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Chasing the Shadow of Green Energy Transition: Ineffective Policy Advocacy Towards Dieng 2 Geothermal Mining

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Abstract

Despite the green energy transition efforts accelerating geothermal energy development, geothermal mining throughout Indonesia has encountered significant community resistance due to the detrimental environmental impacts. In Indonesia, the resistance movement that became the community's tool for advocating policy failed to achieve its aims most of the time. Using the case study of geothermal mining in Dieng and its Dieng 2 expansion project, this study examines why community resistance as a means of policy advocacy remains ineffective in addressing community interests. Through field observations, semi-structured in-depth interviews, and a literature review, this study found that the key internal and external factors contributing to the ineffectiveness of policy advocacy are poor coalition solidity due to socio-economic dependency on the corporations, as well as an impaired democratic decision-making process. While other studies assume that community resistance emerges from shared values and interests, this study found that community resistance extends beyond the dichotomy of corporations against local communities, as the community itself cannot be considered a monolithic coalition with uniform beliefs or equal material interests. Blurring the dynamics inside a coalition can hinder what this study has found: the significance of the coalition's solidity for the success of community resistance.

Keywords:
energy transition; bottom-up policy advocacy; community resistance; geothermal energy

Introduction

To address climate catastrophe and increase energy security, Indonesia, along with other nations, is taking part in the green energy transition, envisioned to achieve net zero emissions by 2060 as stated in Indonesia's Enhanced Nationally Determined Contributions. Under the National Energy Roadmap and Master Plan for Accelerating Indonesian Economic Development (MP3EI) 2011–2025, one strategy is to increase geothermal energy production, maximising Indonesia's potential as home to 40% of the world's geothermal resources. However, the world's current geothermal energy development has encountered several unforeseen dangers, including hot mud eruptions, gas leaks, the destruction of local religious sites, environmental disturbances from hydrogen sulphide emissions and detrimental water use, land-use conflicts, and seismic activity (see Hanum et al., 2023; Ibrohim et al., 2019; Pambudi & Ulfa, 2024; Pasqualetti, 2011). Additionally, geothermal well pads typically have a lifespan of only twenty years before new drilling is required elsewhere, raising doubts on the actual meaning of 'renewable' and further questioning whether geothermal energy mining is genuinely 'green' or if it is just another form of resource exploitation akin to the fossil fuel industry (Dunlap, 2021; Temper et al., 2020). As geothermal energy is site-specific, its power plants are often established in protected forests vital for local livelihoods,

which results in community resistance against most geothermal energy developments. This is particularly significant in Indonesia, where over 75% of the population lives within 100 km of a volcano, the prime location for such facilities (Fan & Nam, 2020; Kashem et al., 2021).

Many studies frame community resistance as stemming from shared grievances, struggles, and clashes between corporations and a unified local community (see Abowitsz, 2000; Mullard, 1985; Yuliani, 1994). This study, however, seeks to further distinguish such grievances and struggles that are not only between corporations and the local community, but also internal, arising from fundamentally ingrained and distinct class interests within the local community itself, which highly influence their solidarity towards the resistance movement. To the best of the author's knowledge and within the scope of this research, no prior study has addressed these distinct class interests within the resistance movement against geothermal mining in first-world nations (see Fan & Nam, 2020; Leucht et al., 2010; Popovski, 2003), where it is assumed that effective participatory decision-making during the planning stages can sufficiently reconcile diverse class interests. On the other hand, in Indonesia, a third-world nation, decision-making for geothermal mining is highly politicised and typically occurs after investment deals and land ownership have already been made (see Abdi et al., 2024b). Existing research on resistance in Indonesia focuses predominantly on the resistance landscape, community strategies, stakeholder mapping, and their resource mobilisation (Anggreta et al., 2022; Fajri et al., 2018; Ibrohim et al., 2019; Santoso & Kusumasari, 2019; Sauni et al., 2022; Wiguna & Fiko, 2024; et al., 2023). More problematically, most studies on Indonesian geothermal mining still concentrate on its technological and scientific aspects (Darma et al., 2021; Kashem et al., 2021; Marbun et al., 2019; Sondakh & Palsson, 2021). Only a small number of studies reveal the negative impacts of mining, the environmentally harmful policies and regulations (Hanum et al., 2023; Pambudi et al., 2022; Pambudi & Ulfa, 2024), manipulative media coverage (Anggreta et al., 2022c; Trisiah et al., 2022; Soltani et al., 2021), and low public acceptance rates (Fan & Nam, 2020; Leucht et al., 2010; Popovski K., 2003; Renoth et al., 2023). Given the scope of existing studies, geothermal energy continues to be portrayed as a safe solution for the energy transition, with limited scientific literature on its potential socio-economic impacts.

The Dieng community's resistance serves as compelling academic evidence, being one of Indonesia's oldest geothermal mines with over a decade of documented resistance concerning social and ecological disruptions. The diverse class interests within the community significantly influence the resistance's solidity and strategy, ultimately determining the movement's effectiveness. The early advancement of mining in Dieng allows this research to offer a novel perspective on policy advocacy theory within a third-world context, which exhibits distinct policy subsystem dynamics. This study further contributes to the national energy landscape by providing insights into a fair and effective policy advocacy ecosystem in Indonesia that can drive the energy transition without favouring one side over another. With over half of the sixteen operating geothermal projects in Indonesia experiencing resistance, analysing resistance strategies is critical (Meyer & Staggenborg, 2012). Overlooking the distinct class interests within the resisting community could lead to an incomplete understanding of the resistance dynamics.

Advocacy for Natural Resources

Resistance movements are a community's 'weapon' to advocate for their interests and influence policy, becoming a means of policy advocacy. This study incorporates elements

from the Advocacy Coalition Framework (ACF) (Sabatier, 1988), which originates from and is widely used in the study of natural resources and environmental policies. According to ACF, advocacy coalitions organise and seek networks with shared beliefs to compete for policy change. A coalition's capacity to do this relies on internal factors, namely the community's capacity to accumulate strategic resources to face challenges that may emerge from external factors. The external factors encompass the socio-political landscape, where coalitions vie for dominance.

Regarding internal factors, most research on geothermal resistance movements focuses on cultural values (Fitting, 2006), discourse coalitions (Hajer, 1995), effective leadership (see Tarrow, 2011), and solidity as a form of participation (Fajri et al., 2018), with the same perspective that portrays resisting communities as sharing values and interests, despite persistent class divisions. While most studies see solidity as 'participatory', this study breaks down how solidity emerges from differentiated values, interests, and beliefs within a local community. This correlates to the view of ACF researchers who caution against assuming homogeneity among coalition members in terms of coordination practices or shared beliefs (Weible et al., 2009). Pattenden (2018) expanded on this, identifying factors that can undermine shared bases for collective action, such as wage labour with various petty self-employment, marginalised interests under a movement led by capitalist farmers, temporary and individualised empowerment programmes, local-level clientelism, and uneven state mediation that politically divides labour. This opens up a wider discussion on class differentiation within villages, where *capitalist farmers* who possess vast rice fields, hire wage labour, and dominate agricultural production also often hold cultural leadership, making them influential actors (Berenschot et al., 2022b). *Petty commodity producers* own medium-sized plots and hire a small amount of wage labour, while *the village working class* or *"classes of labour"* (Bernstein, 2010) cultivate small hereditary plots and must also engage in wage labour (Habibi, 2021).

Concerning external factors, most research focuses on political opportunity structures (Pratiwi & Juerges, 2022). However, it is crucial to recognise how this bottom-up policy advocacy contrasts with the top-down public participation activities initiated by government bodies (McLaverty, 2011). This encapsulates the broader theory of participatory energy transition, where inclusive decision-making is important to strengthen the legitimacy of energy policy, such as by allowing affected communities to express their collective voice (Wahlund & Palm, 2022). Sotirov and Memmler (2011) furthermore argue that the advocacy landscape in environmental issues remained unchanged over time due to a single, dominant coalition typically staying in power, namely an economic development coalition over an environmental coalition. While resistance to mining often persists due to state repression, opposition to geothermal energy, a key part of the energy transition, stems primarily from manipulative media narratives that distort the reality of its development. As illustrated by the Dieng case, both internal and external factors significantly contribute to the policy subsystem dynamics, determining how each coalition effectively competes for policy change and fulfils the interests of the local community.

Method

This research is driven by the question: *to what extent has policy advocacy for the Dieng 2 Geothermal Power Plant been ineffective in ceasing the policy and addressing the interests of the local community?* The author explores the efficacy or inefficacy of advocacy on both internal and external factors of the coalition, while focusing on the most significant of these. This study uses a qualitative research method by recognising

data in the form of text, utilising particular procedures to record data, and interpreting the information through a number of analytical steps in order to elucidate main findings (Creswell & Creswell, 2018). A case study approach was chosen to effectively comprehend the perspectives of research subjects: members of the Dieng local community who are fully engaged in the advocacy process.

The data collection includes in-depth interviews with semi-structured questions, direct observations, and a literature review. The in-depth interviews were conducted using purposive sampling and snowball sampling techniques, selecting participants or stakeholders who were directly involved in the advocacy process, including NGOs, local public figures, local organisations, and residents from various backgrounds and villages. A total of 15 main informants were interviewed, comprising one NGO representative and residents of villages most affected by and actively opposing the PLTP-2 Dieng project: three from Karangtengah, three from Pawuhan, two from Dieng Kulon, and four from Bakal. They were selected based on observed response patterns from the semi-structured questions, which focused on their knowledge of the PLTP-2 Dieng development, experiences with disruptions, participation in the movement, decision-making, embedded demands, and everyday affairs. Examining their everyday affairs was crucial for the study, as informants were chosen from different social classes in each village to minimise bias and capture a comprehensive perspective on their varied interests. All of the informants' names were changed upon request to ensure their safety and privacy.

The in-depth interviews took place from April to September 2024, supplemented by a month of on-site observations. This timeframe encompasses the community's annual cultural event that is associated with their resistance, serving as a time for crucial internal dynamics to develop, such as decision-making and coalition-building. It also allows an analysis of the movement during a relatively stable period that captures the community's actual position towards the mining with no interruptions, which was essential for assessing external dynamics.

Additionally, a literature review of the negotiation outcomes, press releases, social media posts, and geothermal expansion plans serves as tertiary data to highlight the different narratives and levels of transparency offered by the corporations, mainly capturing the external dynamics at play.

Findings and Discussion

Positioning the Dieng Geothermal Power Plant

The Dieng geothermal power plant is located in the Banjarnegara district of Central Java, distributed across the villages of Ngandam, Pawuhan, Kepakisan, Simpangan, Sikunang, Bitingan, and Karangtengah. The facility is situated in the Dieng Plateau's intensely cultivated volcanic highland, where communities and farms exist near the geothermal infrastructure. The first drilling exploration was conducted during the Dutch colonial era in 1918. After 1965, the management was transferred to PT Pertamina, then shifted to Himpurna California Energy, and from 2002 onwards, the 60 MW power plant was managed by PT Segar (a pseudonym for the corporation to safeguard the confidentiality of the community and research participants). PT Segar is a joint venture between PT Pertamina and PT Perusahaan Listrik Negara (PLN – State Electricity Company), operating as a state-owned enterprise with the majority of its shares held by the Ministry of Finance (Layman et al., 2022).

Because of the corporation's extremely early establishment, placing it among the pioneers in Indonesia's geothermal sector, residents had little initial knowledge of

geothermal energy and its possible risks and development. Biru, a farmer from Pawuhan, recalled, "When we were kids, we were enticed with claims that if drilling did not take place, the active volcanoes surrounding Dieng might erupt." Rinjani, a resident of Dieng Kulon, corroborated this memory, "We were then approached to sign agreement contracts," which the community accepted without collective awareness.

Even though it emits fewer greenhouse gases, for decades, the Geothermal Power Plant-1 (PLTP-1 – *Pembangkit Listrik Tenaga Panas Bumi*) mining activities have caused negative social and ecological impacts for the surrounding community. Nearby villages frequently experienced minor induced earthquakes, with notable events in 2009, 2022, and the largest in 2016, where a 6.0 Richter scale earthquake damaged four villages. Drilling activities have also resulted in the emergence of new water springs in Pawuhan village, where the water is hot, yellow, and oily, unlike anything previously seen by residents. Constant disturbances have become part of daily life, including noise pollution from routine well pad services, air pollution from H2S gas emissions that exceed air quality standards and accelerate the corrosion of zinc-based roofs, and significant water and soil pollution. Air pollution was confirmed in a 2024 test held by *Jaringan Advokasi Tambang* (JATAM – Mining Advocacy Network), which recorded hydrogen sulphide (H2S) levels of 0.2 ppm in Pawuhan Village and 0.5 ppm in Bakal Village, far exceeding the safe limit of 0.02 ppm set by the Ministry of Environment Decree No. 50/1996. The geothermal power plant's requirement for 40 litres of water per second has dried up some springs that were a vital livelihood source. Remaining springs in Ngandam and Pawuhan have been contaminated, emitting a pungent odour, changing colour, producing cement mortar, and tasting sour and sparkling; a random test found the water was caustic enough to strip a fish to the bone (Soltani et al., 2021; Sondakh & Palsson, 2021). This soil and water pollution has decreased the productivity of the potato-based agricultural landscape, infringed upon the right to an equal standard of living, and is believed by the community to influence disease trends, including pneumonia and tuberculosis. A notable incident that reached online virality was the 2017 well pad service in Pawuhan and Segragah, which blanketed agricultural land in snow-like white ash.

The community's suffering did not stop there: with 40 production wells drilled and five that are still currently operational, several technical problems have occurred at PLTP-1 Dieng. In 2007, a pipe explosion propelled a victim 20 metres away from the incident site. In 2016, the explosion of Well Pad-30 and a pipe explosion near Well Pad-7 resulted in the death of one worker, injured six others, and rendered a several-kilometre radius of agricultural land unproductive for seven months. The most recent incident occurred in March 2022, when a hazardous H2S gas leak from the malfunctioning Well Pad-28 killed one worker and hospitalised eight others. Such explosions release dangerous gases, including H2S, sulphur dioxide, silica, and CO2, as well as hot fluid up to 250 degrees Celsius. Exposure can lead to heart and lung disease, dizziness, and shortness of breath (Kashem et al., 2021; Sondakh & Palsson, 2021).

The Emergence of the Resistance

The cumulative impacts of the mining operations led the local community, which had initially agreed to the project, to reverse its position and mount a reactionary resistance against PLTP-1 Dieng that has lasted over a decade. Reactionary, in this context, refers to responses initiated by affected residents that only emerge following announcements of further development, incidents, or drilling-related disruptions. The most notable example

was in 2005 concerning polluted water in Ngandam Village and again in 2015 concerning a contaminated spring in Pawuhan Village. The community resisted by hanging banners on their homes, erecting blockades to prevent mining activity, and staging street protests in their villages and at the corporation's office to demand compensation. "It's difficult and lengthy; it sometimes takes half a year, a year, or a year and a half before we get the compensations," said Angkasa, a resident of Karangtengah. Nevertheless, the provision of short-term compensation has consistently succeeded in reducing tensions and dampening the resistance movement. Within this cycle of reactionary action, resistance peaked in 2019 when news spread that PT Segar intended to develop PLTP-2 Dieng. The new plant was planned for the border of Karangtengah and Bakal villages, with a capacity of 55 MW, 10 well pads, and a draft resettlement plan (Sondakh & Palsson, 2021).

Yuliani (1994) argued that resistance during a project's planning stage can be driven by a lack of information and transparency. This view is supported by Pambudi et al. (2022), who observed that negative community perceptions are often caused by limited knowledge of geothermal energy. In some cases, resistance occurs primarily due to a community's limited understanding, particularly in areas with no prior mining history. In contrast, the resistance in Dieng emerged as a direct political response to tangible social and ecological disruptions, shaped by the community's collective trauma from earlier incidents.

While previous resistance movements were organised within individual residential areas, the opposition to Dieng 2 marked a period where nearly all villages actively assembled coalitions to mobilise. After conducting several direct and indirect advocacy campaigns, the community successfully secured an agreement on October 28, 2022, stating that the corporation could no longer undertake projects that disturb or damage the ecosystem. "It is a small victory that we should be grateful for while hoping that there will be other, bigger victories in the future," said Langit, a member of the driving organisation. On the downside, many residents viewed this agreement as a de facto project cancellation, especially as the situation has since become increasingly stable and no further activity was observed for PLTP-2 Dieng. As a result, the resistance movement largely dissipated, and the community became more submissive. However, the Finance Director of PT Segar announced that PLTP-2 Dieng construction would restart in mid-2025, with operations planned to commence in 2027. The construction continuance falls under the Energy Sales Contract (ESC) between PT Segar and PLN, which legally authorised them to distribute up to 400 MW of electricity, with plans to construct a total of eight power plants in Dieng.

Constraining but Not Substantial Factors

The effectiveness of the Dieng community movement has been limited by several internal and external constraints. Internally, regarding financial resources, the advocacy movement has limited and individual-reliant resources, which have shaped the discourse and interests favouring the contributors. Externally, coalitions actively sought assistance from local networks, including advocacy groups, pro bono legal aid institutions, NGOs, civil society organisations, independent media, and research institutions. These locally connected networks helped in various fields of research, laboratory testing, law and rights awareness, and advocacy skills mentoring. The two main NGOs, JATAM and *Wahana Lingkungan Hidup Indonesia* (WALHI – The Indonesian Forum for the Environment), play an important role in gathering important information and developing a cooperative strategy with the residents. The NGOs' extensive network of residents affected by geothermal mining

throughout Indonesia (later referred to as 'site residents') allowed the community to exchange information, discuss strategies, pool resources, and support all movements. This strong sense of solidarity among the site residents serves as a great driving force. "Geothermal development will be a new conflict area all around Indonesia," stated Awan, a member of the driving organisation.

Despite this strong relationship with NGOs, one resident identified a weakness: the NGOs focused primarily on addressing economic losses rather than on cultural values and history. For instance, although the corporation has been able to replace a water spring, it cannot address the associated loss and damage to cultural history. Amid these debates, the local government was similarly unable to support the community, thereby limiting its power. The value of state-level alliances was proven crucial in the Mount Lawu geothermal resistance, where support from the regent and local parliamentary representatives led to greater financial resources and 4,000 residents joining the movement. This aligns with Martínez-Alier's (2002) concept of 'incommensurability', which is the idea that many aspects of human existence and the natural environment cannot be sufficiently articulated in economic terms.

Externally, the weak alliance with the state gives rise to the 'boomerang effect' where weak domestic actors seek international allies to influence policy in their country (Temper, 2020b). Nevertheless, there has been an absence of such international coalitions in the Dieng resistance. Although WALHI, which is a member of the Friends of the Earth International network, endorses the community's cause, it has provided no significant international support, as its broad membership operates in a decentralized manner.

Due to these weak coalition resources, the Dieng community engaged in numerous strategies but lacked substantial ones. While most confrontational actions only secured short-term compensation, collaborative strategies such as independent research on the history of the water springs and pollution levels were ineffective. Research conducted by the state and corporations was perceived as failing to reflect actual on-site data and ignored complaints lacking scientific backing. In 2023, the Center of Economic and Law Studies (CELIOS) facilitated a meeting for the head of the driving organisation to present their independent research to the directorate general of new, renewable energy, and energy conservation in Jakarta, but this did not yield significant results toward stopping the project. Independent research still lacks credibility, with stakeholders continuing to compare geothermal energy directly with fossil fuels—a flawed comparison within the context of energy transition (Hanum et al., 2023).

Advocacy efforts were also misdirected, focusing mostly on corporations. When communities protested, they only had access to engage with public relations staff, project managers, or corporate headquarters in Jakarta, reaching personnel who lacked authority to halt the project entirely. With many stakeholders involved, key actors should have been prioritised, such as the provincial government, which holds permitting and supervisory authority, and especially the central government, as geothermal energy is designated a National Strategic Project under the 2017 regulation and centralised under the Job Creation Law No. 11 of 2020.

Geothermal development in Dieng was partly funded through debt mechanisms from the Just Energy Transition Partnership (JETP), including loans from the Asian Development Bank (ADB) and the World Bank. As lenders, these financial institutions hold significant influence over project continuity and reputational risk. Given the financial institution's role, community resistance can directly impact the project's viability by

presenting community concerns to these investors. This approach succeeded in the Wae Sano geothermal project, where the World Bank withdrew its investment following community resistance. Recognising this importance, the Dieng community sought to bring their concerns to the ADB office as part of their advocacy strategy. However, this effort was hindered by limited financial resources.

Internal Factors: Poor Coalition Solidity Stemming from Socio-economic Dependence on Corporations

I. **Same core belief, but a distinct intermediate belief**

Even with sufficient financial resources, a community movement will fail if it lacks shared fundamental values, resulting in solutions that are merely formalities and fail to adequately meet the diverse interests of the community, as happened in the case of Dieng. Although the majority of the Dieng community recognises that geothermal mining harms the environment and that constructing PLTP-2 Dieng would exacerbate this, each village has expressed fragmented demands. This indicates a shared 'core belief system' but a distinct 'intermediate belief system' (Meyer & Staggenborg, 2012; Santoso & Kusumasari, 2019).

The fragmented demands arose because different villages experienced different impacts and treatments. Karangtengah residents began resisting in 2019 upon learning that PLTP-2 Dieng would be built less than two metres from their homes. Bakal residents started their opposition in 2020 after realising the plant would damage their main livelihood sources—the Sethulu, Sidandang, and Shiranthi water springs, located 300 metres from the proposed site. In contrast, Dieng Kulon residents did not join the resistance as their neighbourhood was distant from the plant and unaffected by its disturbances. Residents of Pawuhan, Ngandam, and Segragah resisted due to the long-standing impacts they had endured. With a perception that little could be changed, their focus remained on reactionary movements and demands for short-term compensation. After all, some residents continued to support the project, provided it operated responsibly and delivered economic benefits to the people.

The economic benefits were delivered through worker housing rentals, food stalls, catering businesses, job opportunities, event sponsorships, and, most notably, Corporate Social Responsibility (CSR) programmes. The CSR initiatives included road repairs, compensation for agricultural losses, health and social assistance, scholarships, and various empowerment programmes. These were organised under schemes such as outreach and scholarships, public infrastructure and social event, agricultural and tourism-based empowerment, and environmental restoration through tree planting and conservation.

Over the decades, this assistance has fostered a significant dependency among residents on the corporation, gradually leading them to equate the environmental damage with the benefits received. This strategy succeeded in winning favour and obscuring the reality that the programmes were more focused on controlling protests and suppressing the movement than on a genuine intention to contribute to the local economy. "Yes, it is replaced, but the replacement is still a loss," said Angkasa, who, after his crops were destroyed by well-testing fluid in 2023, received seed compensation that was considerably cheaper than the varieties typically used by farmers.

At the end of every year, a portion of PT Segar's net profit is allocated to the Banjarnegara district. From this revenue, residents can submit proposals for assistance, which the community generally views as a positive initiative. "There is both a positive and a negative side. Every year, we receive basic food supplies (*sembako*), social aid, and the corporation's workers purchase our goods

and services. Housing rent is also in demand because of fieldwork internships (*praktik kerja lapangan*) for students," said Biru. Mutiara, another Pawuhan resident, added a critical perspective: "At most, there was basic needs assistance, yet it was taped (staged) to be covered on TV."

The job vacancies offered by the corporation, which became prominent alongside the community resistance, have also exacerbated horizontal social divisions. Most positions available to residents are contractual and for manual, blue-collar roles, such as cleaning services, drivers, security guards, and public relations. The public relations roles, in particular, were a source of conflict, as these staff were responsible for managing demonstrators during protests. The corporation also targeted employment offers at articulate, proactive, and influential individuals within the resistance movement, cultivating a sense of betrayal among coalition members. The corporation has also fostered distinctions between villages, labelling one as supportive of the geothermal project and another as opposed to it. This tactic incited conflict between communities that lasted nearly a year and even resulted in one imprisonment.

Most residents cannot deny the social prestige that comes with being hired by the corporation, despite the potential accusations of betrayal. Similarly, they cannot claim the corporation's presence is entirely destructive, as a significant portion of their household earnings derives from it, even though many workers still cultivate their fields for additional income. These differentiated demands and beliefs have made the burden of resistance heavier for the Dieng advocacy movement compared to other regions. In many other cases, projects are still in the planning stages with no prior mining history. In Dieng's case, the corporation has already deeply penetrated the social fabric, infiltrating government structures, establishing roots in the local workforce, and becoming intertwined with the community's everyday affairs.

II. **The differentiated class interests**

The fragmented demands and beliefs were further aggravated by differentiated class interests within the community, particularly between the driving organisation and the wider local population. This organisation began in 2018 as a forum for fifteen young teenagers to share knowledge about Dieng's culture and history, led by a chairman, vice chairman, and treasurer. In 2019, the issue of the PLTP-2 Dieng project prompted the group to begin compiling and exchanging information on geothermal mining, focusing especially on the value of the water springs in Bakal Village. From 2020 to 2023, they shifted their focus to advocating for the villagers' demands by collecting data, generating resources, making advocacy efforts, and establishing an independent media outlet, gradually becoming the driving force behind the resistance.

Composed mainly of residents aged 20 to 27, the organisation represents the younger generation of the elders, or *sesepuh*, who have long opposed geothermal mining. The actively opposing *sesepuh* consist of six to 10 individuals from various villages. Despite their different origins, they are all capitalist farmers who serve as influential figures. A small number of the organisation's members also come from petty commodity producer families (see Habibi, 2021). This composition shows that the resistance movement thus became an intergenerational activity with values and interests passed down through generations, later termed 'intergenerational vested interests'. The members' differentiated backgrounds led to differing approaches, with some being bolder and more confrontational ('vandalistic'), while others were calmer and more cautious.

The intergenerational vested interests were evident in the case of one capitalist

farmer who worked as an influencer to promote a certain pesticide brand. It should be noted that a small number of residents still believe environmental disruptions are caused by agricultural pesticides rather than geothermal mining. This counter-argument was supported by the corporation's early 2023 water quality tests, which claimed that fertiliser and pesticide use had polluted three water springs. The active opposition of this capitalist farmer may thus reflect a vested interest, as attributing environmental damage to geothermal operations instead of pesticides could support his sales and influence.

Due to these differentiated beliefs and class backgrounds, a large passive and non-mobilisable group emerged, hindering the solidity of the wider community association (*paguyuban warga*). This association included farmers from diverse backgrounds and class positions: not only capitalist farmers and petty commodity producers, but also the village working class, or 'classes of labour' (see Habibi, 2021). Although deeply opposed to geothermal development, most of the village's working class refused to join the resistance movement for fear of losing their jobs and the economic benefits provided by the corporation. During the Ramadan period in 2022, a group of capitalist farmers attempted to shift this dynamic by pooling funds to replace the 90,000-rupiah worth of basic necessities received from the corporation's CSR, hoping that this gesture would encourage the village working class to collectively reject the CSR. Capitalist farmers in Pawuhan adopted a similar approach, aiming to detach residents from corporate dependency and strengthen solidarity. However, these efforts failed, as most residents still perceived CSR support as a blessing rather than a strategic tool of influence, prioritising short-term material gain. This contrasted with Angkasa's belief that "the community does not want help; they want to be safe."

Field observations also revealed that a majority of residents remained passive, particularly among the village working class. This passivity stemmed from disappointment and distrust of certain mischievous actors in the village, who promised to communicate issues and demand compensation from the corporation, but acted only in their own self-interest. "Whether it is for one's benefit or the benefit of the community, some landowners joined the demonstrations and demanded compensation. It turns out that they were the only ones who received the compensation," said Mutiara. When the corporation offered job opportunities to these so-called 'broker' residents, the information was not shared publicly. As a result, only the broker's relatives could apply. "There are a lot of job offerings, but sometimes it is not being communicated publicly. The jobs were just offered to one person, who did not share them with others. So, the residents working there are just their family or close relatives," said Bintang, a resident of Pawuhan.

In this regard, the author does not fully agree with Newell's (2008) claim that a 'rural social movement' results from a political bond among small farmers based on the shared experience of exploitation. The reality in Dieng is that 'small farmers' are differentiated into multiple classes, and the experience of exploitation is felt distinctly depending on location, material benefit, and long-held standpoint. It may bring people together politically across traditional class boundaries, but it was constructed with different interests.

III. **Coalition's Strategy in Uniting Solidity**

In 2024, during a period of relative calm, the driving organisation turned its main attention to aligning the community's differentiated beliefs and capturing their collective interests. Bumi, the head of the organisation, stated, "Indeed, from the beginning, we always knew we needed more

steadfast people to join the movement. We do not need to gather everyone if some of them will end up becoming workers there. We have experienced that before." To raise awareness, the organisation conducted independent research and observations, culminating in an annual documentary screening. Each year, the documentary explores the history and significance of the local water springs under a different title, serving as a call to protect what the community values most.

The documentary was then screened at an annual event that has been running for five years. The event engages numerous local networks and site residents, featuring water spring blessing rituals, prayers and recitations, agricultural product parades, cultural performances, and a song mixtape release. The driving organisation uses what Dhiaulhaq and McCarthy (2019) term '*adat* framing', emphasising cultural representations of links with land and resources in conjunction with mining to spread awareness and advocate for their cause. While this is one of the most frequently used strategies among site residents, the annual event and documentary screening have limited coverage and are presented primarily to Dieng's local community. This aspect is a crucial shortcoming, as garnering national sympathy is one of the most effective strategies for a successful movement, exemplified by the success of the Gunung Kendeng Community Care Network (Daneswara & Zarkasi, 2019) as well as the *Aliansi Selamatkan Slamet* movement (Santoso & Kusumasari, 2019).

In Dieng's case, despite a petition of 1,000 signatures to halt the project, an independent media outlet established by the driving organisation, is till ineffective at engaging a wider audience and securing additional resources. It has also been inadequate at aligning the differentiated class interests within the community and strengthening the movement's solidity.

External Factors: Impaired Democracy Hindering Advocacy Efforts

I. **Partial-participation discussion forums and intimidation**

Indonesia's impaired democracy has significantly constrained resistance movements. The term 'impaired democracy' is used here to describe how, in the Dieng case, a lack of freedom of expression, widespread intimidation, manipulative media narratives, and a lack of transparency have degraded key democratic principles. This is most evident in the interactions between the government, corporations, and local communities, which are largely controlled by the corporation and the state, leaving the community with minimal influence.

In 2022, residents from various villages gathered outside the village office to protest the PLTP-2 Dieng project. A coalition of mothers led the demonstration, collectively presenting bottles of water from their springs and challenging the corporation's project manager to drink it. While some protests led to direct compensation, most concerning PLTP-2 Dieng resulted in negotiation forums initiated by the Acting District Head of Banjarnegara to mediate between residents and PT Segar. The first such forum was held in 2019 at the town hall, involving the Attorney General's Office, the Regent of Banjarnegara, and other regional government entities. However, only recognised representatives were invited, and other attending farmers were reportedly compensated to either remain silent or support the corporation's proposals, a practice Newell (2008) refers to as a 'partial representation' forum. Through this process, the community received court-mandated compensation, but a final agreement on the continuation of PLTP-2 Dieng was not reached.

A second forum was held in 2022 at the same location, involving more entities, including the district attorney, the regional Environmental Service, the Ministry of Energy

and Mineral Resources, the Banjarnegara regional government, and geothermal experts from Institut Teknologi Bandung and Universitas Gadjah Mada. The forum also included 70 people who supported the project and approximately 200 security personnel from three police units and one intelligence unit, all carrying long-barrelled weapons. With only two members from the driving organisation and five farmers invited, the intimidating atmosphere suppressed the local community's ability to express their collective decision. This breached the principle of Free, Prior, and Informed Consent (FPIC) and did not represent a good-faith negotiation, which requires equitable power distribution, respected voices, and open, honest communication. After several arguments and debates, the forum turned violent when the driving organisation displayed resistance posters (see Wiguna & Fiko, 2024b).

Other than these partial participation discussion forums, the Dieng community has had no real safe space to organise opposition due to the abundance of intelligence officers roaming the area and widespread intimidation. The situation was particularly disorderly in 2019, when four plain-clothed intelligence officers visited the driving organisation's basecamp to interrogate them about all their activities and to ask whether the organisation promoted communist teachings. On October 24, 2022, five residents who opposed the geothermal expansion were subjected to violence by PT Segar workers (Sucahyo, 2022). Due to the widespread intimidation directed at geothermal resistance movements across Indonesia and the cumulative impact of these incidents, the Dieng community became far warier of exercising freedom of speech. Yet, this repression also drove them to become more determined to fight for their rights. Throughout these incidents, their motto has remained constant: they will not be afraid because they have a right to advocate for their rights.

II. A manipulative media, a lack of transparency and accountability

A manipulative media narrative is observed, as captured in the research of Trisiah, De Vries, and De Bruijn (2022). They stated that 70% of media narratives on geothermal energy in Indonesia highlight economic benefits, 30% mention technical issues, and only a small proportion of articles address environmental or social impacts. These narratives were sourced predominantly from the national government and the geothermal industry, while NGOs and scientists, who offered a more sceptical view, account for just 8% and 6% of coverage, respectively. This overwhelmingly positive narrative of geothermal energy has significant implications for how the world understands climate politics, which in turn contributes to the struggles of rural communities (Borras et al. 2021). For the Dieng community, this has manifested in delayed support from international NGOs, as was their experience with Greenpeace.

Apart from the media's failure to depict the actual situation, Dieng's policy advocacy initiatives arose and were subsequently hindered by inaccessible and non-transparent information. For instance, regarding land ownership and usage, the corporation initially claimed that the land was intended for healthcare facilities and dormitories. In reality, they planned to build a new power plant, using a total of 5.7 hectares of corporation-owned land with an additional 301-metre-long new pipeline and access road. This plan led to the acquisition of land from 23 farmers who had been occupying 4 hectares of the corporation's land. The corporation mitigated the unforeseen resettlement by providing compensation and employing four former coordinators (Muhammad et al., 2022b). Although this presented a positive public image, the acquisition was not smooth from the landowners' perspective. Jarwo, a resident who initially objected to the corporation's

pursuit of his land, finally relented and sold it after long debates and constant threats. "Well, the Karangtengah residents' mistake is that the movement [only became] strong after the land was already in use," said Awan, telling the story of one capitalist farmer from Karangtengah (now deceased) who attempted to purchase land to prevent its utilisation for the power plant. This was impossible, however, as corporate land ownership had been established for years and the expansion project's Environmental Impact Assessment (AMDAL) was already approved for the land permit, a process that is often heavily manipulated (see Wiguna & Fiko, 2024b). "It is just a colonialist move to evict the local community gently," said Angkasa.

Access to the AMDAL document itself was also unnecessarily restricted. It took the community roughly two years of repeated requests to the district Environmental Service to finally obtain the document, only to discover that the corporation planned to build not only PLTP-2 but also PLTP-3 in Dieng to add another 55 megawatts of capacity, something that had never been publicly reported.

The distribution of the electricity produced also lacks transparency. Bumi narrated a story of how the residents once dared to take an oath to challenge the corporation, saying, "If you do not believe that our water is contaminated because of geothermal activity, then shut it down for two years. We will see if the spring returns to its original state or not." The corporation replied, "We cannot do that, Sir. What if there's no electricity in your area?" In reality, the generated electricity is transferred to a central powerhouse rather than heading to the local distribution line. This constitutes a form of metabolic rift, where capitalist-driven energy extraction disrupts the ecological balance between local communities and their natural resources, in this case through the contamination of water, by producing more goods that are circulated and consumed in distant places (Schneider & McMichael, 2010). Despite bearing the ecological consequences of electricity production, residents still pay fully for their electricity use to this day, and there are no long-term subsidies available except for a one-off subsidy for a single year.

The lack of transparency and accountability during the planning and implementation stages deprived the community of any chance to legally appeal against land ownership decisions, permits, and the AMDAL process once news of the expansion surfaced. Numerous successful cases of resistance to geothermal energy have emerged during the planning stages, when permits, licensing, and environmental assessments were still under negotiation. In contrast, the Dieng case unfolded only after these processes had been completed, severely limiting opportunities for community intervention. This is a corporate and governmental strategy to eliminate community engagement from the discourse, creating a gap that results in the community's lack of trust, which is crucial for the success of future development, public support, and meaningful public participation (see Hanum et al., 2023d; Vargas-Payera et al., 2020d).

Conclusion

The resistance movement, as a means of policy advocacy, has proven ineffective due to a combination of internal and external constraints, such as limited financial resources; distant global networks; a strong but localised reliance on support networks that could assist the community with research, strategising, and most importantly connecting with site residents affected by geothermal mining throughout Indonesia; and other strategies that were not on target and lacked substance. The advocacy efforts were largely hindered by impaired democracy, mainly evidenced through manipulative media coverage, which in turn affects the partial participation discussion forum, intimidation, a lack of transparency, and an absence of freedom of

speech. Internally, the most notable factor was the poor coalition solidity, stemming from socioeconomic dependence on corporations.

While other studies often framed community solidarity around 'shared' grievances (Anggreta et al., 2022; Fajri et al., 2018; Fajri et al., 2023; Fan & Nam, 2020; Ibrohim et al., 2019; Leucht et al., 2010; Popovski, 2003; Santoso & Kusumasari, 2019; Sauni et al., 2022; Wiguna & Fiko, 2024), the Dieng community's policy advocacy breaks down community solidarity to its fundamentally distinct class interests. This led to fragmented demands across villages as well as divergent strategic preferences. The fragmented interests result from the community's dependency on the corporation, as it has been established for decades with early mining advancements, fostering economic benefits, job opportunities, and CSR to the community over the long term. The situation was further aggravated as each party, even within the driving organisation and wider local community association (*paguyuban warga*), has intergenerational vested class interests, such as between the *capitalist farmer* and *petty commodity producer* families, with large, passive, and non-mobilisable groups coming mainly from the *village working class.* Aside from their dependency on certain entities, their passivity was also part of their disappointment with mischievous actors who only joined the movement for the sake of their interests.

This case offers a major contribution to the advocacy coalition framework under the policy advocacy theory that within internal and external factors, other dynamics in play could result in coalition decisions that are not truly collective and even weaken the advocacy efforts due to fragmentation in the core and intermediate beliefs, as well as restricted access to key decision-makers, which ultimately limits the coalition's ability to influence or dominate the policy subsystem.

In Indonesia, where the policy advocacy landscape is driven by complex, politicised issues that go beyond the relationship of the corporations and government with the community, this study serves to close the gap for its novelty. While engagement with the public and allies with formal institutions is very much needed (Dhiaulhaq & McCarthy, 2019; Newell, 2008), the short-term aim may thus be to supply grievances by contesting dominant media narratives, unifying community-specific information as the basis of resistance, and mobilising human resources within the resistance movement through advocacy skills and inclusive decision-making. Although finding common ground for strategies that can satisfy diverse class interests is necessary, the main political implication should be to enhance a participatory energy transition that not only focuses on technological systems but also empowers local communities with the knowledge and resources to engage actively in policymaking, fostering the collective decision-making as suggested by Caballero (2006), with particular attention to those most disadvantaged by the unmet interests resulting from mining development.

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