

FROM AGRICULTURAL LAND TO ENERGY LANDSCAPE: AN ANTHROPOLOGICAL STUDY OF COMMUNITY TRANSFORMATION IN JENEPONTO

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Abstract. *The transition toward renewable energy has become a fundamental component of sustainable development policies in Indonesia. The establishment of a wind power plant in Jeneponto Regency represents not only a transformation of the energy system but also a process that reshapes the social and cultural life of local communities. This study aims to examine how local people interpret the presence of the wind power plant and how cultural adaptation unfolds amid the ongoing energy transition. The research employed a qualitative ethnographic approach using participant observation, in-depth interviews, and documentation involving residents living around the wind power plant area. Data were analyzed thematically through the perspectives of development anthropology, energy anthropology, and cultural adaptation. The findings reveal that the wind power plant is widely perceived as a symbol of modernization that introduces new technological experiences while simultaneously constructing a new regional identity as a renewable energy landscape. The project has also transformed the social meaning of local space, reshaped relationships between communities and the operating company, and contributed to changes in everyday social practices, including the declining intensity of communal mutual cooperation. Nevertheless, rather than abandoning their cultural values, local communities actively negotiate between long-established traditions and the new social realities introduced by renewable energy development. These findings demonstrate that energy transition is fundamentally a socio-cultural process that cannot be adequately understood solely through technical or economic perspectives. This study contributes to the advancement of development anthropology and energy anthropology by emphasizing the importance of understanding community meaning-making and cultural adaptation in renewable energy development. The findings provide practical implications for designing socially inclusive and culturally responsive energy transition policies that support sustainable development.*

Keywords: Cultural Adaptation; Development Anthropology; Energy Anthropology; Energy Transition; Wind Power Plant

1. INTRODUCTION

The development of renewable energy has become a strategic agenda in supporting the transition to a low-carbon energy system in various countries, including Indonesia. The government's commitment to achieving the net zero emission target by 2060 or sooner drives the increased utilisation of new renewable energy (EBT) as a substitute for fossil fuels, which have long dominated the national energy mix. Among various renewable energy sources, wind energy has significant potential, especially in the regions of South Sulawesi, East Nusa Tenggara, West Nusa Tenggara, and the coastal areas of Indonesia. Various studies show that diversifying renewable energy sources through the development of wind power plants (PLTB) is one of the important strategies in enhancing national energy resilience while simultaneously reducing carbon emissions in the electricity sector (Yudiartono et al., 2023). The operation of the Sidrap PLTB and Tolo I PLTB serves as evidence that wind energy technology has entered the commercialisation stage and is beginning to contribute to the national electricity system (Asy'ari & Sitanggang, 2023).

The development of modern wind turbine technology further strengthens the prospects for wind power plant development in Indonesia, even though most regions have moderate to low

wind characteristics. Technological advancements enable increased generation efficiency, so the limitations of wind resources are no longer the main obstacle in the development of wind energy projects (Tanoto et al., 2026). In addition to being a provider of electrical energy, wind power plants (PLTB) are also beginning to be positioned as part of a cross-sector decarbonisation strategy through integration with green hydrogen technology, which is considered to have promising economic and environmental prospects. Nevertheless, the development of wind energy still faces various challenges such as fluctuations in wind speed, limitations in transmission networks, the need for energy storage technology, and investment uncertainties. These conditions indicate that the success of wind power plant development is not only determined by technological readiness but also by the ability to understand the social impacts on the communities around the construction site (Resosudarmo et al., 2023; Setiawan, 2024).

Various studies show that renewable energy projects bring consequences that go beyond technical and economic aspects because they also affect the social life of the community. The presence of energy infrastructure can enhance electricity access, expand economic opportunities, improve education and health services, and strengthen community capacity if supported by good community participation (Colmenares-Quintero et al., 2020; Zaharuddin et al., 2025). On the contrary, uneven distribution of benefits, low community involvement, and weak project governance have the potential to create social conflicts, energy injustice, and community resistance to renewable energy development (Delcayre & Bourdin, 2025). Therefore, the main issue of the research is no longer just how to increase electricity generation capacity, but also how to understand the social changes that occur after the wind farm operates.

The transformation is also closely related to changes in land use, spatial configuration, regional identity, and the relationship between the community and its surrounding environment. Energy infrastructure transforms both the physical and social landscapes through changes in livelihoods, local economic structures, social interaction patterns, and the symbolic meaning of the community's living space (Ioannidis & Koutsoyiannis, 2020; Moe & Grubert, 2025; Osorio-Aravena et al., 2020). An approach that only assesses the success of wind farms based on technical indicators has yet to explain the social dynamics that develop in the affected communities. An approach that places the lived experiences of the community as the main focus is needed so that social changes can be understood in a more comprehensive and contextual manner.

Various previous scientific studies have identified several factors that influence the success of wind farm development, particularly social acceptance, distributional justice, procedural justice, perceptions of quality of life, and local socio-economic impacts (Ata Teneler & Hassoy, 2023; Baxter et al., 2020; De Luca et al., 2020; Glasson et al., 2022; Klok et al., 2023). The results of these studies indicate that the level of community support is greatly influenced by involvement in the decision-making process, information transparency, a sense of justice, and the opportunity to gain economic benefits from wind energy projects. Thus, the success of wind farm development is greatly determined by the ability to simultaneously integrate technical, social, economic, and institutional dimensions.

In the perspective of anthropology, energy development is understood as a process of social transformation that affects the identity, cultural values, power relations, and life experiences of local communities. The energy anthropology approach positions communities not merely as recipients of development impacts, but as actors with their own knowledge, values, and perspectives on the environment and the future of their region (Oguz & Goodale, 2024; J. M. Smith & Tidwell, 2016). The daily experiences of communities in facing landscape changes, economic activities, social relationships, and their sense of belonging to their living spaces are important aspects that have not yet been fully explained through quantitative approaches (Gobbo, 2025; Loginova et al., 2025; Tornel, 2023; Van Leeuwen & Singh, 2023).

Research on wind power plants (PLTB) is still dominated by issues of social acceptance, environmental impact, and the fairness of benefit distribution, while cultural changes, long-term

social adaptation, and community experiences after the project operates remain relatively limited (Baxter et al., 2020; Klok et al., 2023). Most studies use cross-sectional designs that only depict community perceptions at a specific point in time, thus failing to explain the ongoing social adaptation processes (Schmidt et al., 2022; Zhang et al., 2025). Moreover, the majority of research has been conducted in Europe and North America, leaving the socio-cultural context of developing countries, including Indonesia, still under-represented (Tsani et al., 2024). These research gaps open up opportunities to examine the social dynamics of local communities more deeply through a qualitative approach focused on lived experiences and socio-cultural transformations.

This research aims to analyse the social changes experienced by the community after the construction of the Tolo 1 Jeneponto Wind Power Plant by placing the life experiences of the local community as the main focus of the study. The novelty of this research lies in the use of an anthropological perspective to explain the relationship between energy development, social change, and community experiences in the Indonesian context, which has rarely been studied in depth until now. This research is based on the hypothesis that the construction of the Tolo 1 Jeneponto Wind Power Plant not only generates economic and environmental benefits but also triggers processes of social adaptation, cultural change, transformation of social relations, and the formation of new meanings regarding the community's living space. The scope of the research is focused on the communities directly affected by the presence of the Tolo 1 Jeneponto Wind Power Plant, with the expectation of providing scientific contributions to the development of energy anthropology studies, as well as serving as a basis for formulating more inclusive, participatory, just, and sustainable energy transition policies.

2. METHODOLOGY

This research uses a qualitative approach with a field anthropology tradition to understand the socio-cultural transformations that occur as a consequence of the construction of the Wind Power Plant (PLTB) 1 in Jeneponto Regency. This approach was chosen because it can explain the life experiences of the community, changes in cultural values, power relations, social identity, and daily practices that developed after the presence of energy infrastructure. Unlike the technocratic approach, which generally measures development success through economic or environmental indicators, field anthropology places local communities as the main subjects of research, allowing for a deeper understanding of how energy development transforms the meaning of space, livelihood patterns, social relationships, and community value systems (J. M. Smith & Tidwell, 2016).

The research was conducted through the direct involvement of the researchers at the research site to capture the social dynamics that develop in the community's life. The ethnographic approach is used because it provides researchers with the opportunity to understand how the community interprets the presence of the Tolo 1 Jeneponto Wind Power Plant based on daily experiences, including perceptions of benefits, risks, changes in cultural landscapes, transformations of local identity, and potential conflicts arising from changes in land and resource use. The ethnographic perspective also allows for the analysis of energy ethics, which is the way communities give meaning to energy based on their social and cultural experiences, so that the impact of development is understood not only through quantitative data but also through social interactions, cultural norms, and the subjective experiences of the community (J. Smith & High, 2017). Additionally, this approach provides space to examine the negotiation processes between the community, government, and project developers in relation to public consultation, compensation, participation, and perceptions of the fairness of benefit distribution from development (Rydin et al., 2018; Virah-Sawmy & Sturmberg, 2025).

Data collection was conducted through in-depth interviews and participatory observation as the main techniques in obtaining rich, contextual, and life-experience-oriented information from the community. In-depth interviews allow informants to reflectively explain their views,

hopes, concerns, and experiences regarding the construction of the Tolo 1 Jeneponto Wind Power Plant, enabling researchers to understand the meanings constructed by the community behind each change that occurs. This approach has proven effective in generating a deeper understanding of participants' perspectives because open dialogue allows for the exploration of experiences, values, and interpretations of social phenomena (Pessoa et al., 2019). Meanwhile, narrative interviews provide a more detailed picture of how development policies are experienced by individuals in their daily lives (Mueller, 2019).

Participatory observation complements the interview results by providing researchers with the opportunity to directly observe behaviours, social interactions, economic activities, and the dynamics of community life after the construction of the Tolo 1 Jeneponto Wind Power Plant. Direct involvement in the field allows researchers to understand the social, cultural, and environmental contexts that influence community responses while also identifying discrepancies between the narratives conveyed by informants and the practices occurring in daily life (Simoný et al., 2018). The use of in-depth interviews and participatory observation simultaneously produces a triangulation process that strengthens the credibility of the findings by allowing cross-verification of various information sources. The combination of these two methods has proven capable of producing a more comprehensive understanding of the social, cultural, economic, and psychological dimensions that influence both the successes and challenges of energy infrastructure development (Richardson et al., 2019; Simoný et al., 2018).

The data obtained were analysed using thematic analysis to identify, organise, and interpret the patterns of meaning that emerged from interviews, observations, and field notes. This approach was chosen because it can explain how the community interprets the social, cultural, economic, and environmental changes that occur as a result of the construction of the Tolo 1 Wind Power Plant in Jeneponto. The analysis was conducted through the process of data familiarisation, coding, theme development, theme review, theme definition, and systematic interpretation as developed in the reflexive thematic analysis approach (Braun & Clarke, 2021; Byrne, 2022). This approach allows for the exploration of latent meanings, so that social change is not only understood as visible behavioural changes but also as a process negotiated through the experiences, symbols, and narratives of society.

Thematic analysis also provides space to identify patterns of change that are cross-contextual and temporal. Through the identification of main themes and metathemes, the research can explain how society responds to the transformation of the energy landscape while also comparing various forms of social adaptation that develop within local communities (Wutich et al., 2021). Additionally, this analysis allows researchers to capture emotional dimensions such as hope, anxiety, resistance, and community acceptance of development, making the resulting interpretation more comprehensive (Buetow, 2025). By considering the development of themes from various informants' experiences, the research can also explain the process of social change as a dynamic and sustainable phenomenon (Spencer et al., 2021). Through all these stages, this research aims to produce a transparent, in-depth, and contextual understanding of the societal transformation resulting from the development of the Tolo 1 Wind Power Plant in Jeneponto, as well as to provide a scientific basis for formulating more inclusive, participatory, and socially just energy transition policies.

3. THE PRESENCE OF WIND POWER PLANTS IN THE LIFE OF THE JENEPONTO COMMUNITY

The presence of the Tolo 1 Wind Power Plant (PLTB) in Jeneponto Regency is a form of energy infrastructure development that brings changes not only to the physical aspects of the region but also to the social and cultural life of the local community. In the perspective of development anthropology, development is understood as a social process that always involves interaction, negotiation, and the formation of meaning between the local community and development actors. The existence of the wind farm cannot be understood merely as a renewable energy supply project, but also as a place where the community builds new meanings regarding

technology, living space, and the social changes they experience (de Sardan, 2005; Escobar, 2007).

Research findings show that the people of Jeneponto interpret the presence of the wind farm as a symbol of change that brings new experiences to their lives. The change is not only felt in the form of physical development but also in the way the community understands the development of their region. One of the informants stated:

"Since the wind farm was established, there have been changes in our village. Life here used to be simpler, now it has started to develop and people are beginning to understand technology."

The statement shows that the community does not merely see wind turbines as infrastructure for power generation, but rather as a representation of progress that brings new experiences regarding modern technology. In energy anthropology, technology is understood as a cultural object that gains meaning through the social interaction of society with its surrounding environment. Smith and High (2017) explain that energy technology is never neutral because it is always interpreted based on the experiences, values, and hopes of society for the future. Therefore, the presence of the wind power plant in Jeneponto has given rise to the perception that technology has become part of the new identity of the village, which was previously known as an agrarian area.

That interpretation also shows that development does not proceed as a process entirely determined by the state or companies. On the contrary, society actively constructs the meaning of development based on their daily experiences. Escobar (2007) explains that local communities have the ability to interpret development according to their own cultural context, so development always results in various forms of local adaptation and interpretation. In the context of this research, wind farms are viewed not only as sources of energy but also as markers of social change that connect communities with images of modernity and progress.

In addition to shaping new perceptions of technology, the presence of wind farms also changes the way communities interpret the spaces where they live. Before the construction of the wind farm, the area was primarily understood as agricultural and livestock land, which was the main source of livelihood for the community. However, after the wind turbines were erected, the area gained a new identity as an energy landscape with its own unique appeal. The presence of the turbines not only changed the physical form of the area but also transformed the way the community perceives its surroundings, which are now recognised by outsiders and have become a symbol of Jeneponto Regency.

The transformation can be understood through the concept of the energy landscape, which refers to the changes in the landscape due to the development of energy infrastructure that generates new social, cultural, and symbolic meanings (Pasqualetti & Stremke, 2018). In the anthropological perspective, landscape is not just a geographical space, but a cultural space that is continuously shaped through the relationships between humans, the environment, and their social activities. Therefore, the changes in the landscape due to the construction of wind farms not only bring about visual changes but also shape a new identity for the community towards their living space. The landscape that was previously identical to agrarian activities is now also associated with renewable energy and technological advancement.

Another change found in this study relates to the social relationship between the community and the wind farm management. During the construction phase, the intensity of interaction between the community and the company was quite high due to the recruitment process, coordination of field activities, and communication regarding project implementation. However, after the wind farm (PLTB) started operating, the relationship changed. One of the informants explained:

"If the relationship between the PLTB and the residents is still good. It's just different from the situation before when the construction was still ongoing; back then, we often met and greeted each other, but now we can only meet again during the activities that are held."

The quote shows that the relationship between the community and the company remains positive, but the frequency of interactions decreases after the project enters the operational phase. In development anthropology, the relationship between the community and development institutions is understood as a dynamic relationship that changes according to the stages of development itself (de Sardan, 2005). When the construction process is completed, the need for daily interactions decreases, causing the previously intensive relationships to shift into more formal ones through certain activities, such as corporate social programs or community meetings. This change in interaction patterns shows that development not only results in material changes but also reorganises the social relationship patterns that were formed during the project. On the other hand, the community also feels a change in the practice of daily social life. One of the informants stated that:

"Mutual cooperation has become rare in the PLTB area or among the community. Because the culture of mutual cooperation that is felt now has generally become rare."

The statement indicates a change in the collective practices that have long been an important part of rural community life. Although these changes cannot be entirely attributed directly to the presence of the wind farm, the informants interpret these social changes as occurring alongside the increasing process of modernisation in their region. In the perspective of anthropology, *gotong royong* is a social institution that functions to strengthen solidarity, build reciprocal relationships, and maintain community cohesion. Geertz (1963) explains that changes in the economic and social structure in rural communities are often followed by a transformation of collective values towards more individual relationships. Therefore, the decline in communal practices can be understood as part of the social transformation process that occurs alongside the introduction of development and changes in the orientation of community life.

The findings of this research show that the community does not view the development of the wind power plant (PLTB) in black and white terms as something entirely beneficial or detrimental. On the contrary, the community builds a more complex understanding based on their own life experiences. On one hand, the wind farm is perceived as a symbol of progress that brings positive changes in the form of technology introduction, increased attention to the region, and the formation of a new identity as a renewable energy area. However, on the other hand, the community also realises that these changes are accompanied by a shift in social relationships and cultural practices that were previously an important part of communal life.

The results of this study indicate that the presence of the Tolo 1 Wind Power Plant is a socio-cultural transformation process involving the negotiation of meaning between the local community and modern energy development. Energy infrastructure not only generates electricity but also shapes the way communities understand space, technology, social relations, and their community identity. In the perspective of development anthropology, this finding emphasises that development always results in multidimensional cultural changes because society actively assigns meaning to every change they experience. Therefore, understanding the impact of wind power plants (PLTB) cannot be done solely through technical or economic approaches, but rather by examining how the community, as cultural actors, interprets development in their daily lives.

4. CHANGES IN SOCIAL PRACTICES AND DAILY LIFE

The changes that occurred after the operation of the Tolo 1 Wind Power Plant (PLTB) are not only evident in the physical transformation of the area or the emergence of new energy infrastructure but also affect the social practices carried out by the community in their daily

lives. In the anthropological perspective, development always brings consequences for the way society organises its social life, including patterns of interaction, inter-group relationships, and cultural practices that have been passed down through generations. The social changes that have emerged around the PLTB area cannot be understood solely as a direct result of physical development, but rather as a result of the community's adaptation process to the social, economic, and cultural changes that accompany the introduction of new technology (de Sardan, 2005; Escobar, 2007).

Based on the interview results, the community acknowledges that daily life has undergone gradual changes since the construction of the wind power plant (PLTB) began. These changes are not always manifested in the form of drastic alterations, but are more evident in the shifting patterns of social activities, the intensity of interactions among residents, and the way the community utilises communal spaces that were previously the center of communal life. This phenomenon shows that energy development not only brings about material changes but also reshapes the rhythm of social life in rural communities. One of the changes conveyed by the informants is the decrease in the practice of mutual cooperation, which was previously an important part of community life. One informant stated:

"Mutual cooperation is rarely seen around the PLTB area or within the community. Because the culture of mutual cooperation that is felt now is generally rarely seen."

That statement indicates a change in collective practices that have long been the main mechanism for building social solidarity in village communities. In anthropological studies in Indonesia, gotong royong is understood not merely as a collective working activity, but as a social institution that reproduces reciprocal relationships, mutual trust, and the collective identity of the community. Geertz (1963) explains that social changes following modernisation are often accompanied by a shift in societal orientation from communal relationships to more individual and rational ones. Thus, the decrease in the intensity of mutual assistance in this study can be understood as part of the social transformation that occurs alongside the increasing economic mobility, changes in work patterns, and the introduction of various new technologies into people's lives.

However, the research findings also indicate that the community does not consider the loss of some mutual assistance practices to be entirely caused by the presence of the wind farm. On the contrary, the community interprets these changes as part of the times, which also influence the overall life of the village. This shows that the community has the ability to distinguish between the impact of infrastructure development and social changes influenced by the broader process of modernisation. In the perspective of development anthropology, local communities are actors who actively interpret changes based on their own life experiences, so development always produces diverse meanings according to the local social and cultural context (Escobar, 2007).

In addition to changes in the practice of mutual cooperation, this research also shows changes in the patterns of social interaction within the community. During the construction phase of the wind power plant, the community had a higher frequency of meetings because many activities were carried out together, both in the construction process, labour recruitment, and communication with the company. After the project enters the operational phase, the intensity begins to decrease.

Changes in social practices occur not only in relationships among citizens but also in the relationship between the community and development institutions. The intensity of communication that previously occurred almost daily has changed to a more formal and incidental relationship. Olivier de Sardan (2005) explains that the relationship between the local community and development actors always changes following the stages of the development project. At the construction stage, interactions usually occur more intensively due to the need for coordination and negotiation, whereas at the operational stage, relationships tend to

become institutionalised through social programs or specific activities. Thus, these changes in relationships are part of the social dynamics that commonly occur in large-scale development.

Changes in social practices are also evident in the way the community utilises shared spaces. Before the existence of the Wind Power Plant (PLTB), the open spaces around the area were mostly used for agricultural activities, livestock farming, and community social activities. After the construction of the wind power plant (PLTB), some areas acquired new functions related to the presence of wind turbines, both as locations frequently visited by outsiders and as a new symbol of the Jeneponto region. The change in the function of the space indirectly affects the daily activities of the community because the space, which was previously used exclusively by residents, has now also become part of the public space with economic and symbolic value.

In the perspective of spatial anthropology, landscapes are not just a collection of physical elements, but are social spaces produced through the everyday practices of society. Pasqualetti and Stremke (2018) explain that the development of energy infrastructure produces an energy landscape, which is a new landscape that forms new relationships between humans, technology, and the environment. Therefore, the change in the function of space around the wind farm not only reflects changes in land use but also shows how the community is beginning to construct new meanings of the environment in which they live.

Another finding that emerged from the interviews indicates that changes in social practices occur through a relatively peaceful adaptation process. No indications were found that the community experienced open rejection of changes in daily life after the wind farm began operating. On the contrary, the community tends to adapt to the new conditions while still maintaining the cultural values that are considered important. This adaptive attitude shows that society has the cultural capacity to integrate modern elements into their lives without completely abandoning the long-developed local identity.

In anthropology, this process is understood as a form of cultural negotiation, where society neither passively accepts changes nor completely rejects them, but selectively adopts certain elements that are deemed compatible with local needs and values. Smith and High (2017) explain that energy development always results in a process of cultural adaptation because communities strive to integrate new technologies into the social systems they already possess. Thus, the changes in social practices occurring in Jeneponto cannot be understood as the loss of local culture, but rather as a process of forming new social practices that arise from the encounter between tradition and modernity.

The results of this study indicate that the presence of the Tolo 1 Wind Power Plant has become one of the factors contributing to changes in social practices and the daily lives of the people of Jeneponto. These changes are reflected in the shift of mutual cooperation practices, changes in social interaction patterns, the transformation of shared space functions, and the emergence of various forms of adaptation to life increasingly influenced by modern technology. From the perspective of development anthropology, these changes show that energy development not only alters the economic structure and physical environment but also reshapes cultural practices that form the foundation of community life. Therefore, understanding the impact of wind power plants requires attention to the lived experiences of communities as cultural actors who actively interpret, adapt, and construct meaning from the changes they face in their daily lives.

5. INTERPRETING THE BENEFITS AND IMPACTS OF THE TOLO 1 WIND POWER PLANT DEVELOPMENT IN JENEPONTO

The development of the Tolo 1 Wind Power Plant (PLTB) in Jeneponto Regency not only brings changes in energy infrastructure but also generates various interpretations from the community regarding the benefits and impacts they experience. Research findings indicate that the community does not view the development as something that is entirely beneficial or detrimental. On the contrary, they construct diverse meanings based on life experiences, social

positions, and the intensity of their involvement with the presence of the wind farm. In the perspective of development anthropology, this condition shows that development is a social process that produces various local interpretations according to the cultural context of the society experiencing it (de Sardan, 2005; Escobar, 2007).

Most informants interpret the presence of the wind power plant (PLTB) as a form of development that brings benefits to the community, especially through improved access to infrastructure, job opportunities during the construction phase, and increased attention from the government and companies towards the villages around the project area. The benefits of development are not only understood in terms of direct economic gains but also through the changes felt in daily life. In development anthropology, the perception of benefits by the community is not always measured based on material indicators, but also through social experiences that strengthen the sense of ownership of the development process. Cernea (1997) explains that development capable of providing space for community participation tends to result in greater acceptance because its benefits are understood as part of collective life, not merely as a result of physical investment.

In addition to providing economic benefits, the community also perceives the wind power plant (PLTB) as a symbol of regional progress. The presence of wind turbines has made Jenepono more well-known to outsiders, creating a sense of pride among some residents. That perception shows that energy development has produced symbolic value that transcends its technical function as a power plant. Smith and High (2017) explain that energy infrastructure often becomes a symbol of modernity that shapes a new identity for a region through changes in how society views technology and the future. Therefore, the benefits of development are not only realised through the improvement of economic welfare but also through the change in the region's image, which is considered more advanced compared to before.

However, the research results also show that the community does not turn a blind eye to the various impacts that emerged after the wind farm began operating. Some informants stated that the benefits of development were not felt equally by all residents. Job opportunities that were previously available during the construction phase decreased after the project entered the operational phase, causing some members of the community to feel that their economic relationship with the company became increasingly limited. These findings indicate that the perception of development benefits is temporal and influenced by the project's phase changes. In the perspective of development anthropology, development always results in an unequal distribution of benefits because each community group has different levels of access to the resources produced (de Sardan, 2005). Therefore, the community evaluates development based on the concrete experiences they have, not merely on the development goals designed by the government or companies.

In addition to economic aspects, the community also associates the presence of the wind power plant with changes in social relationships in their environment. As previously explained in the discussion, the modernisation accompanying development is perceived to also affect the decrease in the intensity of mutual cooperation and social interaction among the community. The community perceives the impact of development not only on the economic aspect but also on the changes in social values that have long been the foundation of communal life. In the perspective of anthropology, *gotong royong* is a cultural mechanism that functions to maintain social solidarity in rural communities. Geertz (1963) explains that the process of modernisation is often followed by a transformation of social relationships from collective patterns to more individual ones. Therefore, the changes in the practice of mutual assistance perceived by the community cannot be understood as a direct result of the existence of the wind power plant alone, but as part of the social dynamics that occur alongside the increasing development and changes in the community's life orientation.

Another finding shows that the community also negotiates various environmental impacts they experience. Some informants believe that the presence of wind turbines does not

significantly disrupt their daily activities, while others have reported certain changes they have experienced after the construction took place. These differing viewpoints illustrate that the community's experience with development is greatly influenced by their proximity to the project site and the economic activities they engage in. In environmental anthropology, perceptions of environmental change are never universal because they are shaped through daily experiences, local knowledge, and the relationship of communities with the spaces they inhabit (Ingold, 2000). Thus, the impact of development is understood as a contextual experience and cannot be uniformly generalised to the entire community.

The diversity of perceptions indicates that the people of Jeneponto are not a group that passively accepts development, but rather actors who actively assess, compare, and attribute meaning to the various changes they experience. Escobar (2007) emphasises that local communities always develop their own perspectives on development based on historical experiences, cultural values, and their living needs. Therefore, the benefits and impacts of the wind farm cannot be measured solely through technical indicators such as electricity capacity or investment value, but also through how the community interprets these changes in their social lives.

The results of this study show that the construction of the Tolo 1 Wind Power Plant has produced multidimensional socio-cultural consequences. On one hand, the community views the wind farm as a symbol of progress that brings economic opportunities, enhances the region's image, and introduces modern technology into their lives. On the other hand, the community is also aware of changes in social relations, the distribution of development benefits, and the dynamics of daily life that do not always provide equal advantages. Thus, the development of renewable energy in Jeneponto not only results in physical transformation in the form of energy infrastructure but also creates an arena for social negotiation where the community continues to interpret the benefits and impacts of development based on their own cultural experiences. The anthropological perspective shows that the meaning of development is never singular, but is continuously produced through the interaction between development policies, the lived experiences of the community, and local values that persist amidst the process of modernisation.

6. CULTURAL ADAPTATION OF SOCIETY AMIDST THE ENERGY TRANSITION

The energy transition marked by the presence of the Tolo 1 Wind Power Plant (PLTB) in Jeneponto Regency not only represents a change in the energy supply system but also brings about a process of cultural adaptation at the community level. In the perspective of anthropology, cultural adaptation is the community's response to changes in the environment, technology, or social structure that affect their lives. The adaptation does not always mean a complete acceptance of change, but can instead be a process of adjustment, negotiation, or even resistance to the new values introduced through development (Escobar, 2007; Steward, 1955). Therefore, understanding the energy transition cannot be done solely through technical and economic approaches, but it is also necessary to see how the community constructs meaning from these changes in everyday life practices.

The research results show that the people of Jeneponto are gradually developing new ways to adapt to the presence of the wind power plant (PLTB). This adaptation is evident in the changes in how the community understands technology, utilises space, and builds social relationships with various actors involved in the development. As explained in the previous section, some members of the community view the wind farm as a symbol of progress that introduces new experiences with modern technology. One of the informants expressed:

"Since the wind farm was established, there has been a change in our village. Life here used to be simpler, now it has started to develop and people are beginning to understand technology."

The statement indicates that the process of adaptation does not occur through drastic cultural changes, but rather through social learning that arises from the interaction of society with the new environment. In the study of the anthropology of technology, society is not positioned as a group that passively receives innovation, but as actors who actively ascribe meaning to technology according to their experiences and cultural context (Pfaffenberger, 1992). Thus, the introduction of renewable energy technology through wind farms has encouraged the community to develop a new understanding of modernity without having to completely abandon the local identity they have long possessed.

In addition to changes in the perception of technology, the process of cultural adaptation is also evident in the changing meanings of the community's living space. Before the construction of the wind farm, the area was primarily used as agricultural and livestock land, which served as the main source of livelihood for the community. However, after the wind turbines were erected, the landscape acquired a new identity as an energy area known beyond Jeneponto Regency. This change shows that space not only undergoes physical transformation but also experiences shifts in social and cultural meaning. Pasqualetti and Stremke (2018) explain that the development of energy infrastructure creates an energy landscape, which is a landscape that contains new symbolic values as a result of the interaction between technology, environment, and society. In the context of Jeneponto, the community is gradually integrating this new identity into their lives, so that the wind farm area is no longer seen merely as an agricultural production space, but also as a representation of regional progress.

However, the process of cultural adaptation does not occur without changes in the patterns of social relationships within the community. The presence of the wind power plant (PLTB) has created a new dynamic in the interaction between the community and the managing company. The form of community adaptation also includes adjustments to the changing relationship patterns after the construction phase enters the operational stage. The intensity of communication that was previously high during the construction process has changed to more formal and situational relationships. In the perspective of development anthropology, this change is a consequence of the shifting function of interaction between the community and development institutions. Olivier de Sardan (2005) explains that social relations in development projects always change according to the program stages, so communities need to develop new strategies to maintain communication and access to various development benefits. Cultural adaptation is also evident in the changes in social practices within the community. One of the informants stated that:

"Mutual cooperation is rarely seen around the PLTB area or the community. Because the culture of mutual cooperation that is felt now is generally rarely seen."

The findings indicate that the community is aware of a shift in collective practices that have long been an important part of rural life. However, the decrease in the intensity of mutual cooperation does not necessarily indicate the loss of communal values. On the contrary, society is beginning to develop new forms of interaction that adapt to changes in economic activities, work patterns, and increasing social mobility. In anthropology, culture is understood as something dynamic so that social values do not disappear, but rather undergo transformation following the context of societal life (Geertz, 1973). Therefore, cultural adaptation in the context of energy transition cannot be understood as the replacement of old culture with new culture, but rather as a negotiation process that produces different forms of social practices.

The adaptation process also shows that society has the ability to preserve elements of local culture amidst the influx of modern technology. This is in line with the concept of cultural adaptation proposed by Julian Steward (1955), that societies will continue to adjust their cultural systems to environmental changes without losing the entire cultural character that has previously developed. In the context of this research, the community continues to maintain its identity as an agrarian community despite now coexisting with large-scale energy infrastructure.

Agricultural activities, kinship relations, and various local traditions still remain part of daily life, while wind power technology is accepted as a new element that complements their social reality.

The cultural adaptation found in this study shows that the energy transition is a process that occurs through the continuous formation of meaning. The community is not only adapting to the physical changes brought about by development but also to changes in their way of thinking about the future of their village. The presence of the wind power plant has expanded the community's imagination regarding development, economic opportunities, and their region's position in a broader context. However, at the same time, the community also continues to reflect on the various social consequences that accompany these changes, including the decreased intensity of communal interactions and the changing patterns of relationships among residents.

The results of this study show that the cultural adaptation of the Jeneponto community occurs as a complex, gradual, and contextual process. Energy transition does not erase local culture, but encourages communities to adjust to new social realities through a process of negotiation between traditional values and modern technology. The anthropological perspective shows that the success of energy development is not only determined by the functioning of infrastructure but also by the community's ability to integrate these changes into their own cultural systems. Therefore, the energy transition in Jeneponto can be understood as a process of social transformation that produces new forms of cultural adaptation without completely erasing the local identity that has long developed within the community.

CONCLUSION

This research shows that the presence of the Wind Power Plant in Jeneponto Regency is more than just the construction of renewable energy infrastructure; it is a process of socio-cultural transformation that reshapes the way the community interprets space, technology, social relations, and local identity. The research findings indicate that the community is not passive towards development, but actively constructs meaning from the changes they experience through a process of cultural adaptation. The presence of wind power plants is perceived as a symbol of progress that introduces new experiences regarding technology and development, while simultaneously transforming the agrarian landscape into an energy landscape with new social and symbolic meanings. At the same time, these changes also affect the patterns of community interaction, including the decreased intensity of relationships with the company after the construction period and the shift in the practice of mutual cooperation as a form of communal solidarity. This study contributes to the development of development anthropology and energy anthropology by showing that the energy transition is a cultural process involving the negotiation of meaning between local communities, technology, and development policies. These findings reinforce the view that the success of renewable energy development is not only determined by technical and economic aspects but also by the community's ability to integrate these changes into their value systems and social practices. Thus, this research expands the study of energy transition through an ethnographic approach that places communities as the main actors in shaping the meaning of development. Further research is recommended to examine the dynamics of long-term cultural adaptation, including changes in the identity of the younger generation, transformations in livelihoods, and the relationship between energy policies, social justice, and cultural sustainability in communities living alongside renewable energy infrastructure.

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