

## Clean Water Donations as a Strategy to Improve MSME Welfare in Aek Tuhul Village: A Qualitative Participatory Impact Assessment

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**Abstract**— This study aims to analyse the role of clean water donations as a strategic instrument in improving the welfare of MSMEs through production efficiency and poverty alleviation using the *maqāṣid al-syari‘ah* approach, particularly *hifz al-nafs* and *hifz al-māl*. The method used is qualitative research based on field research through in-depth interviews and focus group discussions (FGD) with 10–20 informants, which are analysed using Participatory Impact Assessment (PIA). The results show that the clean water charity model based on communal well *waqf*, which is built on four main pillars, can be strengthened through the use of digitalisation. Digitalisation not only serves as a means of financial recording and reporting, but is also developed in the form of a water charity distribution application that facilitates online donations, real-time monitoring of water distribution, and mapping of beneficiaries. This mechanism enhances transparency, public participation, and governance efficiency. The sustainability of the model is supported by a cross-subsidy scheme, whereby MSME contributions guarantee free access to clean water for the poor, while surplus funds are allocated for microfinance and MSME training. This research contributes to a blueprint for the development of non-APBD-based clean water infrastructure based on inclusive economics and sharia at the village level.

**Keywords:** Clean Water Charity, Culinary Msmes, Digital Charity Application, Productive Waqf, Sharia-Based Inclusive Economy

### 1. INTRODUCTION

Clean water is a basic necessity that plays a strategic role not only in the quality of life of the community, but also in the sustainability of economic activities, particularly Micro, Small and Medium Enterprises (MSMEs). The availability of adequate clean water is an important prerequisite for maintaining production efficiency, product quality and business continuity, especially in the culinary sector and food processing businesses. Aek Tuhul Village is one of the villages in Padangsidimpuan Batunadua District with a population of 2,070. Based on village data, around 6% of the population is involved in MSME activities. The Padangsidimpuan City Government has shown its concern for the development of MSMEs in this village, among others through the inauguration of the Cassava Processing Production House in 2022 and training to increase the capacity of human resources for MSME actors since 2021. However, the development of MSMEs in

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Aek Tuhul Village still faces structural obstacles, one of which is limited access to clean water.

The availability of clean water in Aek Tuhul Village is still very limited and unable to optimally meet household needs and productive activities. This condition has a direct impact on increasing the operational costs of MSMEs, reducing product quality, and limiting production scale. A clean water donation programme managed independently by the community has emerged as an alternative solution, and some MSMEs have taken advantage of this facility. However, limitations in capacity, governance, and distribution mean that the benefits of this programme are not yet optimal in supporting the sustainable growth of MSMEs. A number of previous studies have discussed the relationship between the availability of clean water and community welfare, as well as the role of water donations as a form of social philanthropy. However, studies that specifically examine clean water charity as an instrument for empowering MSMEs at the village level, especially those that integrate a participatory approach and the use of digitalisation in the management of charity distribution, are still very limited. This study aims to fill this gap by analysing clean water charity not only as a social initiative but also as a technology-based economic empowerment model.

Based on the above description, the purpose of this study is to analyse the role of digital-based clean water donations in improving the welfare of MSMEs in Aek Tuhul Village. The research questions asked include: (1) what is the condition of clean water access for MSME actors in Aek Tuhul Village, (2) how is digitalisation utilised in the distribution and management of clean water donations, and (3) to what extent does the integration of clean water donations and digitalisation contribute to increasing the productivity and sustainability of MSMEs.

## 2. THEORETICAL REVIEW

### 2.1 MSME Welfare Theory

The welfare of Micro, Small, and Medium Enterprises (MSMEs) is a multidimensional concept that goes beyond mere financial profitability. In a theoretical framework, MSME welfare is defined as an optimal condition in which these business entities are not only able to maintain their sustainability but also have a significant positive impact on owners, workers, and the local community as a whole [1]. This perspective integrates economic indicators, such as asset and turnover growth, with socio-cultural indicators, such as job satisfaction, income stability, and the role of MSMEs in preserving social values. Therefore, the MSME welfare framework requires a holistic analysis, recognising that the true success of MSMEs is a combination of economic independence and social responsibility [2].

Approaches to understanding SME welfare often refer to human capital and social capital theories. Improved welfare is highly dependent on investments made by owners and the government in the managerial and technical capacities of SME actors (human capital), which directly affect production efficiency and innovation capabilities [3]. Meanwhile, social capital, which includes networks of trust, partnerships, and relationships with stakeholders (government, banking), serves as a catalyst that facilitates access to critical resources, from capital to markets. The integration of strong human capital and extensive social capital support forms the foundation for the resilience and growth of MSMEs, taking them from a stage of subsistence to sustainable prosperity [4].

In the context of development economics, the theory of MSME welfare must also consider the role of financial inclusion and technology-based empowerment. Financial inclusion, which ensures that MSMEs have fair and affordable access to formal banking services, is a fundamental prerequisite for unlocking growth potential [5]. When MSMEs can take advantage of working capital loans or other investment instruments, they are in a better position to expand and mitigate risk. Along with the development of digital technology, the use of online platforms and e-commerce has become a strategic means of

expanding market reach, reducing transaction costs, and increasing operational efficiency, all of which contribute to increased net profits and economic stability for business actors [6].

Philosophically, MSME welfare can be seen as a manifestation of equitable and inclusive development. The existence of prosperous MSMEs is a key indicator of the government's success in distributing economic opportunities and reducing inequality [7]. When the SME sector grows strongly and inclusively, it creates jobs, reduces poverty, and strengthens the middle class structure in a country. Thus, policies oriented towards improving the welfare of SMEs are not only economic investments but also crucial social investments to create long-term socio-economic stability and realise the ideals of sustainable national development [8].

## 2.2 Access to Clean Water and Economic Productivity

The relationship between guaranteed access to clean water and increased economic productivity is a crucial topic in development economics, highlighting how environmental health transforms into physical and human capital. The availability of safe and adequate water sources is an irreplaceable basic input in almost every production process, from agriculture and manufacturing to service provision. In the agricultural sector, for example, clean water is an absolute prerequisite for efficient irrigation, which directly affects crop yields and product quality, thereby increasing farmers' incomes and strengthening national food security. Failure to guarantee access to clean water, on the other hand, forces business units to allocate limited resources to water procurement or purification, which inherently increases operational costs and reduces overall competitiveness [9].

Furthermore, access to sanitation and clean water has a profound impact on human capital through public health channels. Inadequate or poor-quality water is directly correlated with an increase in waterborne diseases (such as diarrhoea and cholera), resulting in high absenteeism among workers and students. This creates a double burden on the economy: on the one hand, there is a loss of production output due to lost workdays, and on the other hand, there is an increase in healthcare costs that must be borne by individuals, families, and the state. Conversely, investment in adequate clean water infrastructure will reduce morbidity rates, improve overall health levels, and effectively increase human capital accumulation, as a healthier population is a more productive population with a longer economic life expectancy [10].

In the context of MSMEs, particularly those engaged in the food, beverage, and tourism services sectors, access to clean water is not only a matter of cost, but also a matter of product quality and regulatory compliance. Food and beverage products produced with water whose cleanliness is not guaranteed will face the risk of market rejection and legal sanctions, which could ultimately destroy the reputation and sustainability of the business. Therefore, for MSMEs, collective investment in a standardised water supply system is a differentiating factor that allows them to access broader and higher value-added markets, including export markets that require strict hygiene and sanitation standards. Thus, clean water serves as a driving factor that transforms small businesses into credible and competitive economic entities [11].

Macroeconomically, increased access to clean water can lead to significant time savings and labour redistribution, especially in rural or suburban communities. When the valuable time previously spent by women and children collecting water is redirected to productive activities, such as education, formal employment, or micro-business development, there is accelerated economic empowerment and reduced gender inequality. Economic models show that every dollar invested in water and sanitation can generate up to six dollars in economic returns through increased productivity. This confirms that clean water is not merely a basic need, but a strategic investment instrument capable of

driving the economy from the micro level to the achievement of sustainable development goals (SDGs).

The Indonesian government issued a implementing regulation, namely Government Regulation No. 16 of 2005. In its implementation, the government, through the Ministry of Public Works, announced that water companies, namely PDAMs in Indonesia, would not only produce clean water but also improve it into drinking water. In addition to PDAM, drinking water infrastructure development activities that have been implemented include the Community-Based Drinking Water and Sanitation Programme (PAMSIMAS). The objective of Electoral Dynamics and State Administrators as Implementation of the 1945 Constitution is to improve the achievement of the SDGs for underserved communities, including low-income communities in rural areas, especially coastal areas, to create sustainable clean drinking water and sanitation services. The provision of clean drinking water for rural communities is guided by regulations on drinking water supply systems, namely Government Regulation No. 122 of 2015 [12].

### **2.3 Islamic Philanthropy and Water Waqf**

Islamic philanthropy is based on the theological principles of *ta'awun* (mutual assistance) and *takaful* (mutual responsibility), whereby wealth is not viewed as the absolute property of individuals, but rather as a trust from God in which there are rights for those in need. This concept has given rise to various formal instruments such as Zakat, Infaq, Sadaqah, and Waqf (ZISWAF), which act as institutionalised and systematic mechanisms for wealth redistribution. Philanthropy in Islam is not merely an incidental act of generosity, but a socio-economic obligation that aims to achieve distributive justice and tackle poverty structurally. Thus, the role of Islamic philanthropy goes beyond short-term assistance; it seeks to create an ecosystem in which every individual has the opportunity to achieve a dignified and independent life [13].

In the context of economic development, Islamic philanthropy instruments serve as alternative sources of funding that are non-debt and altruistic in nature. Zakat, for example, is a mandatory instrument aimed at empowering *mustahik* (recipients) until they transform into *muzakki* (zakat givers), thereby creating a positive cycle of economic independence [14]. Meanwhile, Infaq and Sadaqah offer greater flexibility in funding socio-economic projects, including those related to basic infrastructure and public services. Professional and transparent philanthropy management by zakat institutions has made this sector a key player in promoting social inclusion and supporting government programmes, especially in areas that are difficult to reach through market intervention or state budgets.

Water waqf is a special form of Islamic philanthropy that focuses on providing clean water resources and sanitation as waqf for the public interest. In the early days of Islam, waqf was only understood as the use of places of worship in the form of mosques and prayer rooms. The most fundamental change in waqf took place during the development of Islam in Medina. At that time, waqf was very diverse in terms of both purpose and form, and its orientation had shifted from purely religious interests to social interest [15]. In Islamic law, waqf is defined as the maintenance of ownership rights over assets and the permanent transfer of their benefits for charitable purposes (*fi sabilillah*). In the context of water, this means that wells, water treatment plants, pipe networks, or land allocated for spring conservation are converted into assets that cannot be sold or inherited, but whose results (in the form of clean water) can be enjoyed free of charge or at affordable rates by the wider community on a sustainable basis. This model ensures that vital services such as water are accessible to the most economically vulnerable groups, who are often underserved by conventional market mechanisms.

The advantage of water waqf lies in its sustainable nature. Unlike ordinary donations that are used up in one go, waqf creates an endowment fund (monetary/productive waqf) whose profits are used for the maintenance and development of water infrastructure. For

example, rental income from productive waqf assets can be allocated to cover the operational costs of water pumps or to purchase new filter equipment. With this mechanism, water waqf offers a long-term solution to address water scarcity and sanitation issues, minimising dependence on government subsidies or sporadic donations. Therefore, water waqf acts as a social business model oriented towards the welfare of the people, bridging the gap between infrastructure needs and capital availability.

Water waqf is a strategic and documented implementation of the grand ethos of Islamic philanthropy, which transforms the religious command to share into productive assets that serve the public in perpetuity. Islamic philanthropy provides the ideological framework, moral incentives, and legal-formal basis for the practice of waqf, ensuring that noble intentions to do good can be realised in the form of physical infrastructure that can be utilised across generations. Without the spirit and massive support of Islamic philanthropy, waqf instruments, including water waqf, would not have the legitimacy and adequate fund mobilisation to carry out large-scale projects that require long-term commitment [16].

This connection is also practical in addressing development issues. Modern Islamic philanthropy has developed fund-raising mechanisms (such as collective cash waqf) that enable people from various economic backgrounds to participate in water waqf projects, rather than relying solely on large donors. Collaboration between Islamic philanthropic institutions and professional nazhir (waqf managers) ensures that water waqf funds are allocated efficiently, meet technical standards, and are directed to the communities most in need, thereby effectively connecting individual spirituality with the achievement of collective socio-economic development goals.

#### **2.4 Maqashid Sharia and Economic Empowerment**

Maqashid Shariah literally means the objectives of Islamic law, which is the main philosophical and ethical framework in Islamic law. This concept goes beyond detailed fiqh rules to reveal the fundamental purpose of each legal provision, namely to achieve maslahah (public interest) for humanity and reject mafsatadah (harm). Ushul fiqh scholars classify Maqashid into five or six basic needs that must be protected, known as al-dharuriyat al-khams (five primary needs), namely the protection of religion (din), life (nafs), intellect ('aql), lineage (nasl), and property (mal). This framework serves as a normative compass, ensuring that every policy, including in the economic sphere, must contribute to the fulfilment and strengthening of the five essential pillars of human life [17].

In the discipline of Islamic economics, Maqashid Shariah acts as the philosophical foundation for all economic activities. The principle of protecting wealth (hifzh al-mal) not only guarantees individual property rights, but also emphasises the importance of fair circulation and distribution of wealth, rejecting hoarding (iktinaz) and exploitative transactions (such as usury or excessive gharar). Furthermore, the protection of life (hifzh al-nafs) is expanded to include guarantees of a decent standard of living, health, and economic security. Thus, Maqashid Shariah provides an ethical matrix that challenges conventional economic models that focus solely on profit maximisation, encouraging the formulation of policies that are more oriented towards a balance.

Economic empowerment is a multidimensional process that aims to increase the capacity of marginalised individuals or groups so that they can independently access, control, and utilise economic resources. This concept goes beyond charitable assistance or passive fund transfers; at its core, empowerment involves the transfer of knowledge, skills, and access to support structures (such as capital, markets, and information) that enable these groups to create sustainable economic value. The success of empowerment is measured not only by increased income, but also by the empowerment subjects' increased control over strategic decisions that affect their economic lives, which often involves strengthening social capital and increasing participation in the public arena.

Effective economic empowerment focuses on creating an ecosystem conducive to entrepreneurial growth and increased production capacity. This includes vocational training relevant to market needs, provision of soft and sustainable microfinance access, and facilitation of integration into larger value chains. In the context of development, empowerment is often targeted at vulnerable groups, such as MSMEs, female heads of households, and indigenous peoples, to address structural inequalities that have historically limited their opportunities. Thus, economic empowerment acts as a proactive intervention strategy that transforms individuals from passive aid recipients into active and independent agents of economic change.

The relationship between Maqashid Syariah and Economic Empowerment is symbiotic and fundamental, whereby Maqashid Syariah sets normative objectives, while economic empowerment provides operational methodologies. The main objectives of Sharia, particularly the protection of life (hifzh al-nafs) and property (hifzh al-mal), directly require the implementation of economic empowerment measures. According to Setyaningrum (2024), the objectives of Sharia Economics in addressing Economic Maqasid in Indonesia are based on the concept of maqasid syariah, which aims to achieve falah (prosperity) in the context of macroeconomics [18]. The protection of life requires a guarantee of a decent life, which is directly realised through the ability of individuals to earn a living and meet their basic needs without dependence. Economic empowerment, with a focus on capacity building and independence, is a practical tool for realising this guarantee of hifzh al-nafs.

Specifically, economic empowerment inspired by Maqashid Shariah will ensure that the process of capacity building and wealth distribution is carried out in a fair, ethical and sustainable manner. For example, financing programmes for MSMEs must avoid usury practices (which violate hifzh al-mal and hifzh al-nafs because they are exploitative) and instead use profit-sharing or partnership schemes. Thus, Maqashid Shariah serves as an ethical filter and assessment framework for every empowerment programme, ensuring that every economic activity undertaken is not only effective in increasing income but also in line with the principles of Islamic distributive justice and holistically contributes to the welfare of individuals and society [19].

## 2.5 Conceptual Framework of the Study

This study is based on the assumption that limited access to clean water is a major obstacle to the productivity and sustainability of MSMEs in Aek Tuhul Village. The provision of clean water donations based on communal well waqf serves as an alternative solution to improve access. Furthermore, the use of digitalisation in the management of water donations strengthens the effectiveness of the programme through increased transparency, accountability, and community participation. The combination of clean water donations and digitalisation of governance is expected to have an impact on the sustainable improvement of MSME welfare.

Conceptually, the relationship between variables in this study can be summarised as follows:

Table 1. Conceptual framework of the study

No	Main Concept	Role in the Study	Expected Impact
1	Clean Water Charity ( <i>Sedekah Air Bersih</i> )	Productive Islamic philanthropy instrument	Improved access to clean water
2	Digitalization of Charity Management	Governance and distribution enabler	Increased transparency and efficiency
3	Access to Clean Water	Key production factor for MSMEs	Cost reduction and productivity improvement
4	MSME Welfare	Outcome variable	Business sustainability and income improvement

Source : Processed data (2025)

This conceptual framework forms the basis of the analysis in assessing how the integration of clean water alms and governance digitalization contributes to improving the welfare of MSMEs at the village level.

### 3. RESEARCH METHODS

This research is a qualitative-descriptive study using a case study approach. This approach is used to gain an in-depth understanding of the implementation and impact of the clean water charity programme on MSME actors in the specific and actual social context of Aek Tuhul Village. Qualitative-descriptive research allows researchers to describe empirical realities based on the direct experiences of informants [20]. The research subjects included MSME actors and stakeholders who were directly involved in or affected by the clean water charity programme. Informants were selected using purposive sampling based on the following criteria: (1) MSME actors who had been using clean water for at least six months; (2) business actors from various sectors (culinary, laundry, and small-scale production); (3) programme organisers; (4) the surrounding community; and (5) the government/related agencies and academics as supporting informants. The number of informants is planned to be 10–20 people, with the final determination based on data saturation.

Data collection was carried out systematically through: (1) In-depth interviews to explore experiences, perceptions, and changes felt after programme implementation. (2) Direct observation to observe the conditions of clean water utilisation and MSME operational activities. (3) Focus Group Discussions (FGDs), as the primary means of applying the PIA method to explore and map the impact of the programme in a participatory manner. (4) Documentation studies, including programme reports, archives, and other supporting documents. (5) Field notes, to record the dynamics of the research process and interactions with informants.

Data analysis is conducted in stages and integrated with Participatory Impact Assessment (PIA) as the main framework for impact analysis. The stages of analysis include: (1) PIA Preparation and Planning. Researchers identify the objectives of the impact assessment, determine the participant groups (MSME actors), and develop discussion guidelines and participatory instruments. (2) Organisation and Reduction of Initial Data. Data from interviews, observations, and documentation are transcribed, classified, and selected based on their relevance to the research focus. (3) Participatory Data Collection (FGD–PIA). FGDs are conducted with MSME actors to identify the types of impacts of the clean water donation programme (economic, social, and operational). (4) Participatory Analysis and Impact Categorisation. Informants jointly map, discuss, and prioritise the most significant impacts, which are then categorised and coded by researchers. (5) Data Presentation and Interpretation. The results of the analysis were presented in the form of descriptive narratives and thematic matrices, accompanied by interpretations of the meaning of the impacts based on the participants' experiences. Conclusion and Validation of Results The final findings were revalidated with the informants through feedback discussions to ensure consistency between the analysis results and the participants' actual experiences.

To ensure data quality and validity, this study applied: (1) Triangulation of sources and methods, by comparing the results of interviews, observations, focus group discussions, and documentation. (2) Credibility, through member checks at the PIA result validation stage. (3) Reliability, through the preparation of an audit trail documenting the entire research process. (4) Confirmability, through discussion of research results with relevant academics or experts.

## 4. RESULTS AND DISCUSSION

### 4.1 Result

#### 4.1.1 Models or strategies for clean water charity to support the welfare of MSMEs

Micro, Small, and Medium Enterprises (MSMEs) in Aek Tuhul Village, Padangsidimpuan, face significant limitations in accessing and utilising clean water. Based on the identification of these problems, this study aims to formulate specific strategies to overcome the obstacles faced by MSMEs in Aek Tuhul Village. The formulation of these strategies is as follows:

Table 2. Models or Strategies for Clean Water Charity to Support the Welfare of MSMEs

NO	STAGE	KEY PILLARS	KEY ACTORS	MECHANISMS & TECHNOLOGIES
1.	Identification & Commitment	MSME Business Operators	MSME (Aek Tuhul Village), Nazhir	Identification of clean water needs and priority locations that guarantee access for the poor.
2.	Funding & Promotion	Collaboration & Funding	Community (Wakif), Nazhir	Fundraising: Promotion of alms/donations in Aek Tuhul Village through QRIS/cash for operational and cross-subsidies.
3.	Implementation & Innovation	Technological Innovation	Nazhir, Technology Vendor	Construction of Communal Clean Water Facilities (Wakaf Sumur) with a system that is easily accessible to all groups.
4.	Utilisation & Impact	Impact & Development	MSMEs, Underprivileged Groups	Economic Impact (MSMEs): Improved product quality, efficiency, and profit margins. Social Impact (Underprivileged Groups): Free/Highly Subsidised Access to Water, reduced cost of living, and improved health.
5.	Sustainability	Recycling Cycle (Maintenance, Subsidies & Development)	MSMEs, Local Managers	Maintenance and Cross Subsidies: Community contributions/donations (via QRIS/Cash) are used for routine maintenance. Enhanced Benefits for the Poor: These funds also ensure full subsidies or fee exemptions for the poor, thereby guaranteeing their sustainable access to clean water (assistance for the poor is a top priority). SME Development: Surplus funds are also used for training and micro-capital for SMEs.

Source : Processed data (2025)

The table above outlines the structured steps for providing sustainable clean water, with a primary focus on empowering Micro, Small, and Medium Enterprises (MSMEs) and providing assistance to the underprivileged. The programme begins with Phase I: Identification and Commitment, where MSMEs in Aek Tuhul Village and waqf administrators (Nazhir) work together to determine locations that are in dire need of clean water, ensuring that access for the underprivileged is a priority. Next, in Phase II: Funding and Promotion, funds are collected from the community (Wakif) through alms or donations, either in cash or digitally (QRIS). These collected funds will be used for operations and cross-subsidies. Phase III: Implementation and Innovation is the physical construction phase. The managers (Nazhir) and technology vendors build Communal Clean Water Facilities (Wakaf Sumur) designed with innovative systems to be easily accessible to all levels of society. Once the facilities are operational, Phase IV: Utilisation

and Impact begins to take effect. The impact of the programme is divided into two: Economic Impact for MSMEs, which includes improved product quality, efficiency, and profit margins; and Social Impact for the poor, namely access to free or heavily subsidised water, which reduces the cost of living and improves health. Finally, Phase V: Sustainability ensures the programme runs continuously through the Feedback Loop. Contributions or donations from the community (MSMEs and affluent members of society) are used by Local Managers for routine maintenance. Most importantly, these funds also guarantee full subsidies or exemption from contributions for the poor (a top priority). If there is a surplus of funds, part of it is allocated for training and microfinance as a form of further MSME development.

#### **4.1.2 Implementation of the Clean Water Donation Strategy to support the welfare of MSMEs**

The implementation of a comprehensively formulated strategy requires a clear, structured, and accountable operational framework. The success of the clean water supply programme for MSMEs in Aek Tuhul Village is largely determined by the synergy of integrated multi-stakeholder roles.

Table 3. Role of the Village (Aek Tuhul Village Government) Village officials (village head and BPD) act as facilitators, supervisors, and guarantors of order.

NO	FOCUS	VILLAGE RESPONSIBILITY (VILLAGE OFFICIALS)	RESEARCH IMPACT
1	Legality and Licensing	Issuing Letters of Support: The village issues a Decree (SK) formalising the local Nazhir as the manager of the Waqf Well and determining strategic clean water distribution points for MSMEs and the poor	Providing a local legal umbrella for the Nazhir and binding the community's commitment.
2	Data and Validation of the Poor	Updating Data on the Poor: The village is responsible for periodically validating and updating data on the poor and submitting this list to the Nazhir.	Ensuring that the Nazhir's cross-subsidy programme is on target, so that assistance to the poor is effective.
3	Facilitation of Location & Security	Asset Security: The village is responsible for the physical security of the waqf well location and assists in resolving water use conflicts if they arise.	Ensuring the sustainability of waqf assets and preventing vandalism or misuse.
4	Local Regulations	Formulation of Village Regulations: The village formulates Village Regulations that require MSMEs to comply with water hygiene standards set by Nazhir as a condition for business permits in the village.	Improving the quality of MSME products and ensuring the health of the Aek Tuhul Village community.

Source : Processed data (2025)

Table 4. Role of Nazhir (Waqf Manager), Nazhir is fully responsible for financial, technical, and social management.

NO	FOCUS	RESPONSIBILITIES OF THE NAZHIR (WAQF ADMINISTRATOR)	RESEARCH IMPACT
1	Digital Charity Mechanism	Full Implementation of QRIS Wakaf Sumur: Registering a special QRIS for operational donations and training Nazhir members in recording and reporting digital finances from QRIS/cash proceeds.	Ensuring ease of donation and transparency of reports to donors and the public.
2	Cross-Subsidy System	Tiered Fund Management: Using MSME contributions and public donations as full subsidy funds for the poor (based on validated data from villages).	Guaranteeing free/subsidized access to clean water for the poor and improving social welfare.
3	MSME	Micro Capital Distribution & Training:	Enhancing the capacity

	Development	Allocating surplus charity funds for revolving capital programs and water hygiene training for MSMEs.	and growth of MSMEs as the backbone of the village economy.
4	Digitalization Implementation	Nazhir Must Use QRIS: Register waqf wells in the name of Nazhir/Local Manager to receive donations and regular contributions. Nazhir must install QRIS at every water point and educate the community of Aek Tuhul Village.	Ensure ease of access (24 hours) and transparency in the collection of operational funds.
5	Transparency & Accountability	Digital Financial Reporting: Nazhir is required to publish a simple cash flow report (QRIS/cash income vs. maintenance expenses) on physical notice boards and digital village platforms (e.g., chat groups).	Maintain public trust and encourage higher participation in charity from the community (Wakif).
6	Surplus Management	Establishment of Revolving Fund Accounts: Nazhir separates routine operational fund accounts from Alms Surplus Fund accounts. This surplus fund is allocated for MSME development and programs for the poor.	Ensuring that alms funds have a double impact (water services and economic empowerment).
7	Water Regulation & Quality	Tiered Contribution System & Certification: Nazhir sets tiered water contribution rates (small vs. medium MSMEs) that must be paid via QRIS. Nazhir is responsible for conducting regular water quality tests and issuing Nazhir Water User Certificates to MSMEs that comply with contribution and standard requirements.	Improving the quality of MSME products and creating a sustainable source of funding.
8	Development Allocation	Micro Capital Distribution: Nazhir, through a special management unit, distributes Surplus Alms Funds as revolving micro capital to MSMEs that have been proven to use clean water hygienically and have business development potential.	Alms funds serve as an economic stimulus, improving the welfare of MSMEs in Aek Tuhul.
9	Full Access Guarantee	Cross-Subsidy Determination: Nazhir is required to use MSME contribution funds and public donations to fully subsidize (100%) water operational costs for the poor. Access for the poor is prioritized over other interests.	Ensuring that the benefits of waqf (as a social asset) achieve their main objectives without burdening the poor.
10	Beneficiary Validation	Issuance of Clean Water Cards for the Poor: Nazhir coordinates with village officials/RT/RW to regularly collect data on the poor and issue Subsidized Access Cards.	This ensures that the program reaches its intended targets and prevents the misuse of waqf facilities by those who are financially capable.

Source : Processed data (2025)

Table 5. The Role of the Community (Wakif, Users, and Supervisors)

NO	FOCUS	SOCIAL RESPONSIBILITY	RESEARCH IMPACT
1.	Sustainable Financial Support (As a Wakif)	Active Participation in Digital Almsgiving: The general public, regardless of economic status, is encouraged to regularly donate (infaq/alm) through the QRIS or cash methods provided by Nazhir, even if the amount is small.	Ensuring the Availability of Operational Funds: Alms from the community are the main source of funds for purchasing filters, paying for pump electricity, and ensuring that the wells do not stop operating.
2.	Asset Ownership and Maintenance (As a User)	Physical Well Maintenance: The community is obliged to maintain the cleanliness and security of the waqf well	Maintaining the Lifespan of Waqf Assets: This active role reduces major repair costs and ensures that waqf assets

		facilities and to report immediately to the Nazhir or Village Officials any damage or misuse.	function for a very long time.
3.	Respecting Cross-Subsidies (Social Integrity)	Monitoring and Respecting the Rights of the Poor: Wealthy communities (who may not be MSMEs) are asked to respect the cross-subsidy system and not take water quotas allocated or prioritized for the poor.	Ensuring Social Success: Ensuring that the primary purpose of waqf as a social safety net is achieved, creating harmony and fairness in the distribution of benefits.
4.	Quality Control and Feedback	Providing Accurate Feedback: Communities proactively provide feedback to the Nazhir or the Village regarding water quality (for example, changes in taste or odor) or other technical issues.	Ensuring Water Quality: Assisting the Nazhir in maintaining clean water health standards, which is vital for MSMEs and family health.
5.	Local Promotion and Education	Waqf Information Disseminator: Communities who understand the benefits and mechanisms of alms (QRIS/Cash) act as promotional agents to neighbors or newcomers to the village.	Developing a Virtuous Circle: Encouraging more individuals to become new Waqif, increasing the total funds collected, and strengthening the model.

Source : Processed data (2025)

#### 4.1.3 Contribution of the Implementation of a Clean Water Alms Strategy to Support the Welfare of MSMEs (Sustainable Model)

The strategic implementation of this research focuses on the applied relevance and sustainability of its impact, designing the implementation of a solution to the limited clean water supply for MSMEs in Aek Tuhul Village not as a temporary technical intervention, but rather as a community-based development model that provides multidimensional contributions. This impact assessment is crucial to verify its scientific and social utility, with the explicit goal of increasing the capacity of MSMEs as drivers of the local economy, improving the welfare and participation of the community in general, and providing best practices for the Padangsidimpuan City Government in formulating adaptive and pro-people public policies. Therefore, this systematic analysis will map the Contribution of the Implementation of Research Findings quantitatively and qualitatively, covering the impact on MSMEs (through increased productivity and operational efficiency), the community (through a sense of belonging and reduced household burden), and the Padangsidimpuan City Government (through sustainable partnerships and regulations).

Table 6. Contribution to MSMEs

NO	FOCUS ON CONTRIBUTION	DETAILS OF INFORMATION PROVIDED	IMPACT ON MSME WELFARE
1.	Product Quality Improvement	Data and analysis on the direct relationship between the use of certified clean water (from Well Waqf) and improved hygiene standards and product quality for MSMEs.	This will increase product competitiveness and sales value, thereby increasing MSME turnover.
2.	Operational Cost Efficiency	Analysis of the effectiveness of cross-subsidies and the use	This will reduce production costs (water and energy)

		of energy-saving technology (Solar Pumps).	costs), which directly increases MSME profit margins.
3.	Capital Access & Training	Evaluation of the allocation model for surplus alms funds (QRIS/Cash) as a fund for hygiene training and revolving micro-capital.	This will provide access to interest-free capital and increase the human resource capacity of MSMEs for business expansion.

Source : Processed data (2025)

Table 7. Contribution to Society

NO	CONTRIBUTION FOCUS	DETAILED INFORMATION PROVIDED	IMPACT ON COMMUNITY WELFARE
1.	Communal Sustainability Model	Data on the success of QRIS/Cash-based alms and contribution mechanisms as a source of funding for well operations.	Encouraging a sense of belonging and community independence in managing waqf assets without relying entirely on external assistance.
2.	Social Security for the Poor	Analysis of the effectiveness of cross-subsidies that guarantee free access to clean water for the poor.	Reducing the economic burden on poor households and improving overall community health.

Source : Processed data (2025)

Table 8. Contribution to the Government (Padangsidimpuan City). Research provides strategic and policy input.

NO	CONTRIBUTION FOCUS	DETAILED INFORMATION PROVIDED	IMPACT ON IMPROVING PUBLIC WELFARE
1.	Public Project Replication Model	A tested model (prototype) for providing public infrastructure (clean water) outside the regional budget (funded by Waqf and community initiatives).	The government received guidance on a sustainable partnership model for replicating clean water projects in other villages, saving regional budgets.
2.	Philanthropy & Economic Integration	Clear evidence that Islamic philanthropic instruments (Waqf) can be integrated with technology (QRIS) for local economic empowerment (MSMEs) and social safety nets (Dhuafa).	Strengthening the government's role in facilitation, regulation, and collaboration with the Nazhir (Waqf Agency) to achieve the Sustainable Development Goals (SDGs), particularly clean water and economic growth.

Source : Processed data (2025)

#### 4.1.4 Research Findings

The research findings indicate that the clean water charity strategy formulated for Aek Tuhul Village forms a sustainable model in supporting the welfare of MSMEs and protecting the poor. This model consists of five main stages, namely: (1) identification and commitment, (2) funding and promotion, (3) implementation and innovation, (4) utilisation and impact, and (5) sustainability. In the identification and commitment stage, MSME actors and waqf managers (Nazhir) identify clean water needs and determine priority locations that guarantee access for MSMEs and the poor. This stage forms the

basis for social and operational agreements for the programme. The funding and promotion stage is carried out through a mechanism of alms and donations from the community (wakif), both in cash and digitally (QRIS). The funds collected are used for the operation of clean water facilities and cross-subsidy schemes. The implementation and innovation stage is realised through the construction of communal clean water facilities (wakaf wells) that can be accessed by MSMEs and the community. This system is designed to be easy to use and managed collectively.

The utilisation and impact phase shows two main results. First, the economic impact on MSMEs, in the form of improved product quality, production process efficiency, and increased profit margins. Second, the social impact on the poor, namely access to free or heavily subsidised clean water, which contributes to a reduction in the cost of living and improved health. The sustainability phase is realised through a feedback mechanism, whereby SME contributions and community donations are used for facility maintenance, full subsidies for the poor, and SME development through training and microfinance. With this mechanism, the programme does not end as a short-term intervention but operates on a sustainable basis. In addition, the research results identify a clear division of roles among multiple parties, including the village government as a facilitator and local regulator, Nazhir as the manager of waqf and finances, and the community as waqf donors, users, and social supervisors. The synergy between these actors strengthens the effectiveness of the clean water alms strategy implementation.

#### 4.2 Discussion

The findings of this study reinforce the theory of basic needs fulfilment as the foundation of economic welfare, which emphasises that access to clean water is an important prerequisite for the productivity and sustainability of MSMEs. In this context, clean water not only serves as a domestic necessity, but also as a factor of production that determines the quality and efficiency of a business. The results of the study are also in line with community-based development theory, which emphasises the importance of community participation and shared ownership of public assets. The clean water charity model in Aek Tuhul Village shows that the involvement of MSMEs, the community, and Nazhir creates a sense of belonging that strengthens the sustainability of the programme. When compared to previous studies on clean water supply and economic empowerment, these findings are similar in terms of increasing business efficiency and the welfare of small economic actors. However, the difference lies in the sources of financing and governance. Previous studies generally focused on government intervention or donor assistance, while this research confirms that Islamic philanthropy based on waqf, digitised through QRIS, can be an effective and accountable alternative financing model.

Furthermore, the integration between cross-subsidies for the poor and MSME development demonstrates a dual contribution that is rarely found in similar studies. This programme is not only oriented towards improving the economy of MSMEs, but also functions as a social safety net that guarantees access to clean water for vulnerable groups. Thus, this discussion confirms that the clean water charity strategy formulated in this study contributes conceptually and practically as a community-based sustainable development model, which is relevant for replication in public policy, particularly in efforts to improve the welfare of MSMEs and achieve sustainable development goals.

### 5. CONCLUSION

This study concludes that the clean water crisis and contamination issues faced by MSMEs in Aek Tuhul Village have a direct impact on increased operational costs, the risk of product quality decline, and loss of productive time. These problems can be overcome through the implementation of the Clean Water Alms Model based on Waqf Communal Wells as a sustainable infrastructure solution outside the APBD funding scheme. This model is able to guarantee the availability of safe and sustainable clean

water, while supporting the improvement of MSME welfare and free access to clean water for the poor through a cross-subsidy mechanism.

The main contribution of this research is the formulation of an applied model for clean water provision based on Islamic philanthropy that integrates waqf, digital technology (QRIS), and MSME empowerment into a single sustainable system. This research also provides a conceptual contribution by emphasising the role of Maqashid Syariah as a framework for evaluating economic programmes, particularly in terms of the protection of life (hifzh an-nafs) and the protection of property (hifzh al-mal), as well as demonstrating the potential of Islamic philanthropy as a social capital investment that generates double impact (economic and social).

In practical terms, the results of this study can be used as a reference for local governments in designing and replicating waqf-based clean water supply projects with community participation, emphasising the importance of legalising local Nazhir and standard water hygiene regulations for MSMEs. For Nazhir, this study confirms the urgency of transparent and digital governance and a commitment to full subsidies for the poor. For MSMEs, this model provides benefits in the form of cost efficiency, improved product quality, and access to non-usurious capital. Theoretically, this research enriches the literature on the integration of Islamic philanthropy and digital financial technology in the context of local economic development, and strengthens the use of Maqashid Syariah as an analytical approach in assessing the effectiveness of empowerment programmes.

This study has limitations in terms of its scope, which focuses on only one village, meaning that the findings are contextual. In addition, the qualitative approach used does not measure the economic impact of MSMEs quantitatively and does not observe the long-term sustainability of the programme. Further research is recommended to expand the study location in order to test the replication of the model in other regions, combine qualitative and quantitative methods to measure economic impact more accurately, and assess the long-term sustainability of the clean water waqf model, particularly in terms of governance, financing, and community participation.

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