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Land Acquisition, Compensation Utilization, and Community Welfare: A Case Study of Danu Kerthi Dam

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ABSTRACT

This study examines the conditions and factors that explain the effects of land acquisition on welfare and why compensation may contribute to economic sustainability. Most previous studies have focused on conflicts during the compensation phase rather than on livelihood trajectories after land acquisition. This descriptive qualitative study applied snowball sampling involving 18 informants from 80 entitled parties in Sawan and Bebetin Villages, Buleleng Regency. The primary data were collected through structured interviews and questionnaires, while the secondary data were obtained from land acquisition documents and welfare indicators from the Central Statistics Agency. The findings show that the assessment of physical and non-physical losses resulted in proportional compensation and that its success was largely determined by three conditions: credible governance involving the village government, meaningful participation through the calculation of customary losses, and socio-cultural sensitivity. Most recipients used their compensation for education, asset acquisition, and business development, which explains why the welfare indicators show relatively good conditions. However, some farmers remain vulnerable during the transition to long-term investment because perennial crops are not yet productive and prices are volatile. In conclusion, fair compensation based on the principle of indemnity can strengthen socioeconomic resilience if supported by post-payment assistance based on the Global *Gotong Royong* principles; otherwise, the sustainability of welfare is not automatically guaranteed.

Keywords: Compensation; Land Acquisition; Participation; Welfare

ABSTRAK

Penelitian ini menganalisis kondisi dan faktor yang menjelaskan dampak pengambilalihan lahan terhadap kesejahteraan serta mengapa kompensasi dapat mendukung keberlanjutan ekonomi. Sebagian besar kajian terdahulu berfokus pada konflik pada fase kompensasi, bukan pada ragam mata pencaharian pasca-pengambilalihan lahan. Penelitian kualitatif deskriptif ini menggunakan teknik sampel bola salju yang melibatkan 18 informan dari 80 pihak terkait di Desa Sawan dan Bebetin, Kabupaten Buleleng. Data primer diperoleh melalui wawancara terstruktur dan angket, sedangkan data sekunder diperoleh dari dokumen pengambilalihan lahan serta indikator kesejahteraan Badan Pusat Statistik (BPS). Hasil penelitian menunjukkan bahwa penilaian kerugian fisik dan nonfisik menghasilkan kompensasi yang proporsional dan bahwa keberhasilannya sebagian besar ditentukan oleh tiga aspek: tata kelola yang kredibel dengan melibatkan pemerintah desa, partisipasi yang bermakna melalui perhitungan kerugian adat, dan kepekaan sosial budaya. Sebagian besar penerima menggunakan kompensasi untuk pendidikan, pembelian aset, dan pengembangan usaha, sehingga indikator kesejahteraan menunjukkan kondisi yang relatif baik. Namun, beberapa petani tetap rentan selama masa transisi karena hasil tahunan yang belum produktif dan adanya fluktuasi harga. Dengan demikian, kompensasi yang adil berdasarkan prinsip ganti rugi dapat memperkuat ketahanan sosial-ekonomi jika didukung oleh bantuan pasca-pembayaran berdasarkan prinsip Global Gotong Royong; bila tidak, keberlanjutan kesejahteraan tidak terjamin secara otomatis.

Kata Kunci: Ganti Rugi; Kesejahteraan; Partisipasi; Pengadaan Tanah

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INTRODUCTION

Land is a multidimensional resource with a dual character: it serves both as an economic asset for development and as a socio-cultural space for communities. From an economic perspective, the availability of land is an essential requirement for investment in national strategic projects such as dams, irrigation networks, toll roads, airports, ports, and other public infrastructure (Laksono, 2021). Relevant government institutions, including the Ministry of Public Works and the Ministry of Agrarian Affairs and Spatial Planning, manage infrastructure development through formal land acquisition procedures.

However, the above mechanisms often intersect with the second dimension of land, which extends beyond its economic value. Land is an important source of livelihood, identity, and historical and cultural heritage, particularly for rural communities (Syazarah Soraya & Harahap, 2024; Triani et al., 2023). The interaction of these two dimensions often complicates and prolongs the land acquisition process, resulting in delays in infrastructure projects, cost overruns, loss of livelihoods, and slower regional economic growth (Novianingsih et al., 2026; Setiawan, 2025; Tetama et al., 2022).

Among the most critical land policy issues are those in which the imperatives of development investment directly conflict with the protection of community rights. This tension is well illustrated by India's Purandar airport project, where affected communities and other parties demanded comprehensive packages of monetary compensation, employment guarantees, replacement land with a high coefficient, and educational guarantees (Sharma, 2024). Likewise, in the Vadhvan port project, stakeholders sought guarantees of sustainable livelihoods despite the Indian government having established an appropriate compensation system (Vadhvan Port Project, 2024).

The challenges facing Indonesian land policy are not substantially different, as illustrated by the Yogyakarta International Airport and Bener Purworejo Dam projects (Nugroho & Kurniawati, 2024; Rijanta et al., 2022). Both projects adhered to national regulations in implementing compensation schemes based on independent appraisals and consignment systems. However, such formal compliance did not resolve the underlying conflicts. A continuing major concern among affected communities is the sustainability of their livelihoods and appropriate compensation for social, ecological, and cultural losses. Sociological studies suggest that, for such communities, a social approach involving participation, future security for affected people, appropriate relocation, and long-term efforts toward economic recovery is more meaningful than monetary compensation alone (Cernea, 2000; Scudder, 1991).

Indonesia has a strong legal basis for land management through Law No. 5 of 1960 on Basic Agrarian Regulations and Law No. 2 of 2012 on Land Acquisition for Development in the Public Interest. These frameworks protect affected and entitled communities through compensation and reparation mechanisms based on both legal and customary norms, such as deliberation (*musyawarah*). In principle, these regulations protect landholders who fulfil their obligations, such as paying Land and Building Tax and maintaining their property, while ensuring that they receive the rights to which they are entitled. Compensation under these laws is comprehensive. Parties with a documented interest in acquired land are entitled to compensation for the land, space above or below the ground, buildings, plants, and other assets associated with the land.

This protection is further elaborated in Government Regulation No. 19 of 2021, which provides that, when land is acquired for the public interest, control of state land by cultivators may be demonstrated through Land and Building Tax receipts or evidence of cultivation. In addition, to strengthen tenure security, Government Regulation No. 24 of 1997 allows a person who has lawfully and continuously occupied land for 20 years or more to apply for a formal land certificate. In general, these regulations seek to balance state-led development with the protection of individual and communal property rights.

The land acquisition framework in Indonesia is comprehensive, covering stages from planning to implementation. However, sociological and empirical studies show that the process can succeed only when it extends beyond procedural compliance. A major concern relates to the quality of substantive justice. Land acquisition processes may lack social legitimacy because of information gaps, perfunctory public engagement, post-relocation vulnerability, and the predominance of legal-administrative approaches (Edita, 2024). Moreover, the principle of "fair and equitable" is often compromised when compensation is limited to objective market value (Purbawa, 2022). Thus, the success of land acquisition should not be measured merely by the distribution of monetary compensation, but also by the capacity of the process to facilitate restorative justice and the long-term socioeconomic recovery of affected communities.

The outcomes of land acquisition are receiving increasing attention, but several gaps remain in the literature. First, most studies focus on the compensation phase and are primarily concerned with whether payments are timely and procedurally compliant, while the post-acquisition period—particularly how households actually use compensation and whether they restore or improve their livelihoods—remains under-researched (Yudhanto et al., 2021). Second, the existing literature tends to focus on conflictual cases, producing a predominantly pessimistic narrative in which large-scale infrastructure projects lead to impoverishment and resistance (Cernea, 2000; Downing, 2002). Third, limited empirical attention has been given to local cultural mechanisms such as cooperation (*Gotong Royong*) in providing post-acquisition support.

This study addresses these gaps by examining the relatively harmonious case of the Danu Kerthi Dam to explain the conditions under which land acquisition can lead to positive welfare outcomes. It also provides empirical evidence on the role of informal *Gotong Royong* as a coping mechanism and its limitations. Based on these findings, the study proposes the formalization of post-payment assistance as a policy-relevant measure.

Justice and social welfare are urgent concerns. It is essential not only to describe the effects of land acquisition on well-being, but also to explain the conditions under which and the reasons why such effects may have positive or negative consequences for affected populations. The Danu Kerthi Dam project in Buleleng Regency, Bali, provides a distinctive case for examining both the land acquisition process and the community's utilization of compensation funds. The project is one of 61 strategic dams planned for development between 2015 and 2024, most of which are designated as National Strategic Projects.

Land acquisition is a key determinant of the success of infrastructure policy. Its processes affect various dimensions of infrastructure governance. First, improved infrastructure governance through transparent and participatory processes can enhance accountability and reduce corruption risks. Second, delays in the construction of national strategic infrastructure projects increase costs and undermine project credibility when land conflicts remain unresolved. Third, predictable land acquisition outcomes facilitate better fiscal planning by reducing the potential for budget overruns and contingency allocations. Fourth, early social risk assessment during project preparation enables developers to anticipate potential opposition and plan appropriate mitigation measures. Fifth, meaningful participation and appropriate compensation shift risk from affected communities to the state and therefore reduce the likelihood of social conflict. Sixth, community acceptance based on procedural justice and cultural sensitivity is crucial in determining whether a project gains public legitimacy or faces prolonged opposition. The Danu Kerthi case provides an empirical illustration of how these six dimensions can be addressed positively.

This study adopts an explanatory approach to identifying the mechanisms and contextual factors that influence welfare outcomes rather than merely documenting procedural compliance. Against this background, three main research questions are formulated. First, under what circumstances does the land acquisition process result in social harmony and community acceptance? This question seeks to explain what distinguishes the Danu Kerthi project from more conflictual cases by examining factors such as credible governance through village heads, meaningful participation, including the assessment of non-physical losses associated with customary rituals, and socio-cultural sensitivity. Second, under what conditions does financial compensation become a catalyst for productive uses, such as investment in education, assets, and business, while some households remain vulnerable during the transition to long-term agricultural investment? This question examines how occupational backgrounds, including those of farmers, entrepreneurs, and civil servants, influence adaptive capacity. Third, does compensation-based land acquisition create long-term socioeconomic resilience among affected households, and how can the Global *Gotong Royong* principle strengthen post-compensation welfare sustainability? This question explores whether improvements in health, education, employment, consumption, housing, and poverty indicators translate into sustained resilience.

This study defines "success" in land acquisition across three dimensions. First, procedural and social success refers to a transparent and participatory process that results in community acceptance. Second, welfare restoration is reflected in improvements in BPS indicators, including health, education, employment, consumption, housing, and poverty. Third, sustainable livelihood strategies serve as measures of

long-term resilience. However, such resilience may remain conditional for farmers investing in perennial crops because of the transition gap.

This study makes three distinct contributions to the literature. First, while the existing literature has mainly focused on the compensation phase, this study examines post-acquisition outcomes by collecting retrospective accounts of the use of compensation funds and their effects on community welfare three to five years after the project. This approach addresses an important gap in land acquisition research, which tends to overlook the post-project phase (Yudhanto et al., 2021; De Maria et al., 2023). Second, the study analyzes multidimensional welfare indicators, including health, education, and employment, based on indicators used by Statistics Indonesia (*Badan Pusat Statistik*, or BPS). This multidimensional framework responds to the need for research that examines different impacts in parallel (Sari et al., 2022; McCarthy et al., 2022). Third, this study has practical significance for national and regional government programs by assessing the effectiveness of land acquisition regulations.

The research findings shall be relevant to technical agencies such as the Ministry of Public Works and the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), which are responsible for land administration and physical infrastructure development. Furthermore, the findings can assist the Buleleng Regency Government in developing policies that provide greater protection for entitled parties and affected communities. Ultimately, this study aims to provide a rigorous assessment of the socioeconomic well-being of communities affected by the Danu Kerthi Dam project in Buleleng, Bali.

THEORETICAL FRAMEWORK

Land Acquisition

Land acquisition refers to the process of acquiring land and any structures, plants, or other assets attached to it by providing fair and adequate compensation to entitled parties. According to Government Regulation No. 19 of 2021, this procedure is organized into four main stages: planning, preparation, implementation, and handover of results. In the Indonesian context, land acquisition may also be classified according to its purpose. It may be undertaken by the government for public or non-public interests or by private parties for commercial or non-commercial purposes.

However, understanding land acquisition procedures alone is insufficient. The academic literature on development-induced displacement and resettlement (DIDR) has long emphasized that land acquisition for infrastructure projects often entails systematic risks of impoverishment, including landlessness, joblessness, homelessness, marginalization, food insecurity, loss of common property resources, and increased morbidity (Cernea, 2000; Downing, 2002). More recent scholarship has emphasized that these risks are not merely technical but deeply political: who benefits, who loses, and under what conditions are shaped by asymmetries of power among states, corporations, and local communities (Levien, 2015).

In Indonesia, the political economy of land acquisition appears to favor infrastructure development over agrarian reform, while compensation mechanisms tend to favor those holding formal legal title rather than informal occupants or customary land users (Cramb & McCarthy, 2016). This study therefore does not regard land acquisition as a neutral administrative process, but rather as

a contested arena in which state-led development intersects with local livelihoods, rights claims, and cultural values.

Compensation Utilization Patterns

An "entitled party" refers to a party with the right to receive compensation by considering the transfer of its rights. Such a party may be an individual, a legal entity, a government agency, or a community ruled by customary law. An entitled party is therefore the owner of, or a party legally entitled to, the land subject to acquisition. Compensation may be used in two ways: productively, such as for business capital and investment, or consumptively, e.g., for purchasing a vehicle or improving a house. Decisions on the use of compensation are generally influenced by personal characteristics.

Critical scholarship on livelihood restoration argues that the distinction between productive and consumptive use is often too simplistic. What matters is not merely whether compensation is "invested," but whether its use leads to sustainable livelihood outcomes that are at least equivalent to pre-project conditions (Aucamp & Woodborne, 2020). Furthermore, the concept of "distributive equity" is central because compensation should account for differences in vulnerability and asset ownership among affected households (Vatsa, 2004). For example, farmers who lose perennial crops may require different compensation arrangements, such as replacement for fruit-bearing trees, from wage laborers who lose access to common property resources.

This study therefore adopts a more nuanced view: productive utilization is context-dependent, and its success should be measured by whether households achieve livelihood restoration or improvement rather than merely by whether compensation funds are allocated to "business."

The Impact of Compensation on Welfare Levels

The term "impact" refers to a significant effect that may produce either positive or negative outcomes. In the context of land acquisition, these effects may be positive, such as improved local economic conditions and infrastructure development, or negative, such as social disruption, environmental degradation, and livelihood losses. The welfare effects of land acquisition can be assessed through detailed indicators. Social welfare exists when a person's material, psychological, and relational needs are fulfilled, enabling that person to lead a decent life and perform social roles. The Central Statistics Agency identifies eight categories of welfare indicators: population, health and nutrition, education, employment, housing and environment, consumption patterns and levels, poverty, and other social indicators.

However, measuring welfare in the context of land acquisition requires more than statistical indicators alone. Scholars of social impact assessment (SIA) argue that welfare should be understood as a multidimensional and dynamic concept that encompasses not only income and assets but also psychological well-being, social networks, cultural identity, and perceived justice (Aucamp & Woodborne, 2020; Esteves et al., 2024). Procedural justice, referring to fairness in the decision-making process, is as important as distributive justice, referring to fairness in outcomes, in shaping affected communities' acceptance of compensation (Gross, 2007). Procedural justice in land acquisition includes transparency, access to information, meaningful participation, and grievance mechanisms. This study therefore assesses welfare using both objective BPS indicators and subjective perceptions of justice and fairness, as revealed through in-depth interviews with entitled parties.

State–Society Relations, Participation, and an Integrated Framework

The outcomes of land acquisition are strongly influenced by state–society relations. Resistance may arise even when compensation amounts are objectively fair if the state is perceived as extractive or unresponsive (Peluso & Lund, 2011). Conversely, social harmony is more likely to be maintained when local state actors, such as village heads, function as trusted intermediaries who articulate community concerns and negotiate fair terms. However, meaningful participation must extend beyond formal consultation. Arnstein's (1969) well-known ladder of citizen participation distinguishes tokenistic forms of participation, such as informing or placating, from genuine citizen power involving negotiation and co-decision-making.

The Danu Kerthi case illustrates a shift toward procedural justice. Krismantoro (2025) argues that the shift is closely related to legitimacy and trust. The inclusion of village heads in the implementation team and the recognition of traditional ceremony costs as compensable losses are examples of this approach. Compensation fairness therefore has two inseparable dimensions: distributive fairness (full replacement of physical and non-physical losses) and procedural fairness (transparency, inclusiveness, and accountability). This distinction remains a recurring concern in recent studies of land acquisition in Indonesia (Sakti & Sidipurwanty, 2026; Sari et al., 2020).

This study adopts three operational definitions of these concepts: success is defined as livelihood restoration or improvement for most entitled parties at least three years after the project (Esteves et al., 2025); welfare is understood as multidimensional, encompassing material, social, and psychological dimensions; and participation requires genuine influence over compensation decisions rather than mere attendance. Combining these perspectives suggests that positive welfare outcomes in land acquisition are more likely to occur when three conditions are met: (1) a procedurally just process that is transparent, participatory, and culturally sensitive; (2) distributively fair compensation covering full replacement costs, including non-physical losses; and (3) post-compensation livelihood support capable of bridging the transition gap. Even substantial compensation payments may produce adverse outcomes when these conditions are absent. The Danu Kerthi case is analyzed using this framework, with particular attention to procedural justice, perceived fairness, patterns of compensation utilization, and changes in welfare three to five years after the project.

Gotong Royong as Social Capital

Gotong Royong is a traditional Indonesian concept of cooperation and collective action grounded in sincerity, willingness, togetherness, tolerance, and trust. It is not based on monetary exchange (Wagner et al., 2025; Lukiyanto & Wijayaningtyas, 2020). Rather, it operates on the principle of reciprocity: helping others with the expectation of receiving assistance in return at a later time, without immediate economic calculation (Scott, 1981). However, Marhayati (2021) cautions that *Gotong Royong* is currently experiencing "cultural entropy," in which the value system remains present but the social system is no longer able to motivate and regulate community behavior.

In the context of post-displacement livelihood restoration, *Gotong Royong* may function as a form of informal social capital, such as through intrafamily transfers or shared caregiving. However, its benefits are

not universal. Individuals without extended family networks, elderly people living alone, or those who have migrated away from their relatives may be left behind.

This study distinguishes between the informal *Gotong Royong* observed in post-acquisition family practices, such as the sharing of compensation and participation in collective rituals, and the Global Gotong Royong (G2R) paradigm proposed as a formal policy framework for post-payment assistance (Masyhari Makhasi et al., 2025; Yasin et al., 2025). The former is treated as an empirical finding, whereas the latter constitutes a normative prescription derived from the findings of this study.

METHODOLOGY

Research Design

This study aims to examine the utilization of compensation funds and their effects on the welfare of entitled parties affected by land acquisition for the Danu Kerthi Dam. It employs a descriptive qualitative research design (Turner et al., 2017). The study uses a sampling approach rather than a census approach because it focuses on a selected subset of the population to examine socioeconomic characteristics in depth. The study population consisted of 80 entitled parties, comprising 78 residents of Sawan Village and two residents of Bebetin Village. From this population, 18 informants were selected to represent different occupational backgrounds, including civil servants, private-sector employees, and farmers.

Snowball sampling was used as the primary sampling technique because the researchers initially had limited knowledge of specific key informants and required credible referrals to access in-depth information about socioeconomic dynamics. The study was conducted at relevant government agencies and at land acquisition sites associated with the Danu Kerthi Dam in Sawan District, Buleleng Regency, Indonesia. Although the population of 80 entitled parties was clearly identified and accessible through official records from the Buleleng Land Office, the researchers chose snowball sampling because the study sought not merely to describe the population but to obtain an in-depth qualitative understanding of compensation utilization patterns, household perceptions, and subsequent family adjustments.

The study addressed sensitive topics, including satisfaction with compensation, the distribution of funds within households, and livelihood strategies following land acquisition. Such personal information may be difficult to obtain, particularly from outsiders or in formal settings. Existing community leaders, including the village head and several key informants, were therefore used to establish initial contact and provide referrals to other households, thereby facilitating more open disclosure. This technique also enabled the researchers to trace natural social networks and examine the flow of information, support, and financial resources among entitled parties.

However, the researchers acknowledge the potential bias associated with this method. Households with positive experiences or stronger social networks may have been more likely to be referred and to volunteer to participate, whereas those who were less satisfied, more vulnerable, or socially isolated may have been inadvertently excluded. This possibility is recognized as a limitation of the study.

Another methodological limitation is the absence of formal baseline data on household welfare prior to land acquisition. No systematic pre-acquisition survey was available, while the study was conducted

three to five years after the commencement of the project. To assess changes in welfare, the researchers relied on retrospective accounts in which informants were asked to compare their current conditions in terms of health, education, employment, consumption, housing, and poverty with their recollections of pre-acquisition circumstances.

Accordingly, this study is not longitudinal in the strict sense of repeated observations at multiple points in time. Rather, it is a descriptive qualitative study that uses retrospective recall to capture perceived changes over a specified post-acquisition period of three to five years. The study was conducted from February to June 2025 and covered all stages of the research, from initial planning and data collection to analysis and final reporting.

Data and Data Sources

This study is based on field research with specific objects and data requirements. Primary data were collected directly from informants through structured interviews and open-ended questionnaires, supplemented by systematic observation and documentation. The primary objective was to examine empirical conditions and investigate the effects of compensation fund utilization on the welfare of entitled parties following land acquisition. The study also incorporates descriptive economic analysis within a qualitative framework by using quantitative welfare and income indicators from Statistics Indonesia to strengthen the interpretation of primary and secondary data.

The primary data were collected through structured interviews, open-ended questionnaires administered to entitled parties, and in-depth interviews with village leaders. Secondary data consisted of Statistics Indonesia welfare indicators, land acquisition data from the relevant villages, and official documents from the Buleleng Regency Land Office. To enhance credibility, the data were triangulated across household interviews, Land Office documents, village head accounts, and BPS indicators. Key points from each interview were summarized and confirmed with the informant immediately afterward as a form of member checking.

Data analysis was conducted sequentially through data collection and preliminary review, data reduction and abstraction, classification and presentation, analysis, and the drawing of conclusions (Sugiyono, 2016).

RESULTS/FINDINGS

Land Acquisition Mechanism and Compensation Determination

Land acquisition for the Danu Kerthi Dam in Buleleng Regency is part of a National Strategic Project that has been implemented since 2019 pursuant to Bali Governor Decree No. 779/01-A/HK/2019. The process is governed by Law No. 2 of 2012 on Land Acquisition for Development in the Public Interest. The law establishes a systematic sequence consisting of planning, preparation, implementation, and handover of results. As the Head of the Buleleng Regency Land Office explained in an interview, *"These stages are carried out sequentially and involve various parties, from the agencies requiring the land to the Land Office as the main implementing institution."*

During the planning stage, the agency requiring the land prepares a Land Acquisition Planning Document (DPPT), which includes site analysis, development benefits, socioeconomic studies, conformity with the Regional Spatial Plan, and budget planning. The document provides the legal and feasibility basis for the project. The preparation stage involves contacting entitled

parties, obtaining relevant information, collecting data, determining the land acquisition location, and issuing an official announcement by the Governor. The location determination provides the legal basis for implementation at the regency level. The implementation stage is conducted by the Buleleng Regency Land Office through a team led by the Head of the Land Office and comprising relevant subject-matter specialists and the village heads of the affected villages to ensure procedural compliance.

Land in Sawan Village is predominantly used for perennial crops, such as durian, cloves, and coconut, as well as paddy fields, as recorded in the nominative list based on the inventory of land acquisition objects. Buildings, including villas and cattle sheds, were also recorded. These detailed inventory data provide an important basis for the appraisal team in determining fair compensation based on actual field conditions.

Mechanism for Determining Compensation Amounts

The appraisal team determines the value of compensation payable to entitled parties for both physical and non-physical losses, as summarized in the assessment scheme presented in Table 1. Physical losses include land, buildings, and plants.

Table 1. Compensation assessment scheme for land, buildings, and plants

Object	Physical Components	Non-Physical Components
Land	Land area; rights status	Land premium; solatium/emotional compensation; BPHTB; PPAT fees; waiting period
Building	Type of building; number of buildings; depreciation	PPAT fees; business loss; demolition costs; religious ceremony costs for demolition; waiting period
Plants	Type of plants; number of plants	BPHTB; PPAT fees; waiting period

The market approach is used to value land by reference to the fair transaction value of comparable land in the same location. This approach is intended to ensure that compensation reflects prevailing market prices and that entitled parties do not incur economic losses (Divianto, 2022). For buildings, the cost approach estimates the cost of reconstructing equivalent structures based on the type and quantity of the buildings, while accounting for depreciation. Depreciation is therefore considered in determining the fair value of buildings at the time of appraisal.

For plants, the market approach is applied by multiplying the total number of plants by the unit price of comparable crops. This method recognizes plants as productive assets capable of generating income. Unlike buildings, which are subject to depreciation, plant valuation does not include a depreciation component because plants are living productive assets whose economic value depends on their type, condition, and productive capacity.

The appraisal process considers not only physical assets but also non-physical losses and other intangible consequences arising from the loss of land. Non-physical components associated with land include premiums, emotional loss or solatium, BPHTB (Land and Building Rights Acquisition Duty), PPAT fees, and compensation for the waiting period between appraisal and payment. For the loss of a home or ancestral land held for a long period, an additional 15% of the land value is provided as compensation for emotional loss. This

approach is consistent with the principles of humanity, justice, benefit, and welfare underlying Law No. 2 of 2012.

For buildings, non-physical losses may include emotional loss, depreciation-related premiums, loss of business income, transaction fees, demolition costs, and ceremonial costs associated with building demolition. The inclusion of ceremonial costs reflects the appraisal team's recognition of local Balinese cultural values, which may attribute spiritual significance to land and structures, including shrines or *pelinggih*. The compensation scheme therefore seeks to account not only for material assets but also for relevant social and spiritual values.

The appraisal results show considerable variation in compensation amounts. According to the validation letter issued by the Buleleng Land Office, the highest compensation received in Sawan Village amounted to Rp3,943,405,779, while the lowest was Rp28,780,569. This variation reflects differences in land area, vegetation, and structures. The findings indicate that compensation was assessed individually and proportionately, according to the characteristics of each affected parcel.

Timing of Compensation Payment

Compensation is paid in accordance with Article 41 paragraph (2) of Law No. 2 of 2012 when the release of land rights is executed. In practice, however, certain administrative or legal constraints may prevent direct payment, requiring the compensation to be deposited with the court through a consignment mechanism (Kustiani et al., 2025). The Head of the Buleleng Land Office, Agus Apriawan, explained: *"Consignment occurred for two main reasons. First, six parcels belonged to entitled parties who were absent during the release process and had not appointed a representative. Second, six other parcels were subject to legal seizure or were used as bank collateral."*

A total of 12 parcels were therefore subject to consignment. This indicates that administrative and legal constraints, rather than rejection of the compensation value, were the primary reasons for the use of this mechanism. The Head of Sawan Village, Nyoman Wirya, strengthened this explanation, stating: *"Overall, the community preferred cash compensation. Consignment occurred mainly because some residents lived outside Sawan Village, so the funds were deposited with the court."*

These statements indicate that consignment was primarily associated with technical and administrative circumstances rather than dissatisfaction with the compensation amounts. In such cases, entitled parties may still access the compensation after fulfilling the relevant court procedures. The mechanism therefore serves to protect the rights of affected parties despite administrative or legal constraints (Meckelburg & Wardana, 2024). Overall, the findings do not indicate that consignment resulted from rejection of the assessed compensation values.

Table 2. Nominative list of compensation recipients

Nomor Unit	PIHAK YANG BERHAK		NIS	TANAH					RUANG ATAS DAN RUANG BAWAH		BANGUNAN		TANAMAN		BENDA LAIN YANG BERKAITAN DENGAN TANAH		pembebanan hak atas tanah/fiducial	Perkiraan dampak dari rencana pembangunan	Ket
	Pemilik	Menguasai/menggarap/menyewa		NIB	Letak	Luas Alas Hak (M2)	Luas yang diberikan (M2)	Status Tanah	Surat Tanda Bukti/Alas Hak	HM/ Sarusun/ Lainnya	Jenis	Jumlah	Jenis	Jumlah	Jenis	Jumlah			
	a. Nama b. Tempat / Tgl Lahir c. Pekerjaan d. Alamat e. NIK.NG. KTP	a. Wama b. Tempat /Tgl Lahir c. Pekerjaan 2. Alamat e. NIK.NG. KTP			a. RT/RW b. Desa c. Kecamatan			MUR/LT/ NTMA/ Lainnya	sertifikat/ girli/letter c data jual beli lainya		a. rumah tinggal b. rumah mulia c. rumah toko d. rumah kantor		a. tahunan b. musiman		a. saluran air b. saluran telepon c. saluran gas d. dan lain-lain				
1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21
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Compensation Utilization Patterns

The utilization of compensation varied according to occupational background. Among the farmers interviewed, most used their compensation to purchase new agricultural land, while some diversified into non-farm assets. Made Terimana, who received IDR 1.3 billion, invested in a boarding house in Denpasar, stating, *"The remainder was saved and distributed to relatives."* The boarding house now generates approximately IDR 2.5 million per month. Ketut Wirasa, who received IDR 250 million, established a motorcycle workshop for his son, explaining, *"The land was built on and used for my child's workshop business."* The workshop generates approximately IDR 150,000 per day.

Cening Murdhita, who received IDR 565 million, purchased agricultural land planted with young avocado and durian trees, although the returns remain limited. He explained, *"For avocado, each harvest yields around 50 kg at IDR 15,000/kg ... durian is contracted for IDR 2.5 million per year."* He further noted that *"the land was only purchased and planted three years ago."* Other farmers, such as Cening Liartha, who received IDR 600 million, and Nyoman Wirya, who received IDR 720 million, used their compensation for purposes such as house renovation or transfers to their children and therefore did not generate new income from the funds. Cening Liartha stated, *"The remainder was distributed to children and relatives."*

Among the entrepreneurs interviewed, compensation was generally used for larger investments. I Putu Ardhika, who received IDR 3 billion, purchased rice fields and invested in a villa, generating IDR 6 million per harvest from the rice fields and IDR 90 million per year from the villa. Ketut Sulandra's son, who received IDR 3.3 billion, diversified the compensation into rice fields, rambutan land, rental property, and a plot used for medical practice, together generating approximately IDR 129 million per year. He stated, *"The rice fields produce 1.2 tons per harvest, sold for IDR 6 million ... the villa is rented yearly for IDR 90 million."* I Gede

Darmayasa, who retained IDR 625 million after the compensation was divided among family members, purchased rice fields, although the harvest is primarily consumed by the household. He explained, *"Usually, the rice is used for daily needs, so there is no fixed income from the land."*

Among the civil servants, Ir. Cening Kardi, who received IDR 3.747 billion, invested in a boarding house that generates approximately IDR 20 million per month and a decoration business that can generate up to IDR 300 million over a two-month period. He noted, *"If I receive a commission to decorate a house, the income can reach IDR 300 million in two months."* Nyoman Sepira, who received IDR 1.017 billion, purchased agricultural land and deposited the remaining funds, while earning relatively limited returns from cloves of approximately IDR 2.5 million per harvest. He explained, "The income is still small because the clove trees have only recently begun to bear fruit." I Gede Gara, who received IDR 160 million, used the compensation for a house down payment and therefore generated no additional income from the funds.

The detailed utilization patterns are presented in Table 3.

Table 3. Compensation utilization patterns and income outcomes

No	Occupation	Name	Compensation (million IDR)	Compensation Utilization	Monthly Income (million IDR)
1	Farmer	Cening Murdhita	565	Purchase of agricultural land	0.21 (irregular)
2	Farmer	Made Terimana	1,300	Boarding house investment	2.5
3	Farmer	Nyoman Wirya	720	Transfer to children	-
4	Farmer	Made Sika (son)	1,370	Land purchase	-
5	Farmer	Ketut Wirasa	250	Land purchase and establishment of a repair workshop	4.5
6	Farmer	Ketut Gelgel (son)	650	Purchase of dry land and a vehicle	2.25
7	Farmer	Cening Liartha	600	House renovation	-
8	Farmer	Ketut Sukadana	1,000	Purchase of agricultural land	-
9	Farmer	Ketut Suartha	547	Purchase of dry land	-
10	Entrepreneur	I Putu Ardhika	3,000	Purchase of rice fields and villa investment	7.5
11	Entrepreneur	Made Sutarjana	1,050	Purchase of rice fields and investment in a blacksmith business	9
12	Entrepreneur	Cening Sedaka	250	Purchase of agricultural land	1.67
13	Entrepreneur	Ketut Sulandra (son)	3,300	Purchase of agricultural land and property investment	10.75
14	Entrepreneur	Gede Mandyasa	720	House construction	-
15	Entrepreneur	I Gede Darmayasa	625	Purchase of rice field)	-
16	Civil Servant	I Gede Gara	160	Land purchase	-
17	Civil Servant	Nyoman Sepira	1,017	Purchase of agricultural land and bank deposit	0.21 (irregular)
18	Civil Servant	Ir. Cening Kardi	3,747	Land purchase, boarding house investment, and decoration business	>20

Overall, entrepreneurs and civil servants with relatively stable existing incomes were more likely to invest their compensation in rental property or business expansion. Farmers, by contrast, generally faced longer waiting periods before obtaining returns when investing in perennial crops. Some farmers also used their compensation for house renovation or transfers to family members, thereby reducing the proportion available for income-generating investment.

When the data are disaggregated by occupational background and compensation amount, distinct patterns emerge among the 18 informants. Recipients of relatively large compensation amounts generally invested in income-generating assets such as boarding houses, villas, rental properties, or diversified business activities. Recipients of medium-sized compensation showed more varied outcomes. Farmers who purchased productive agricultural land did not necessarily obtain immediate cash income, particularly when the produce was consumed by the household or when perennial crops had not yet reached productive maturity. By contrast, recipients who diversified into non-farm assets were more likely to generate regular returns.

Recipients of relatively small compensation amounts generally had more limited opportunities to generate substantial new income, although there were exceptions. Ketut Wirasa, for example, received IDR 250 million but invested in his son's workshop, which generated approximately IDR 4.5 million per month.

Across the occupational groups, civil servants and entrepreneurs with pre-existing stable incomes appeared more able to convert compensation into assets with relatively short payback periods, such as rental properties and boarding houses. Farmers, in contrast, predominantly invested in agricultural land, particularly land planted with perennial crops that may require several years before producing substantial returns. This creates a "transition gap" during which households may remain economically vulnerable despite having received substantial compensation. The findings therefore suggest that the relationship between compensation value and subsequent welfare outcomes is mediated by occupational background and pre-existing income stability.

Post-Acquisition Welfare Findings

Interviews with 18 informants from different occupational backgrounds, including farmers, entrepreneurs, and civil servants, were conducted to assess the post-acquisition welfare conditions of entitled parties affected by land acquisition for the Danu Kerthi Dam in Sawan Village. The findings were classified and analyzed using welfare indicators from Statistics Indonesia (BPS), supplemented by information obtained from the village head. The results are summarized in Table 4.

Welfare outcomes varied across occupational groups, as shown in Table 4. Entrepreneurs and civil servants generally experienced stable or increasing incomes, relatively favorable nutritional conditions, and greater asset diversification. Farmers also showed favorable outcomes in education and housing, but some faced a "transition gap" associated with the three- to five-year maturation period of perennial crops. Although formal baseline data were unavailable, retrospective accounts suggest that most households perceived improvements in their welfare, particularly related to their children's education and housing conditions.

Nevertheless, less visible forms of vulnerability remained. These included nutritional constraints among some lower-

income households relying on public health services and the limited short-term resilience of farmers awaiting returns from newly established perennial crops. Such vulnerabilities may not be fully captured by standard BPS indicators but remain relevant to understanding welfare during the post-acquisition period.

Table 4. Post-acquisition welfare outcomes by occupational group (n = 18)

BPS Indicator	Farmers (n=9)	Entrepreneurs (n=6)	Civil Servants (n=3)
Health and Nutrition	Mixed. Informants with stable agricultural or non-farm income, such as Made Terimana, reported adequate nutrition, while some households relying on public health services reported unmet needs.	Generally good. Entrepreneurs using private clinics reported adequate nutrition, while those relying on public health services showed more varied outcomes.	Good. All three had stable salaries. Two used private clinics and reported adequate nutrition, while one used civil servant health insurance and also reported adequate nutrition.
Education	All nine farmers financed their children's education through at least senior high school; five also financed university education.	All six entrepreneurs financed their children's education through senior high school; four financed university education.	All three civil servants financed their children's education through senior high school; two financed university education, including medical education.
Employment	No unemployment was reported. All remained engaged in agriculture, while two diversified into non-farm assets, including a boarding house and a workshop.	No unemployment was reported. Three generated new rental income from villas, boarding houses, or rental property, while two shifted to farming as either a primary or secondary occupation.	No unemployment was reported. Primary employment remained unchanged, while two generated additional income from assets or businesses, including a boarding house, land, and a decoration business.
Consumption Level	Mixed. Some households reported increased income, while others experienced temporary declines during the transition to new agricultural investments. Most reported higher expenditure levels that remained manageable.	Generally increased. Most reported higher income following business diversification, although those transitioning into farming experienced temporary declines.	Stable to increased. All three were able to meet higher expenditures, supported by salaries and, in some cases, additional income from newly acquired assets.
Housing	All nine lived in permanent, self-owned houses. Access to clean water was obtained either through the village water supply system or from water sources on their own land.	All six lived in permanent, self-owned houses. One also purchased an additional house in Singaraja.	All three lived in permanent, self-owned houses. One purchased a house in Denpasar using compensation toward the down payment.
Poverty (Basic Needs)	All nine were able to meet basic food needs, either through their own harvests or purchases.	All six were able to meet basic needs.	All three were able to meet basic needs.
Overall Vulnerability	Highest among the three groups. Farmers investing in perennial crops faced a transition gap of approximately three to five years before obtaining substantial returns. Some allocated the compensation to house repairs or family transfers rather than income-generating investment.	Generally low. Most had stable or increasing income from diversified assets, although those who shifted toward farming remained temporarily vulnerable during the transition period.	Low. Stable salaries provided a safety net, while additional income-generating assets strengthened household resilience.

Informal *Gotong Royong* in Post-Acquisition Support

In addition to the BPS welfare indicators, the study identified informal manifestations of *Gotong Royong* as a coping mechanism following land acquisition. Some of the 18 informants explicitly reported sharing compensation funds with extended family members. Made Terimana, a farmer who received IDR 1.3 billion in compensation, stated, *"The remainder was saved and distributed to relatives."* Cening Liartha, who received IDR 600 million, used IDR 150 million for house repairs and distributed the remaining IDR 450 to children and relatives.

Ketut Gelgel used part of his compensation to finance a *Ngaben* cremation ceremony for his deceased father, which reflected a collective family and ritual obligation. Nyoman Wirya transferred all of his compensation to his children, who subsequently covered his daily living expenses. These practices are consistent with traditional *Gotong Royong* values that emphasize solidarity, reciprocal support, and collective ritual obligations rather than individual accumulation.

However, this informal safety net has limitations. Its effectiveness depends on the availability of adult children, extended family members, or other close relatives who are able to provide support. Households without such networks may not have access to the same form of assistance. Although none of the 18 informants interviewed in this study fell into this category, its absence from the sample should not be interpreted as evidence that such households do not exist.

Reliance on family transfers may also reduce the resources available for productive investment. For example, Cening Liartha distributed IDR 450 million to children and relatives rather than investing the funds in income-generating assets. This pattern is consistent with Marhayati's (2021) observation that *Gotong Royong* is experiencing "cultural entropy": its underlying values remain present, but its social functions may be weakening or becoming increasingly selective. In households without strong kinship networks, the forms of informal *Gotong Royong* observed in this study—such as sharing compensation with relatives and receiving support from adult children—may therefore be unavailable.

The absence of such households from the sample may also reflect the limitations of snowball sampling identified earlier. Socially isolated households with weaker community networks or those experiencing greater difficulties may have been less likely to be referred or willing to participate.

DISCUSSION

Community Welfare in the Danu Kerthi Dam Land Acquisition

Land acquisition for public infrastructure often creates tension between development objectives and the welfare of entitled and affected communities. The Danu Kerthi Dam project in Buleleng Regency presents an important case because the acquisition process was relatively harmonious and appears to have had generally positive effects on the welfare of compensation recipients. This discussion is structured around the key mechanisms and contextual factors shaping welfare outcomes and responds to the three explanatory research questions posed in this study: (RQ1) under what conditions land acquisition produces social harmony; (RQ2) why and under what conditions compensation encourages productive utilization; and (RQ3) whether compensation contributes to long-term resilience.

The Danu Kerthi project can be assessed across three dimensions of success: procedural and social acceptance, which was relatively high; welfare restoration, which was moderate to high; and long-term resilience, which remained conditional, particularly on the availability of post-payment assistance.

Under What Conditions Does Land Acquisition Produce Social Harmony?

In their study of Laos, Magliocca et al. (2022) found that land deals tend to produce "zero-sum" outcomes involving "winners and losers" and that financial compensation alone does not necessarily improve community welfare. Similarly, research on the Logung Reservoir in Kudus reported negative effects in terms of community anxiety, horizontal and vertical conflict, declining income, and livelihood disruption. The findings from Danu Kerthi, however, reveal a different pattern. The establishment of task forces involving village heads and the participatory discussion of compensation values helped minimize the potential for conflict.

These findings support the argument of Magliocca et al. (2022) that social embeddedness, expressed through compensation arrangements combined with employment opportunities and access to infrastructure, can increase the likelihood of positive income effects. Thus, social harmony in the Danu Kerthi project appears to have been supported by three conditions: (1) the establishment of multi-actor task forces involving village heads as legitimate local representatives; (2) recognition of non-physical losses, including the costs of customary ceremonies, demonstrating sensitivity to local cultural values; and (3) transparent deliberative processes that enabled meaningful community involvement in compensation decisions. These conditions help explain why the Danu Kerthi project did not experience the prolonged conflicts associated with infrastructure projects relying primarily on formal procedural compliance.

Why and Under What Conditions Does Compensation Encourage Productive Utilization?

A key finding of this study is that compensation was often used for productive and long-term purposes, including investment in education, land, rental property, and business development. The data suggest two mechanisms. First, compensation amounts, ranging from IDR 28 million to IDR 3.9 billion, were in some cases sufficiently large to enable substantial investments that might otherwise have been hard for rural households to finance. Second, recipients who faced less immediate consumption pressure because they had other sources of income or family support were better positioned to invest compensation in longer-term assets.

However, productive utilization varied according to occupational background. Entrepreneurs and civil servants with relatively stable income streams were more likely to invest in villas, boarding houses, rental properties, or business expansion. Farmers, by contrast, tended to reinvest in agricultural land and therefore faced longer waiting periods before receiving returns, particularly when investing in perennial crops.

The findings also indicate that compensation may support human capital investment. Ten of the 18 informants were able to finance university-level education for their children. This suggests that compensation can function as a means of strengthening longer-term household capacity. In addition, some occupational shifts between agricultural and non-agricultural activities indicate efforts to diversify livelihoods and reduce exposure to economic uncertainty.

Does Compensation-Based Land Acquisition Produce Long-Term Resilience?

The findings also reveal challenges during the post-acquisition transition period. Farmers who invested in fruit trees and other perennial crops had not yet achieved optimal returns because the plants had not reached full productive maturity and agricultural prices remained volatile. This situation illustrates a "transition gap" between receipt of compensation and livelihood recovery, during which households may remain vulnerable despite having received substantial compensation.

Does compensation therefore guarantee long-term resilience? The findings suggest that the answer is conditional. Resilience is more likely when compensation is invested in assets with relatively short payback periods, such as rental properties and boarding houses, or in human capital, such as education. It is also more likely when post-payment assistance is available to bridge the transition gap. In the absence of such support, farmers relying on perennial crops may experience prolonged economic uncertainty. This finding reinforces the importance of the five-step approach to post-payment intervention proposed by Esteves et al. (2025), which includes livelihood promotion, business support, and social protection.

The Danu Kerthi case refines existing references on land acquisition and welfare restoration. Consistent with Magliocca et al. (2022), positive outcomes appear to depend on social embeddedness, expressed in this case through multi-actor task forces and recognition of non-physical losses. The findings also support Gross (2007), who emphasizes that procedural justice, including transparency, participation, and accountability, is as important as distributive justice in shaping community acceptance.

At the same time, the Danu Kerthi case challenges the assumption that large-scale infrastructure projects inevitably result in conflict and impoverishment, as illustrated by more conflictual cases such as Yogyakarta International Airport and the Bener Purworejo Dam (Edita, 2024; Nugroho & Kurniawati, 2024). Unlike projects in which formal compliance did not resolve underlying social tensions, Danu Kerthi achieved relatively high levels of social acceptance because compensation extended beyond market value to recognize emotional and customary losses.

This study makes two analytical contributions to the literature. First, it introduces the concept of a "transition gap," referring to the period between receipt of compensation and effective livelihood recovery. This period may be overlooked when compensation is evaluated only at the point of payment. Second, the study provides empirical evidence that informal *Gotong Royong* can function as a short-term social safety net, while also demonstrating its limitations. These include the exclusion of households without strong kinship networks and the potential reduction of resources available for productive investment. These limitations strengthen the case for more formalized post-payment assistance.

The findings suggest that the affected communities may continue to require protection, business assistance, livelihood support, and community empowerment after compensation has been paid. Empirically, the study identified informal *Gotong Royong* as a post-acquisition coping mechanism. Some households shared compensation funds with extended family members, as illustrated by Made Terimana and Cening Liartha, while others used part of their compensation to meet collective religious obligations, such as the *Ngaben* ceremony financed by Ketut

Gelgel. The practices functioned as short-term social safety nets, particularly where adult children were able to support elderly parents.

However, these informal arrangements also have limitations, as suggested by Marhayati's (2021) concept of "cultural entropy." Family transfers may reduce the capital available for productive investment. Furthermore, households without strong kinship ties may be excluded from this form of support. Third, informal family assistance does not address the technical needs of farmers transitioning to perennial crops, who may require agricultural extension services, business guidance, or other forms of structured livelihood support rather than family transfers alone.

The *Gotong Royong* approach represents an important element of Indonesia's cultural heritage and offers a valuable framework for post-acquisition support (Mundayat et al., 2022; Suwignyo, 2019), including through a collective entrepreneurship paradigm based on cooperation (Masyhari Makhasi et al., 2025). This paradigm conceptualizes entrepreneurship as a participatory process grounded in social solidarity, shared value creation, and sustainability, and operationalized through four pillars: supply chain, market, quality, and branding (Yasin et al., 2025). Compensation alone is insufficient to ensure sustainable land acquisition. Long-term welfare requires organized post-project support. Accordingly, both central and local governments should incorporate principles of economic independence and *Gotong Royong* while remaining responsive to Bali's distinctive socio-cultural context.

Building on these empirical observations, and acknowledging the limitations of informal *Gotong Royong*, this study proposes a formalized Global Gotong Royong (G2R) paradigm as a framework for post-payment assistance. Unlike informal family-based sharing, G2R is conceived as a structured approach to collective entrepreneurship that emphasizes social solidarity, shared value creation, and sustainability across four pillars: supply chain, market, quality, and branding (Masyhari Makhasi et al., 2025; Yasin et al., 2025). Operationally, G2R would comprise six interrelated mechanisms: post-payment mentoring, cooperative business development, community-based monitoring, shared livelihood-restoration funds, financial literacy support, and multi-stakeholder assistance.

To strengthen its implementation, two additional mechanisms are proposed. First, G2R should be integrated with village economic institutions, such as *BUMDes* and cooperatives, to manage shared livelihood-restoration funds and coordinate mentoring activities. Second, local governments, in collaboration with the National Land Agency, should conduct long-term welfare monitoring every two to three years to assess post-acquisition outcomes and identify households requiring additional support. Fair and sustainable land acquisition should therefore not end with the payment of compensation. Long-term welfare requires structured post-project assistance that complements, rather than replaces, existing informal support networks.

Based on the empirical findings, the relative success of the Danu Kerthi Dam project cannot be attributed to a single factor but rather to several interconnected strategies. Returning to the three research questions, RQ1 shows that social harmony was supported by credible governance through multi-actor task forces, meaningful participation in the assessment of non-physical losses, and socio-cultural sensitivity through the recognition of ritual costs. RQ2 indicates that productive utilization was more likely when compensation amounts were

sufficient to overcome liquidity constraints and when recipients had stable alternative sources of income, although farmers generally experienced a longer transition gap. RQ3 shows that long-term resilience remains conditional and may require structured post-payment assistance, for which the Global Gotong Royong paradigm is proposed as a possible framework.

These conclusions are grounded in the empirical evidence rather than being purely normative. First, procedural legitimacy was reflected in the establishment of multi-actor task forces involving village heads and Land Office personnel, as well as in the transparent inventory process undertaken by *Satgas* A and B and confirmed through interviews with the Head of the Buleleng Land Office and affected residents. Second, meaningful participation was reflected in the recognition of non-physical losses, including traditional ceremony costs, as shown in Table 1. Several informants regarded this recognition as an indication of cultural respect. Third, household adaptive capacity was evident in the patterns of compensation utilization: entrepreneurs and civil servants invested in rental properties and business expansion, while some farmers diversified into non-farm assets, such as Made Terimana's boarding house and Ketut Wirasa's workshop. Fourth, the need for continued economic monitoring is not itself an empirical finding but a policy lesson derived from the observed "transition gap" among households investing in perennial crops, some of whom remained vulnerable three to five years after land acquisition.

The Danu Kerthi experience therefore suggests that social harmony can be supported through credible leadership, meaningful participation, economic adaptation, and continued monitoring of post-acquisition welfare.

CONCLUSION

This study concludes that land acquisition for the Danu Kerthi Dam was implemented through a relatively transparent and inclusive appraisal and compensation process. Its principal theoretical contribution is to demonstrate that successful land acquisition for public infrastructure depends not only on procedural compliance and fair compensation but also on post-payment livelihood support.

These generally positive findings should nevertheless be interpreted carefully. The study has several limitations, including possible social desirability bias in face-to-face interviews, unobserved vulnerabilities among farmers experiencing the perennial-crop transition gap, the possible exclusion of households without strong kinship networks from informal support systems, the absence of formal baseline data, and reliance on retrospective recall.

The project combined market-based valuation of physical assets, including land, buildings, and perennial crops, with consideration of non-physical and cultural losses, thereby strengthening the basis for procedural and distributive justice. Many entitled parties used compensation to acquire productive or long-term assets, e.g., agricultural land, rental property, residential property, and diversified business ventures. However, the outcomes were not uniform across all households.

The effects on community welfare were multidimensional. Compensation contributed to improvements in education, housing, asset ownership, and income-generating prospects. Some households were also able to invest in education and diversify their livelihoods. At the same time, the study identified a critical "transition gap" among households shifting toward long-term agricultural investment, particularly those investing in perennial crops whose returns had not yet fully materialized.

The Danu Kerthi experience indicates that social harmony in land acquisition is more likely when compensation is treated not merely as a financial payment but as part of a broader process of socioeconomic recovery and empowerment. Informal *Gotong Royong* practices among affected households provided valuable short-term support through family transfers, reciprocal assistance, and collective obligations. However, these arrangements were insufficient to address long-term investment needs and did not necessarily extend to households without strong kinship networks.

Accordingly, the study recommends institutionalizing a structured post-project framework for social protection, livelihood restoration, and entrepreneurship support. A formal Global *Gotong Royong* paradigm could extend existing cooperative values by incorporating structured business assistance, technical training, financial literacy, institutional coordination, and long-term welfare monitoring. Such a framework should be designed inclusively so that assistance does not depend solely on informal family networks. For infrastructure policymakers, this means that land acquisition governance should extend beyond project completion to include structured and sustained livelihood-restoration measures.

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