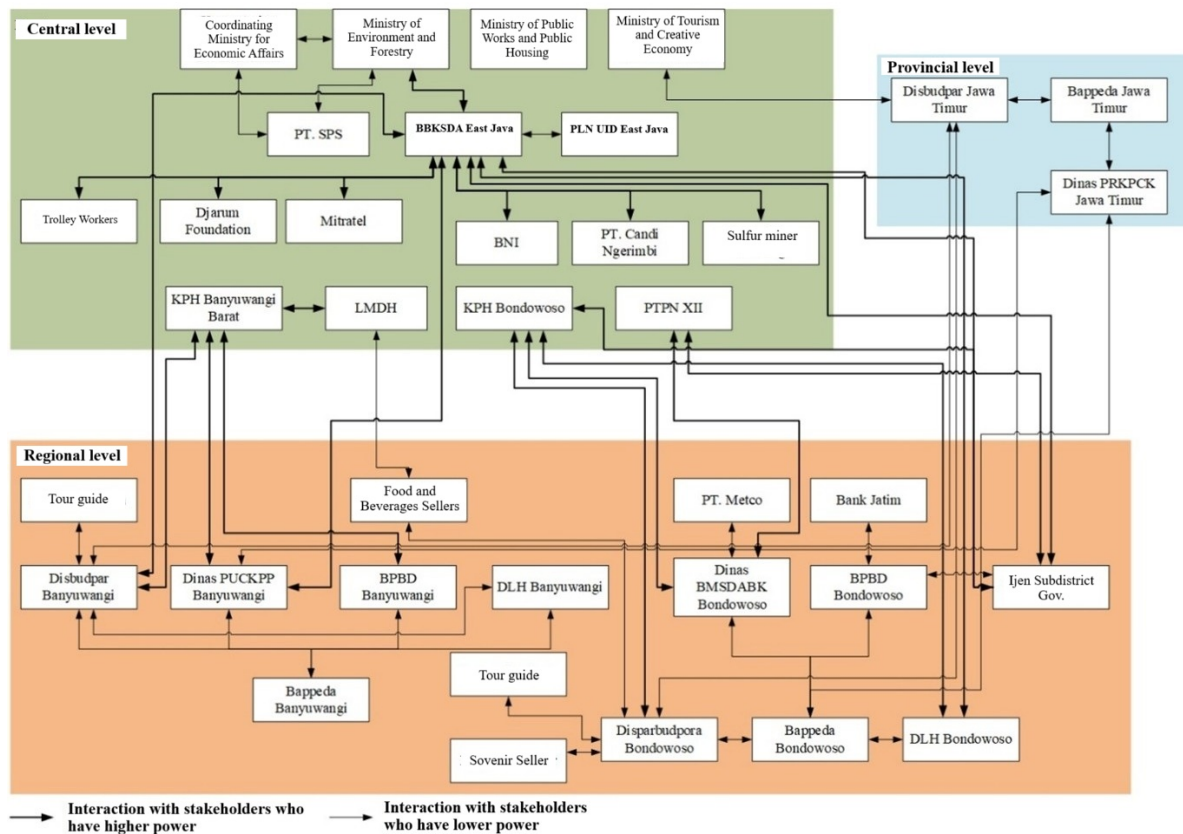


Figure 4. Interaksi Stakeholder dalam Pengelolaan TWA Kawah Ijen

Factors influencing stakeholder interactions in the management of Ijen Crater Nature Tourism Park

The first factor that can influence interactions in the management of Ijen Crater TWA is the authority of the stakeholders. The authority of each stakeholder closely influences the management of Ijen Crater TWA. In the Ijen Crater TWA area, the authority lies with the Ministry of Environment and Forestry, which is delegated to the East Java BBKSDA to manage the area. Although administratively, Ijen Crater TWA is located in Bondowoso Regency and Banyuwangi Regency, and the local government cannot directly intervene in the area's development, so there needs to be interaction through coordination and cooperation. When the district government plans to develop infrastructure to support tourism in Kawah Ijen, coordination, communication, and cooperation are carried out with area managers such as BBKSDA East Java, PTPN XII, and Perhutani, represented by their respective KPH.

The second factor that influences interaction is policy. Policies made by stakeholders can influence the management process at Ijen Crater TWA. When developing the Ijen Area, synchronization of the policies issued by the stakeholders is necessary. This condition determines which rules or policies will be implemented and align with the development goals of the area.

The stakeholders' interests are the third factor that significantly influences the management of the Ijen Crater Tourism Park. This is because many stakeholders, involved in their respective interests, influence every development and construction plan in the Ijen Crater TWA area. Stakeholders' interests also influence the presence or absence of interactions built between parties in managing the TWA Kawah Ijen. The potential in Ijen, such as blue fire and natural panoramas, can be developed as tourist destinations, while the sulfur in Ijen Crater can be utilized as an economic potential. Some stakeholders designate Ijen as a conservation area. Those interests can later become drivers and obstacles for stakeholders in managing the Ijen area.

Various potentials found in the Ijen area become a unique attraction for stakeholders. The natural beauty with the charm of blue fire at Ijen Crater can be turned into a tourist attraction, thereby providing

both direct and indirect benefits to the economy of each region. The natural panorama and Ijen Crater also hold a high potential for sulfur. That potential can become a source of livelihood for the communities living around the Ijen area. With its various potentials, the strategic condition of Ijen has led many stakeholders to want to be involved in managing the Ijen Crater Nature Reserve. This situation was conveyed by several informants during data collection in the field as follows:

“According to the PBS-01 source, the Ijen area has much natural potential for conservation areas and economic potential derived from sulfur in its crater.”

The development carried out by stakeholders will not be free from the need for funding. Funding sources can come from the regional budget (APBD) or outside the regional budget (APBD). Funds outside the APBD, such as CSR or Corporate Social Responsibility funding requests. The Bondowoso Regency Government, through the BPBD, has requested financial support from businesses to assist in developing infrastructure around the Ijen Crater TWA area. Regional Disaster Management Agency (BPBD) of Bondowoso Regency also requested funding from Jatim Bank to construct signboards leading to the Ijen Crater TWA area.

Based on the data obtained in the field, it can be determined that the factors influencing the interactions of the actors in the management of Ijen Crater TWA consist of institutional, political, and economic factors. These factors are categorised based on Guo's theory in the book "Cross-Border Resource Management: Theory and Practice." The three factors, two of which align with Guo's theory, are the political and economic factors. The institutional factor became a distinct finding in this research.

Table 3. Interaction among stakeholders and the factors that influence it

| | Economic factor | Political factor | Institutional factor |
|---------------------------|--|---|--|
| <i>Coexistence</i> | | Coordinating Ministry for Economic Affairs, Ministry of Tourism and Creative Economy, Ministry of Public Works and Public Housing, BBKSDA of East Java Province, KPH of Bondowoso KPH of West Banyuwangi, The Banyuwangi Regency Government, and The Bondowoso Regency Government | - BBKSDA of East Java Province, KPH of West Banyuwangi, KPH of Bondowoso, The East Java Province Government, The Banyuwangi Regency Government, and The Bondowoso Regency Government - BBKSDA of East Java Province, KPH of West Banyuwangi, KPH of Bondowoso - Environmental Agency of Banyuwangi Regency & Environmental Agency of Bondowoso Regency |
| <i>Networking</i> | - Regional Disaster Management Agency of Bondowoso | - Ministry of Tourism and Creative Economy, Culture and Tourism | BBKSDA of East Java Province, Tour guide, and Trolley Workers |

| | Economic factor | Political factor | Institutional factor |
|--------------------------------|---|---|--|
| | Regency, The Ijen Subdistrict Government, BBKSDA of East Java Province, PTPN XII, KPH of Bondowoso | Agency of East Java Province, Culture and Tourism Agency of Banyuwangi Regency | |
| | - Regional Disaster Management Agency of Banyuwangi Regency, BBKSDA of East Java Province, KPH of West Banyuwangi | - Ministry of Tourism and Creative Economy, Culture and Tourism Agency of East Java Province, Tourism, Youth and Sports Agency of Bondowoso Regency | |
| | - Public Works, Water Resources, and Construction Development Agency of Bondowoso Regency, KPH of Bondowoso, PTPN XII, BBKSDA of East Java Province | - BBKSDA of East Java Province, Dinas PUCKPP Banyuwangi, Bappeda of Banyuwangi Regency | |
| | - Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi, BBKSDA of East Java Province, and KPH of West Banyuwangi | - KPH of West Banyuwangi, Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi Regency, Bappeda of Banyuwangi Regency | |
| | | - Bappeda of Bondowoso Regency dengan KPH of Bondowoso | |
| | | - Bappeda of Bondowoso Regency and BBKSDA of East Java Province | |
| Cooperation (kerjasama) | | | - BBKSDA of East Java Province with Food and Beverage Seller |
| | | | - KPH of West Banyuwangi, LMDH, Food and Beverage Seller |
| | | | - KPH of Bondowoso and BPBD of |

| | Economic factor | Political factor | Institutional factor |
|---------------------|------------------------|---|--|
| | | | Bondowoso Regency |
| | | | - DLH of Bondowoso Regency with BBKSDA of East Java Province, and KPH of Bondowoso |
| Coordination | | - Public Housing, Settlement Areas, and Public Works Agency of East Java Province with Bappeda of East Java | - DLH of Banyuwangi Regency, Bappeda of Banyuwangi Regency, and Culture and Tourism Agency of Banyuwangi Regency |
| | | - Culture and Tourism Agency of East Java Province and Bappeda of East Java | - Culture and Tourism Agency of Banyuwangi Regency and Bappeda of Banyuwangi Regency |
| | | - Dinas PUCKPP Banyuwangi, Bappeda of Banyuwangi Regency | - Tourism, Youth and Sports Agency of Bondowoso Regency, BBKSDA of East Java Province, KPH of Bondowoso, PTPN XII |
| | | - BPBD of Banyuwangi, Bappeda of Banyuwangi Regency | - BPBD of Bondowoso & Jatim Bank |
| | | - Culture and Tourism Agency of Banyuwangi Regency with Bappeda of Banyuwangi Regency | - Public Works, Water Resources, and Construction Development Agency and Metco |
| | | - Tourism, Youth and Sports Agency of Bondowoso Regency with Bappeda of Bondowoso Regency | |
| | | - BPBD of Bondowoso Regency with Bappeda of Bondowoso Regency | |
| | | - Kementerian PUPR, Dinas PUCKPP Banyuwangi, | |

| | Economic factor | Political factor | Institutional factor |
|----------------------------|--|------------------------------|--|
| | | BBKSDA of East Java Province | |
| Coalition (koalisi) | <ul style="list-style-type: none"> - Kemenko perekonomian, Kementerian LHK, PT. SPS - Tourism, Youth and Sports Agency of Bondowoso Regency & KPH of Bondowoso - Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi & BBKSDA of East Java Province - Public Works, Spatial Planning, Housing, and Settlements Agency of Banyuwangi, BBKSDA of East Java Province, KPH of West Banyuwangi - Culture and Tourism Agency of Banyuwangi Regency & BBKSDA of East Java Province - BBKSDA of East Java Province & Mitratel - BBKSDA of East Java Province & PLN UID East Java - BBKSDA of East Java Province & Djarum <i>Foundation</i> - BBKSDA of East Java Province & BNI | | BBKSDA of East Java Province & PT. Candi Ngrimbi |

V. CONCLUSION

Interactions in the management of Ijen Crater TWA are dominated at the central level, as the stakeholders authorized to manage Ijen Crater TWA are BBKSDA East Java and the surrounding areas by KPH of Bondowoso, KPH of West Banyuwangi and PTPN XII. The interactions formed in the

management of Ijen Crater TWA include coalition, coordination, cooperation, networking, and coexistence. Based on the research results, it can also be seen that institutional, political, and economic factors influence the management of the Ijen Crater Nature Tourism Park. The research results can serve as input for the government in formulating policies for managing natural tourist parks on Mount Ijen. In managing the Ijen Crater Nature Tourism Park, it is necessary to improve communication so that the interests of each stakeholder can be well integrated into the development of the Ijen Crater Nature Tourism Area. The research findings can also serve as input in developing good governance strategies to ensure that planning, management, and implementation of activities from spatial and technical aspects can proceed in an integrated and synergistic manner. Future researchers can conduct a more comprehensive study from the aspect of the power structure in managing the Ijen Crater TWA area because, in this research, the interactions between stakeholders were limited. This is done by examining the application of power in decision-making within the management of the conservation area.

REFERENCES

- [1] S. A. Wahdiniawati, F. M. Lubis, D. Erlianti, V. B. M. Sari, S. Uhai, and W. D. Febrian, "Work-Life Balance: Achieving Employee Well-Being Through Sustainable HR Management," *Journal of Review of Education and Teaching*, vol. 7, no. 1, pp. 728–737, 2024, doi: <https://doi.org/10.31004/jrpp.v7i1.24683>.
- [2] A. Qurtubi, "Evaluation of the Impact of Stakeholder Involvement in Organizational Strategy Decision-Making," *Journal of Review of Education and Teaching*, vol. 7, no. 1, pp. 2045–2057, 2024, doi: <https://doi.org/10.31004/jrpp.v7i1.25657>.
- [3] R. F. Suryawan, Kamsariaty, and W. D. Febrian, "Socialization of Prevention Patterns of Wild Racing and Suppressing the Number of Traffic Accidents," *Asian J. Community Serv.*, vol. 2, no. 11, pp. 945–954, 2023, doi: <https://doi.org/10.55927/ajcs.v2i11.6803>.
- [4] V. Z. Husna, "Inter-Regional Cooperation in Public Service Management and Its Relation to Local Revenue (PAD) (Case Study of the Cooperation between the Surabaya City Government and the Sidoarjo Regency Government in the Management of the Purabaya Terminal)," *Socia J. Ilmu-Ilmu Sos.*, vol. 17, no. 1, pp. 38–47, 2020, doi: <https://doi.org/10.21831/socia.v17i1.32599>.
- [5] N. Larasati and A. Puspaningtyas, "Management of the Integrated Waste Management Site in Bantar Gebang with the Concept of Collaborative Governance," *Channel J. Komun.*, vol. 8, no. 1, pp. 69–78, 2020, doi: <https://doi.org/10.12928/channel.v8i1.15752>.
- [6] A. Rahmawati, I. D. A. Nurhaeni, and D. T. Kartono, "Inter-Regional Collaboration in Resolving Fishermen Conflicts in the Waters of Pacitan, Wonogiri, and Gunungkidul," *Paradig. J. Ilmu Adm.*, vol. 5, no. 2, pp. 1–17, 2016.
- [7] W. F. Hermawan, "Local Economic Development Based on Tourism Activities in the Ijen Geopark (Case Study: Ijen Crater TWA, Banyuwangi Regency)," Universitas Jember, 2021.
- [8] I. Melati, "Environmental Accounting as a Strategy for Environmental Management in the Mount Ijen Tourism Area, Banyuwangi Regency," *J. Ris. Akunt. dan Bisnis Airlangga*, vol. 1, no. 1, pp. 85–96, 2017, doi: <https://doi.org/10.31093/jraba.v1i1.10>.
- [9] D. B. Virgiawan, "The Threat of Ijen Crater Eruption to the Ijen Slope Community (Bondowoso Regency)," *J. Soc. Sci. Educ.*, vol. 1, no. 1, 2020, doi: <https://doi.org/10.21154/asanka.v1i1.1945>.
- [10] A. Zaennudin, D. Wahyudin, M. Sumardi, and E. Kusdinar, "Volcanic Eruption Hazard Forecast for Ijen Volcano, East Java," *J. Lingkungan dan Bencana Geol.*, vol. 3, no. 2, pp. 109–132, 2012, doi: <http://dx.doi.org/10.34126/jlbg.v3i2.40>.
- [11] N. Amalia, *Harmonization & Conflict (A Study on Social Interaction, Acculturation, and Conflict Between the Campus Community of Malikussaleh University and the Reuleut and Blang Pulo Communities)*. Lhokseumawe: UNIMAL Press, 2013.
- [12] T. Andayani, A. Febryani, and D. Andriansyah, *Introduction to Sociology*. Medan: Yayasan Kita Menulis, 2020.
- [13] T. Kim and S. Y. Shin, "Competition or cooperation? The geopolitics of gas discovery in the Eastern Mediterranean Sea," *Energy Res. Soc. Sci.*, vol. 74, 2021, doi: <https://doi.org/10.1016/j.erss.2021.101983>.

- [14] B. B. Frey, J. H. Lohmeier, and N. Tollefson, "Measuring Collaboration Among Grant Partners," *Am. J. Eval.*, vol. 23, no. 3, pp. 383–392, 2006, doi: <https://doi.org/10.1177/1098214006290356>.
- [15] W. Kurniawan, C. Kusmana, S. Basuni, A. Munandar, and K. Kholil, "Analysis of Land Use Conflicts in the Gunung Halimun Salak National Park Area," *J. Pengelolaan Sumber Daya Alam dan Lingkungan*, vol. 3, no. 1, pp. 23–30, 2013, doi: <https://doi.org/10.29244/jpsl.3.1.23>.
- [16] E. Setiawan, "Conflict in the Conservation Area of Alas Purwo National Park and Its Solutions," *J. Ilmu Sos. dan Ilmu Polit. Malikussaleh*, vol. 3, no. 2, pp. 286–297, 2022, doi: <https://doi.org/10.29103/jspm.v3i2.7770>.
- [17] Benjamin, Susetyo, Ikram, and Y. Ratnasari, "Conflict Among Village Residents: Simon Fisher's Analysis Through Case Study," *J. Ilm. Kaji. Ilmu Sos. dan Budaya*, vol. 21, no. 1, pp. 74–96, 2019, doi: <https://doi.org/10.23960/sosiologi.v21i1.39>.
- [18] A. Bayramov, "Review: Dubious Nexus Between Natural Resources and Conflict," *J. Eurasian Stud.*, vol. 9, no. 1, pp. 72–81, 2018, doi: <https://doi.org/10.1016/j.euras.2017.12.006>.
- [19] R. Hague and M. Harrop, *Comparative Government and Politics*, 6th ed. New York: PALGRAVE MACMILLAN, 2004.
- [20] P. Healey, *Collaborative Planning: Shaping Places in Fragmented Societies*. UBC Press, 1997.
- [21] I. N. I. Kumara, I. G. F. S. Tapa, D. C. Indrashwara, I. W. D. Pancane, and M. A. Predana, "Value Engineering in Enhancing Green Building Innovation," *J. Geosci. Eng. Environ. Technol.*, vol. 10, no. 1, pp. 64–70, 2025, doi: <https://doi.org/10.25299/jgeet.2025.10.1.18570>.
- [22] R. Guo, *Cross-Border Resource Management: Theory and Practice*, 1st ed. Elsevier Science, 2005.
- [23] Hamidi, *Qualitative Research Methods: Practical Application of Proposal and Research Report Preparation..* Malang: UMM Pres, 2005.
- [24] M. Saunders, P. Lewis, and A. Thornhill, *Research Methods for Business Students (7th Edition)*, 7th ed. PEARSON, 2016.
- [25] J. W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE, 2013.
- [26] Sugiyono, *Quantitative, Qualitative Research Methods, dan R&D*. Bandung: Alfabeta, 2013.