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Water Ethics for sustainable Rural Community-Based Water Service System in Malang Regency, Indonesia

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ABSTRACT

The sustainability of rural-based water services for villagers is typically determined by technical operational factors of the service. These factors encompass the production and distribution of water to end users, the management of financial records, and the availability of managerial competence, environmental awareness, and social community support. The objective of this qualitative study is to elucidate the factors that contribute to the sustainability of the village water service system administered by the water users association. The data presented herein was collected through a combination of in-depth interviews, participant observation, and documentation with informants from the management of the association and the head of the Association of Water Users in Malang City. The findings revealed that the management of water users associations prioritizes the utilization of water for the social welfare of residents, particularly the economically disadvantaged, over the pursuit of financial gain for the institution. This approach is exemplified by the exemption from water pipe installation and monthly subscription fees for houses of worship, along with the provision of discounts ranging from 25 to 50 percent for economically disadvantaged households seeking to install water pipes. Moreover, the management establishes a more inexpensive subscription rate in comparison to that of the local government-managed drinking water company. Moreover, a portion of the profits from water management are allocated to enhance the social welfare of residents. The ethical norm of water for the common good is a determining factor in the sustainability of water services. This commitment is further reinforced by the values of sincerity, volunteerism, and a genuine concern for enhancing the well-being of residents.

Keywords: Commodity, Common Good, Commons, Water Ethics, Water Users Association.

1. INTRODUCTION

The general public, as well as local communities, have come to understand the water scarcity crisis as a result of global population growth, which leads to conflict. This understanding, however, is misguided and hazardous in nature, as it attributes the scarcity to natural phenomena rather than recognizing the role of human activity in exacerbating the issue. Water scarcity is not merely a matter of diminishing natural resources; it is also closely related to the inequalities that shape access to and control over water, as well as the manner in which humans manage water resources. This understanding, therefore, underscores the necessity for a nuanced approach to water governance that acknowledges the intertwined dynamics of population growth, environmental resources, and social justice (Heuër & Ehrensperger, 2015). This is a misrepresentation of the truth, as water scarcity is not exclusively a natural phenomenon; it is frequently a consequence of anthropogenic interventions, arising from inadequate water management and land use practices (Hanasz, 2014). Consequently, the scarcity of water necessitates the establishment of adequate water supplies. The solution to the problem of water scarcity is the production of water through the addition of water infrastructure. However, this misconception is frequently endorsed by World Bank engineers and bureaucrats. In essence, the prevailing issue is not a water crisis per se, but rather a crisis of understanding and mismanagement of water resources (Iyer, 2007). Water governance necessitates an ethic that aims to integrate scientific knowledge with cultural meanings and perceptions. Furthermore, issues related to conservation, sanitation, and health promotion are interconnected with those of justice, equity, and human rights. Additionally, sustainability and biodiversity are intertwined with democratic governance, law, and policy (Jennings et al., 2009). Achieving this objective entails the practical implementation of a values approach in water governance, which facilitates the accommodation of local cultural value perspectives. This, in turn, clarifies the orientation of water resources

governance. This approach is often neglected. The "command-and-control" governance model, characterized by its prescriptive nature, has been criticized for its tendency to supersede the values of participation and social learning, leading to fragmentation and conflict. A similar oversight is evident in market-based governance, which often disregards ecological perspectives (Groenfeldt & Schmidt, 2014).

A water morality ethic is predicated on the premise that water constitutes the foundation for sustaining the social determinants and human capacities that underpin and enhance health and well-being. Water is not merely a "resource" in the conventional sense, but rather, it is a pivotal element in the intricate web of planetary life. Consequently, the focal point of water ethics does not lie in the study of water in isolation, but rather in the examination of the water cycle and its interconnectedness with the terrestrial and atmospheric realms, as well as the intricate relationship between water, land, and biotic communities. Water is dynamic, elusive, determined, and a fertile source for human moral and spiritual imagination. This conception is shared and applied by nearly all indigenous cultures and traditions worldwide. Water's inherent connection to fertility and life is a fundamental aspect of the religious and metaphysical worldviews of nearly all peoples (Jennings et al., 2009). The establishment of a universal code of conduct for water governance is imperative for the collective responsibility and sustainability of global water resources. This code necessitates the consensus of all actors, including individuals, associations, non-governmental organizations (NGOs), public entities, governments, and international organizations. This ethic calls for the adoption of a participatory approach to resource planning and management, engaging users, civil society organizations, and government agencies. In essence, this approach aims to ensure that the management of water resources is a matter of collective responsibility, particularly for the poor and vulnerable populations who are entitled to water that is sufficient, safe, acceptable, physically accessible, and affordable for personal and household use (Groenfeldt, 2009).

Water ethics can be comprehensively defined as a normative framework that guides actions with ramifications for water resources. It can also be understood as a concern for the value of nature or the regulation of best management practices in natural resource policy. This concern provides an evaluative framework that governs appropriate behavior (Brown & Schmidt, 2010). This morality ethic is indispensable and is applied in water governance. The efficacy of this ethical framework has been demonstrated through historical analysis, which indicates that the rise and fall of civilizations is contingent on their adherence to the principles of water ethics. The ascent of ancient Egyptian civilization, for instance, can be attributed to the systematic planning, management, and engineering of irrigation, as well as the observance of values such as cooperation, participation, equitable distribution, solidarity during floods, and the principle of river and other sacred value preservation (Hefny, 2009).

The ethics of water governance according to Jennings et al. (2009) includes six principles, namely, equal respect for human dignity, equality and proportionality, solidarity, common good, responsible management, and inclusive and deliberative participation. A similar view was expressed by Hefny (2009), who identified eleven principles. First, human dignity; water availability goes hand in hand with human life, because those who do not get water will not get life. Second, participation of all people; involving the poor in water planning and management by addressing gender and poverty issues across sectors. Third, solidarity; integrated water management that takes into account the integration between upstream and downstream aspects of water management. Fourth, human equity; all people must receive what they need in an equitable manner. Fifth, the common good; water is a common good, and without good water management, human potential and dignity are degraded. Sixth, stewardship; respect for the wise use of water. Seventh, transparency and universal access to information; access to information that is easily understood and open to all parties. Eighth, inclusiveness; taking into account the interests of all people living in the catchment area. The interests of minority groups, the poor and other disadvantaged sectors must be protected. Ninth, empowerment; the need to facilitate participation in planning and management, which goes beyond providing opportunities for consultation; it is a matter of social and environmental justice, based on three important concepts: equality, equity and intergenerational access. Tenth, partnerships that help different communities or interest groups understand each other's needs. Eleventh, a focus on local interests that allows for practical solutions to real problems. In summary, a water ethic addresses questions of social and environmental justice based on three important concepts: equity, justice and and intergenerational access.

The above description illustrates that, according to Bartholomew (2010:271-2), everything in the universe (nature) is a single unity or one. Water, as one of the elements of the universe, is therefore considered a source of consciousness and a spiritual mediator of the unity of the universe. Water is the common denominator of all living

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things, the medium of communication within and between organisms. Through water, the intricate and complex web of life is organized and orchestrated to create interdependence among all forms of living things. Bartholomew, (2010:266) therefore regards water as a model of sustainable holism of life. Sustainability here should be interpreted as an organism that has a sustainable system that allows it to keep all energy in a whole that creates balance; surplus energy from one part of the organism is used by another part. Sustainable living is the real application of the basic principles of ecology, which according to Capra (1994:10) are interdependence, recycling, partnership, flexibility and diversity. Thinking within the framework of a complex system is therefore a historical necessity in order to achieve sustainable human life. Capra, (2007:11-12) sees this framework as requiring a holistic view of the world; each element of life and nature in terms of interconnectedness, interdependence and context. The radical breakthrough in thinking is: from the parts to the whole; from viewing nature as a material object to interconnectedness (from objects to relationships); from objective knowledge to contextual knowledge; from quantity to quality. In short, life and living systems are non-linear or interrelated. This is, of course, contrary to modern traditions of thought, which are in a linear framework of thinking that sees things only in terms of causal sequences. Based on quantum theory, Capra (1977:68) asserts the fundamental unity of the universe. This means that all elements of the universe, including living things, are interconnected and related to each other through a complex network of relationships between diverse parts of the whole. In short, Water is neither inert entity nor a commodity. But it is a a "conscious living being" that is full of spirituality and a sense of divinity. Water ethics is therefore a necessary requirement for water governance.

Article 33 of the Constitution of the Republic of Indonesia stipulates that water, the earth and everything contained therein shall be controlled by the state to be harnessed for the greatest benefit of the people. The state's control of water is intended to guarantee that water, which is a public good, can provide equitable benefits to all citizens. As a commons, water cannot be owned and controlled by non-state actors. If this commons is freely released, it will lead to what Hardin, (1968:1244) calls the tragedy of the commons: "freedom in the commons brings ruin to all". Water resources must be jointly managed by government, the private sector and citizens. To ensure the availability of safe and clean water services to communities, especially in rural areas, the government, with the help of international donor agencies, has launched community-based water supply schemes. These programs include the Water and Sanitation for Low Income Communities (WSLIC) and the Community-Based Water Supply and Sanitation (PAMSIMAS) programs. Community-based drinking water supply systems outside of these two programs are also included. CPRG data (2018:2) recorded 12,254 community-based water systems through PAMSIMAS with a total population of 15.6 million people in 33 provinces and 365 districts. The government aims to build 20,000 drinking water supply systems (Sistem Penyediaan Air Minum/ SPAM) with a target population of 22.1 million people by 2020.

This is in line with the National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional /(RPJMN) 2015-2019, which targets 60 percent of the population to be served by SPAM and the rest to be served by local government-owned enterprises (Perusahaan Daerah Air Minum PDAM) pipeline systems. However, SPAM faces several internal and external problems. If left unaddressed, these problems will threaten the sustainability of community-based drinking water services. (Al'Afghani et al., 2019) explained that there are four problems commonly experienced by SPAM, namely (i) lack of a formal legal institutional status, (ii) unclear service standards, (iii) lack of asset security, and (iv) limited financial security. External issues include the availability of water resources, which is related to the awareness and commitment of community members to environmentally sustainable behavior and conservation. Other issues include the regulation of water legislation. Therefore, this qualitative research seeks to describe how the administrators of the Water Users Association (Himpunan Penduduk Pengguna Air Minum HIPPAM) Mangga Dua Wonokerso Pakisaji Malang Regency are formalizing water ethics as a mechanism to sustain the community-based water service system.

2. MATERIALS AND METHODS

This research uses qualitative research methods, or often referred to as naturalistic research, which seeks to describe conditions and events in a natural setting; it views social reality as something holistic, complex, dynamic, full of meaning, and interactive relationships between symptoms (Sugiyono, 2019). It seeks to construct social reality and cultural meanings that focus on interactive events and processes so that their authenticity can be revealed (Neuman, 1999). The research data collected through in-depth interviews, participant observation, and documentation aimed to

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provide an overview of how *Mangga Dua* Water Users Association (WUA) institutionalized water ethics to sustain the rural community-based clean water service system. The informants of this research consisted of the management of WUA; Suhadi (chairman), Bambang Wiyono (secretary); Mulyono (coordinator of Community Empowerment Institutions/Lembaga Keswadayaan Masyarakat (LKM) - Institutions established by PNPM); and Adi Arif Rendra (chairman of Malang City Water Users Association).

3. RESULT AND DISCUSSION

3.1. PNPM-MP Drives the Birth of HIPPAM

The National Program for Community Empowerment—Self-Reliant Urban (Program Nasional Pemberdayaan Masyarakat Mandiri Perkotaan, PNPM-MP) is a nation-wide managed poverty alleviation initiative that adopts a community-based or community-driven development approach. This program considers the community as the primary driver of development, believing that they are best equipped to address their problems based on their local values and social institutions. To effectively combat poverty, positive values such as honesty, care, sacrifice, and sincerity must be deeply embedded in community behavior. According to PNPM, the root cause of poverty lies in the erosion or absence of these moral values within the community, rather than external factors such as limited access to economic resources or low education levels. These values are intended to guide every phase of program management, including planning, implementation, monitoring, and evaluation (Effendy, R., 2015).

In 2010, Wonokerso Village, categorized as a water-scarce area where most residents rely on irrigation canal water for their livelihoods, received a PNPM block grant of Rp.31,500,000 ($1.937,44 USD) for the development of a clean water supply system. Following the program's guidelines, a Community Self-Help Group (*Kelompok Swadaya Masyarakat*) named *Mangga Satu* was formed to oversee and implement the project. This funding is clearly insufficient to cover the costs of the project, which include water drilling, the construction of water reservoirs, electrical installations, and the purchace of a 6-square-meter plot of land. With the spirit of community togetherness and self-reliance, the project was successfully completed at a total cost of Rp. 114,034,475.($6,956.10 USD). The funds were allocated for constructing boreholes, purchasing pumps and water meters, installing electrical systems, acquiring a 6-square-meter plot of land, building permanent concrete reservoirs, and purchasing three master meters. The residents agreed to establish Himpunan Penduduk Pengguna Air Minum (HIPPAM) / Water Users Associations *Mangga Satu* in Wonokerso Hamlet as the institution responsible for managing clean water services for 290 households.

Inspired by the success of *Mangga Satu WUA* , the villagers, through a deliberation meeting (Rembug Warga Desa) led by the Board for Community Self-Reliance (Lembaga Keswadayaan Masyarakat, LKM) *Karsa Santosa*, decided to undertake a similar project in Segenggeng Hamlet in 2011. In compliance with PNPM-MP regulations, the development cost was Rp47,500,000 ($2,897.50 USD). A new project implementation committee, KSM *Mangga Dua*, was formed to supervise project implementation.

The water drilling in Segenggeng was eventually completed at a cost of Rp72,000,000 ($4,392.00 USD). This amount excluded the purchase of a 4x4-square-meter plot of land, which was generously donated by Suhadi, a resident who also served as the head of KSM and later on *Mangga Dua* WUA . The project was further supported by a loan from the operational earnings of *Mangga Satu* WUA. By July 2011, the *Mangga Dua* water drinking facilities was operational and serving residents' households, initially using temporary plastic reservoirs. After six months of operation, the community-based clean water service institution managed to construct a permanent concrete reservoir at a cost of Rp 37,500,000, (2,306 USD).with a capacity of 15,000 cubic meters. HIPPAM Mangga Dua now provides clean water services to 365 households, spanning ten Neighborhood Associations (Rukun Tetangga) and two Community Associations (Rukun Warga).

3.2. Water Ethics Implementation

Unlike government programs such as PAMSIMAS and WSLIC, which specialize in community-based clean water supply and provide financial assistance along with professional guidance for planning, implementation, supervision of construction activities, institutional development, and financial management, *Mangga Dua* Water Users Associations operates without such 'luxuries.' All operational management activities are conducted independently, through self-teaching, without the involvement of professionals or financial support from the village government.

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Despite these challenges, the management team worked tirelessly, driven by a shared commitment to providing clean water services to the community. Suhadi, the chairman, who generously donated a 4x4-square-meter plot of land, along with other administrators, remained on standby 24 hours a day to address issues such as pipeline repairs, maintenance of facilities, electrical installations, clean water reservoirs, and submersible water pumps, as well as other technical matters.

All technical work was carried out through trial and error, combined with social learning facilitated by their networks. For their dedication, Suhadi and the administrators initially received an incentive of Rp 250,000 (15.34 USD) per month, which was then increased to Rp 500,000 (30.67 USD) starting in early 2018.

As an expression of environmental concern, discussions about environmental issues frequently arise in the local public sphere, with the community's environmentally friendly actions demonstrating their ecological and environmental literacy. The community increasingly exhibits awareness and concern for environmental challenges, supported by the knowledge, skills, and motivation necessary to address current issues and prevent future problems (McBride, 2013, p. 3). However, community-based water management extends beyond the preservation and maintenance of the environment. It also encompasses WUA management's worldview regarding the essence and philosophy of water, as well as, most importantly, the ethics and morality of its management. According to Wolf (2012), managing water involves spiritual, ethical, and moral dimensions, which go beyond the technicalities of professionally and rationally managing institutions.

In this context, Adi Arif Rendra, Chairman of the Malang City Association of Water Users Association, emphasizes that community-based drinking water management must be founded on the values of honesty, care, and sincerity. These fundamental moral principles, he asserts, should guide all aspects of water service governance carried out by WUA administrators.

"Only managers who uphold these moral values can ensure the sustainability of the drinking water service enterprise. By doing so, WUA can strengthen community social capital, fostering harmony and care, which ultimately contribute to the community's welfare. In essence, the morality of the management unites the community. Without it, WUA risks bringing harm to the community due to dishonest or corrupt management practices," he stated. He went on to share an inspiring true story about a water drilling initiative in a village in Malang City, illustrating the impact of these values in practice.

The story recounts an incident where a villager initially intended to donate a piece of land for a drinking water service. However, after witnessing groundwater gushing abundantly during drilling, he reconsidered his decision, contemplating using the water for personal economic gain. This change of heart caused the artesian well's groundwater to recede and eventually disappear. Realizing the situation, the villager decided once again to donate the land. However, fearing a repetition of his earlier actions, the *Lurah* (village head) declined his offer. Instead, the land was purchased by the *Kelurahan* (village administration), and groundwater drilling resumed. Remarkably, groundwater began flowing again.

This story reinforced the belief that HIPPAM water management must be guided by moral values aimed at the common good of the community rather than individual profit. "I require all HIPPAM managers in Malang City to allocate a portion of their income to support the poor and orphans within the service area. Only by adhering to such principles can HIPPAM achieve sustainable water management," he stated.

He further explained that mismanagement leading to WUA's bankruptcy would result in all institutional assets being seized by the state, as the community would no longer be able to manage the drinking water services. This outcome aligns with existing laws and regulations. Therefore, he emphasized that the appropriate legal structure for WUA should be an association or cooperative, rather than a business entity like a Village-Owned Enterprise (*Bumdesa*).

3.3. Social Benefit, Not Financial Gain as a Measure of Service Success

Social values, such as concern for the poor—which form the core 'spirit' of PNPM-P—are evident in the operation of clean water supply services within this institution. This commitment is particularly reflected in the tariff-setting policies. The *LKM Karsa Santosa*, as the entity responsible for the project, implemented a differentiated tariff policy for installation fees based on the household's economic capacity:

1) Poor families are exempt from installation fees.

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2) Families with middle to low economic capacity are charged installation fees ranging from 25% to 60% of the standard rate.
3) Well-off families are charged a full installation fee of Rp. 1,200,000 (73.62 USD) .

Additionally, the policy addresses water usage fees. The *LKM* established the following tariff structure:

1) The first 10 cubic meters: Rp. 1,500 (0.091 USD).per cubic meter.
2) The second 10 cubic meters: Rp. 1,750 (0.107 USD) per cubic meter.
3) The third 10 cubic meters: Rp. 2,000 (0.122 USD) per cubic meter.

A fixed usage fee of Rp. 5,000 (0.3067 USD) is also applied. These tariffs are notably lower compared to those set by PDAM Malang City, underscoring the institution's commitment to affordability and social equity.

Another key value is the spirit of volunteerism and the sincerity of the administrators in assisting fellow residents. This is evident in the lean organizational structure, which consists of a chairman, secretary, treasurer, cashier, and three water meter recorders. Despite its simplicity, the organization effectively serves 348 households. The water meter recorders receive a modest commission of Rp. 700 (0.043 USD) per household, while the team as a whole undertakes a wide range of responsibilities. These include not only organizational governance but also technical tasks such as pipe installation, pump maintenance, and addressing customer complaints regarding water services.

The administrators receive a monthly honorarium that started at Rp. 250,000 (15.34 USD) in 2011 and was only recently increased to Rp. 500,000 (30.67 USD) as of August 2018. They do not receive any additional benefits, such as exemptions from paying monthly subscription fees or communication allowances, for example. Despite these modest earnings, they continue to perform their duties with sincerity, dedicating their time, energy, and commitment to ensuring that residents have access to clean water. This selfless service underscores their dedication to the well-being of the community.

Additionally, the social responsibility of Mangga Dua WUA requires it to donate the profits generated from the management of clean water services for the community's social welfare, both in the form of funds and goods. In 2018, the organization donated a total of Rp 9,750,000 (595.24 USD) for various social purposes, which can be broken down as follows:

- Rp 500,000 (30.67 USD) to the Village Government for 17th August commemoration activities
- Rp 500,000 (30.67 USD) to the Village Government for Clean Village activities
- Rp 3,000,000 (183.15 USD) to Mr. Wawan for the construction of a simple house made from calcium silicate board material
- Rp 2,000,000 (122.68 USD) to Mr. Riyadi for house renovations
- Rp 3,000,000 (183.15 USD) to Mrs. Sulastri for the construction of a water closet and bathroom water tub
- Rp 750,000 (46.02 USD) to help repatriate a resident who was seriously ill in Papua Province.

The total donations from Mangga Satu and Mangga Dua Water User Associations (WUAs) to the community from 2011 to 2018 amounted to Rp 47,146,000. A detailed breakdown of these contributions is presented in Table 1.

Table 1: **Contributions from Mangga Satu and Mangga Dua WUA Management for Social Activities and Small-Scale Development (2011-2018)**

Activities	Total
Construction of Community Reading Park /TBM	IDR.15.000.000,- (915.15 USD)
Purchase of LCD Projector	IDR. 4.150.000,- (253.19 USD)
House Renovation in RT.11	IDR. 1.200.000,- (73.62 USD)
House Renovation in RT.03	IDR. 2.792.000,- (170.92 USD)
HIV AIDS & Drug Counseling	IDR. 650.000,- (39.92 USD)
Paving block development on Jalan. Pondok	IDR. 1.952.000,- (119.48 USD)
Small business development fund grant	IDR. 1.100.000, (67.21 USD)
Paving block development and Renovation of two houses	IDR.20.302.000,- (1,244.45 USD)
Total	IDR.47,146,000. (2,874.78 USD)

In total, the donations from Mangga Satu and Mangga Dua WUA to the community from 2013 to 2024 amounted to Rp 100.022.000 (6,134.45 USD).

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The management faced several challenges, one of which was the installation of network pipes along the edge of the highway. This required them to receive warnings from the Public Works and Public Housing Office of Malang Regency. To mitigate this, the installation work was carried out at night. Their primary focus, however, was ensuring that clean water service to customers remained a priority. According to Murta and Willetts (2014:30), their motivation stemmed from a strong sense of solidarity among residents and a commitment to achieving social welfare goals. With a social mission at heart, the management decided that the institution's legal form should be a social entity rather than a business organization. Not surprisingly, they declined the option of becoming a Village-Owned Enterprise, which is more profit-driven. This decision reflected their belief that HIPPAM's core mission is community-based water services aimed at promoting social welfare.

Recognizing HIPPAM's dependable social performance, Village Head Naryadi entrusted the management with full authority to oversee the borehole previously constructed by the Ministry of Public Works. The management plans to integrate the new water pipeline network with HIPPAM's existing system, ensuring a more resilient infrastructure that can prevent disruptions and extend clean water services to underserved residents.

3.4. Efforts to Achieve Environmental Sustainability

Environmental sustainability has been a primary concern of the LKM management since the establishment of Mangga Satu WUA in 2010. To ensure the sustainability of groundwater reserves, the LKM has implemented the following programs: (1) planting mango trees along the village road; (2) promoting a home greening movement by creating water infiltration wells and planting productive trees in each resident's yard; (3) launching a 'Healthy and Clean Living and Environmentally Friendly' campaign in collaboration with the village midwife and Pakisaji Health Center to discourage residents from disposing of waste in irrigation channels or rivers; (4) subsidizing the construction of 21 water closets for low-income residents; and (5) advocating for environmentally friendly behaviors by establishing a community-based waste management unit, which began with training on "managing waste as a blessing." Discussions about environmentally friendly attitudes and behaviors frequently take place during community meetings at the village hall and in interpersonal or group meetings, especially between administrators and residents. Another emerging discourse involves the strict limitation of land conversion, both for agricultural land and residential yards, to prevent the uncontrolled development of business and housing facilities. The village's proximity to the city of Malang and the highway to Kepanjen, the capital of Malang Regency, makes it a prime location for economic infrastructure development, including housing, factories, and warehouses. Currently, three housing complexes have been established near the Mangga Dua water reservoir complex in Segenggeng Hamlet. In response, the board plans to propose a Village Regulation (Perdes) to the Village Council (BPD) to strictly limit land conversion. This regulation should mandate that housing developments create environmentally friendly residential areas by building infiltration wells and planting trees in public and social spaces. Such a regulation on environmental conservation is crucial to ensuring the availability of raw groundwater reserves, thus safeguarding the sustainability of drinking water services.

3.5. Water Users Association as a Civil Society Organization

Structurally, HIPPAM, originally named Kelompok Swadaya Masyarakat, operates under the organizational control of LKM, an entity established by PNPM-MP responsible for program management. As a poverty reduction initiative, the program posits that poverty is often the result of a lack of moral values within the community, which in turn weakens social ties and disrupts social capital. The LKM management is thus chosen to represent the collective leadership of community members, grounded in moral values. This collective leadership structure ensures that decisions made reflect moral principles that promote social justice, thereby preventing individual political interests from undermining the program. LKM leaders are at the forefront of civil society organizations and serve as champions of moral values, consistently applying and embodying these principles in all program activities aimed at restoring social capital within the community.

The moral values emphasized by the program are clearly reflected in the management of HIPPAM. For example, the land grant of 4x4 square meters, the board's incentive of Rp 250,000 (15.34 USD) per month (which was increased to Rp 500,000 (30.67 USD) in 2019), the board's commitment to working around the clock to provide clean water services to residents without professional technical guidance, and the spirit of togetherness (gotong royong) in the construction of water reservoirs—all serve as evidence of the embodiment of these moral values. Additionally, the

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pricing of clean water services, which is significantly lower than that of Local government drinking water company, and the board's policy to donate a portion of the net profits from services to support the poor, as well as contribute to social activities and village road infrastructure improvements, further illustrate the application of moral principles (Effendy, 2014).

3.6. The Right of the People to Manage Water Resources

National natural resources, which are abundant and distributed throughout the country, must be controlled by the state to maximize their utilization for the prosperity of the people. However, alongside the private sector, the people must also be involved in managing these resources, particularly water resources. The concept of co-management, or community-based natural resource management, refers to the shared governance of resources between the state and local communities. This approach ensures the sustainability of resource management.

Brosius et al. (1998:158) argue that local communities are often more committed to sustainable natural resource management than the state or corporations. This is because they possess a deeper awareness and understanding of local ecological processes and practices, enabling them to manage these resources more effectively using local values and wisdom. Water is a community resource, and it should be governed in the "public interest in accordance with the righteous principles of the greatest good for the greatest number for the longest time" (Groenfeldt & Schmidt, 2014:227). Collective management of water by communities is not only a right but also a necessity.

Bakker (2007:441) outlines three reasons for community involvement in water governance. First, the management of water services by the state or corporations can fail, and community participation can help ensure sustainable management. Second, water has cultural and spiritual dimensions that are often closely tied to local institutions and norms, which state or private companies may struggle to implement. Third, water is a flowing resource owned by local people, and its use directly impacts them. Through their spirit of togetherness, communities can guarantee the protection and sustainability of resource management.

The perspectives of informants regarding water and community-based water governance sharply contrast with the contents of Law No. 17 of 2019 on Water Resources. This law represents an ideological divide between proponents of water as a commons and those who view water as a commodity, as well as between those who see water as a human right and those who see it as an economic good. The law marks an era of water privatization, which poses a significant threat to the sustainability of community-based water systems (Afghani & Mova, 2018). It is also suspected of complicating the recognition of Indigenous Peoples and neoliberalizing nature, with the primary aim of transforming natural resources from common ownership into tradable goods (Bakker, 2007:433).

According to Yunita et al. (2014), the World Bank's international capitalist influence plays a role in this privatization process through initiatives like the Water Restructuring Adjustment Loan (WATSAL). A 2003 study by the International Consortium of Investigative Journalists found that most World Bank loans in recent years have required the transfer of public water systems to the private sector (Barlow & Clarke, 2002).

The debate between these opposing camps, as described by Bakker (2007:441), can be framed as follows: Proponents of water as a commons view water as a public good, while those who favor water as a commodity consider it an economic good. Pricing is determined by full cost recovery in the pro-commodity camp, while opponents argue that water should be affordable as a government public service. The pro-commons camp believes that the government should control water governance, while the pro-commodity camp sees the market as the overseer. Finally, the goal of resource management should be justice and a just life, according to one camp, while the other camp prioritizes efficiency and the security of natural resources. In conclusion, the management of water resources by the community ensures that water remains a shared, sustainable resource, while opposing views emphasize privatization and market-driven governance.

4. CONCLUSION

Mangga Dua Water Users Association, which emerged from the PNPM-MP program, embodies the moral values inherent in community-based development. These values are central to the management of water services, with a clear institutionalization of water ethics in the organization. The commitment to serving the community is reflected in the dedication of HIPPAM administrators, who ensure the total distribution of drinking water to the poor. Their sincerity and dedication are exemplified by their 24-hour service and their ability to address various technical challenges.

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Water Users Association administrators view water not merely as a public good but as a resource with social and spiritual significance. The water they manage is intended to benefit all citizens, not as a means of economic gain. As such, they strongly reject proposals to turn water services into a village-owned enterprise, seeing water as a form of social capital that bonds and unites community members.

Moreover, they believe water should be used for the greater good and social welfare, especially for those who cannot afford it. Consequently, net profits generated from the water service are donated to various social causes, such as road infrastructure projects, the renovation of poor residents' homes, the establishment of Community Reading Gardens, the construction of water closets, and other community welfare initiatives. These acts of kindness send a strong message that water should serve the social good, rather than being commodified.

In addition to their social contributions, WUA administrators actively promote environmental sustainability and healthy living behaviors. These themes are frequently discussed in local public spaces, such as the village's annual deliberative meetings (Rembug Warta Tahunan), and in informal conversations among administrators. Efforts to preserve the environment and ensure the sustainability of groundwater resources are ongoing. In fact, there is a proposal to the village government and the Village Council (BPD) to issue a Village Regulation on environmental conservation and healthy living practices.

As water becomes increasingly scarce and valuable—often referred to as "blue gold" due to high demand—its price continues to rise. Unfortunately, this market-driven approach threatens the right to water as a human right, particularly in light of laws that could undermine community-based water supply systems like Water Users Association. History has shown that attempts to privatize water have failed, as evidenced by the Constitutional Court's decision to annul Law No. 4 of 2007 on Water Resources.

The business model adopted and implemented by WUA can be classified as eco-social entrepreneurship (Heuër & Ehrensperger, 2015) or Social and Eco-Friendly Entrepreneurship (Starchenko et al., 2021). This model aligns economic objectives with social and environmental goals, ensuring that water remains a shared resource for the benefit of the community.

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