

Rice land sustainability and agricultural financing through waqf

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Abstract

Purpose – This paper aims to formulate a waqf of rice field model combined with the mitigating risk associated with maintaining the agricultural land due to the conversion issue.

Methodology – This study used a qualitative method with a library approach by adopting a qualitative content analysis which strengthens primary data collection through in-depth interviews with experts consisting of regulators, practitioners, and academics in the fields of waqf and agriculture

Findings – The results showed that the strategy to implement the waqf of rice fields could be pursued by an internal strategy, namely optimizing and revitalizing waqf land. That had been pledged as a means of production and an external strategy through the acquisition of potential paddy fields for waqf and managed by nazhir. In implementing the proposed model, some institutional engineering is needed, namely by presenting the role of anchor companies as managers, farmer associations of driving actors, and off-takers who buy crops. It can mitigate the risk of reduced cash waqf principal and farmer financing through a holistic feasibility study, involvement of insurance/guarantor, reserving capital funds, restructured financing, blended finance schemes, and institutional strengthening.

Implications – This model expects to answer the sustainability problem of agricultural land, be a catalyst for increasing production quantity, and solve the financing issue for farmers.

Originality – This preliminary study integrated the agricultural issues with the concept of waqf and Islamic instruments strengthened by literature review and expert judgment, followed by formulating the proposed model's strategies, models, and risk mitigation.

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Introduction

In realizing food sovereignty and security as a national and global plan, the second Sustainable Development Goals (SDGs) listed no hunger (no poverty) in 2030. The Ministry of Agriculture has planned and implemented strategies to direct agricultural development as the driving force behind the national economy. It can be seen in the strategic plan of the Ministry of Agriculture for 2020-2024, namely through the target of achieving self-sufficiency in staple foods, increasing diversification of food and value-added commodities, and being competitive, as well as increasing the income of farming families. Among the efforts that are the Government's main priority to realize the above strategy is expanding the availability, ownership, and use of agricultural land as the main production factor for agricultural development (Kementerian Pertanian, 2015, 2020a).

Increasing access to land tenure by farmers is one of the main approaches in a holistic framework to improve the welfare of farmers so that they can get out of the poverty trap (Susilowati & Maulana, 2012). It is because many agricultural lands, as the main production factor, have been eroded and converted to non-agricultural land such as roads, dams, bridges, factories, health and education facilities, industrial and real estate activities (Kementerian Perencanaan Pembangunan Nasional, 2015, Kementerian Pertanian, 2015, 2020a; Ruswandi et al., 2007).

From 2014 to 2018, there was a downward trend in the amount of agricultural land, whether for paddy fields, gardens, fields, or temporary land that did not cultivate (Table 1). In the 2017-2018 period, the most significant land decrease occurred in paddy fields, especially irrigated land, which was 19.84%, with an average reduction of 6.165% for all types of land (Kementerian Pertanian, 2020b). In terms of land ownership, in the five years, there was an increase in the number of smallholder farmer households by 1,560,534 households to 15,809,398 households in 2018, which means that the number of farmers with land ownership of fewer than 0.5 hectares is increasing (Badan Pusat Statistik, 2018).

The above conditions directly impact the decline in household heads working in the agricultural sector. The Ministry of Agriculture noted that 500,000 or five million farmers from 2003-2013 switched professions due to the lack of land tenure. An imbalance in income and expenditure results in high potential losses that will ultimately reduce farmers' welfare (BeritaSatu.com, 2015; Ekonomi.bisnis.com, 2015).

Table 1. Agricultural land area in Indonesia 2014-2019

Land Type	Year					
	2014	2015	2016	2017	2018	2019
Ricefield	8.111.593	8.092.907	8.187.734	8.164.045	7.105.145	7.463.948
Irrigated rice field	4.763.341	4.755.054	4.782.642	4.745.809	3.804.391	-
Non-irrigated rice field	3.348.252	3.337.853	3.405.092	3.418.236	3.301.053	-

Source: National Statistic of Bureau, 2018; Ministry of Agriculture, 2019, 2020b

The Indonesian Government's policy to condition the size and structure of agricultural land tenure, such as agricultural land expansion, transmigration programs, agrarian reform, perpetual land policy or sustainable agricultural land, and so on, has not been able to empirically create conducive land tenure to support the achievement of agricultural development goals. (Susilowati & Maulana, 2012). This is evident from the high trend of selling Paddy fields due to the economic motive of farmers as the main factor (Benu et al., 2013; Kementerian Perencanaan Pembangunan Nasional, 2015; Ruswandi et al., 2007). The printing of paddy fields due to conversion has only reached 40 thousand hectares per year of the total national conversion of rice fields which reached 100 thousand hectares per year (Kementerian Pertanian, 2015).

As a result, this has consequences for the low ability of paddy fields to meet food needs during high demand for supply. The direct impact occurred is a decrease in the quantity and inefficiency of production, which affects forcing land productivity, unorganized business management, and a reduction in the amount of production and crop yields which will ultimately threaten national food security (Bantacut, 2014; Benu et al., 2013; Mechiche-Alami et al., 2021; Mulyani et al., 2011; Rondhi et al., 2018). On a macro level, this will increase the government budget to procure imported food which, of course, will increase the value of a capital flight to the foreign (Kementerian Perencanaan Pembangunan Nasional, 2015). On a micro level, this also has a direct impact on the decline in income and common welfare of small farmers, which has been proven in many empirical studies regarding the effect of land area on the amount of production and income of farmers (Ayu et al., 2021; Mulyani et al., 2011; Ruswandi et al., 2007; Susilowati & Maulana, 2012).

In response to the above, the Government, through the Ministry of National Planning and Development (BAPPENAS), began to look at waqf concepts and schemes to maintain the integrity and sustainability of paddy fields in high conversion trends (Antaraneews.com, 2021; Kontan. co, 2021). With this waqf concept, it is hoped that it can be a win-win solution for all parties to

encourage reduced conversion of paddy fields as the main production factor, which is a revenue and profit driver (RPD) in the agricultural sector. It carried out the strategy and solution with waqf of raw rice fields because legal provisions and regulations, as well as existing government programs, were still considered unable to prevent the closure of people's agricultural land (Antaranews.com, 2021).

Waqf (endowment fund/asset) comes from the Arabic "habs," which means to prevent something from moving. In sharia terminology, waqf means making the property (asset as waqf) permanent or sustainable from any disposition that directs the transfer of ownership and contributes the benefits of managing the asset (which is waqf) to the beneficiary (public) (AAOIFI, 2017). It means that someone who has donated his assets has consequently separated and/or handed over part of his property. It was used forever for a certain period following his interests in worship and public welfare (Law No. 41 of 2004, 2004). (UU No. 41 Tahun 2004, 2004). In its development in the contemporary era, waqf assets are not only limited to property that is not easily damaged, such as fixed property, land, or buildings. Still, they have also been applied to other objects known as cash waqf, book waqf, stock waqf, and other assets (Hassan, 2010).

As a social finance instrument, waqf has been widely studied and applied in various economic sectors. In the micro, small and medium enterprises (MSMEs) and entrepreneurship sectors, research conducted by Abdul Rahman et al. (2016), Thaker et al. (2016), Thaker (2018), Thaker et al. (2020), Majid (2021a) and Majid (2021b) showed that waqf could play a role in financing and empowering and assisting MSMEs. Furthermore, cash waqf that is professionally managed and integrated with microfinance can be a viable and sustainable tool in poverty alleviation (Abdul-Majeed Alaro & Alalubosa, 2019; Saiti et al., 2021). Waqf also plays a role in the education sector such as in research conducted by Usman and Ab Rahman (2021); home financing as in a study by Zabri and Mohammed (2018), insurance for flood victims and natural disaster refugees in research by Che Mohd Salleh et al. (2020), Indrawan and Herman (2017), and Kachkar (2017), and the socio-economic sector others as a catalyst in terms of financing sustainable development projects as research done by Shaikh et al. (2017). Furthermore, waqf has a strategic role as a tool to achieve financial inclusivity and the fulfillment of socio-economic justice in multiple fields (Shaikh et al., 2017; Zauro et al., 2020). Thus, it is clear that the presence of waqf as a source of cheap financing can help or reduce the portion of state expenditure.

In the agricultural sector, the initiation of waqf instruments as a solution to the main problems of agriculture has a lot to be done and applied. In terms of providing cheap financing for unbanked farmers, Ahmad (2018), Azizan et al. (2021), Khan et al. (2021), Majid (2021), Moh'd et al. (2017). Olaniyi et al. (2014) have proposed several sustainable farmer financing models integrated with Financial Technology (FinTech), Crowdfunding platforms, Islamic microfinance institutions, and waqf instruments. In the case of optimizing waqf land for the agricultural sector, Azizan et al. (2021), Majid (2021), and Shafiai et al. (2015), three collaborated on the role of Nazhir (manager of waqf assets) with company anchors who acted as vehicles to generate profits from the agricultural waqf land.

Nazhir is the central communication figure with stakeholders in using cash waqf instruments as an alternative source of cheap financing, namely cash waqf, through collaboration/collaboration with relevant stakeholders. This study seeks to explore the potential of waqf as a solution to the problem of sustainable rice fields that threaten the welfare of farmers, the sustainability of agricultural productivity, and national food security in the future. This study fills the gap of previous research, which is still limited by conceptual models, by conducting an in-depth analysis strengthened by in-depth interviews with relevant stakeholders. In addition, the author also integrates the concept of cash waqf as waqf land management to meet the production needs of farmers by providing fertilizers, seeds, seeds, agricultural tools, and equipment to the marketing stage of farmers' crops. Thus, rice fields that have been a waqf asset so that they cannot be sold, donated, or pledged will be managed productively, innovatively, and professionally.

The purpose of this research is to know the potential and strategy for the sustainability of paddy fields through the concept of waqf, and how institutional engineering, business models, BOCR analysis, and risk mitigation of waqf-based paddy fields management.

Literature Review

The Theory of Rights of Ownership

Ownership rights can be interpreted as rights to own, to use, to change the form and content of ownership (to change its form and substance), and to transfer all rights to assets or some desired rights which may or may not be tangible. Objects of physical ownership can be in the form of consumer objects, land, and capital equipment, while non-physical objects (invisible, intangible property) can be in the form of ideas, concepts, business schemes, and formulas/formulas of physics, chemistry, and the like (Yustika, 2013).

The primary ownership rights for economic theory are regarding labor and means of production, such as land, capital, and labor, which are a priority in production. Hence, it is necessary to ensure ownership rights because their absence will affect the smoothness of the production process. Toetenberg (Yustika, 2013) states that ownership rights have four main characteristics, including the following.

- Universality: all resources are privately owned, and the available allotments are specified in full detail.
- Exclusivity: all profits and costs are expanded due to ownership and utilization of resources. That should be borne/obtained by the owner directly or indirectly through sales.
- Transferability: all ownership rights must be transferable from one owner to another through voluntary exchange.
- Enforceability: ownership rights are guaranteed from coercive practices and/or violations by other parties.

Based on the division above, if we trace the property rights that exist and develop in society, there are at least three important rights (Yustika, 2006, 2013).

- Private property right/ownership. Individual/private ownership rights mean that every individual has the right to control and own the desired specific assets, which with such ownership has consequences for his right to obtain profits, either by processing, selling, or by other schemes.
- State property right/ownership. State ownership rights mean that specific assets are only allowed to belong to the state, so individuals/private people are not allowed to own them, including using them and benefiting from them.
- Communal property right/ownership. Meanwhile, communal ownership rights are nothing but ownership owned by a well-defined group of certain people who join together to own non-transferable assets.

Apart from that, several other ownership rights, such as open access property rights. Still, their existence is weakening in line with economic modernization's intensity.

The Concept of Waqf: Definition and Potential in Indonesia

In the language, waqf comes from Arabic, defined by al-habs, which means to restrain, and al-man'u, which means to hinder (AAOIFI, 2017; Rozalinda, 2015). Legally formal in the context of regulation in Indonesia, based on Law no. 41 of 2004 concerning waqf (UU No. 41 Tahun 2004, 2004), waqf is defined as the legal act of wakif to separate and/or surrender part of his property to be used forever or for a certain period by his interests for worship and/or public welfare according to sharia.

The majority of scholars (Islamic jurists) state that the pillars of waqf consist of four components, namely *waqif*, *mauquf* (objects that are donated), *mauquf 'alaihi* (beneficiaries of waqf), and *shighah*. A *waqif* must be reasonable, mature, intelligent, waqf of his own accord, and has independent status as the owner of the waqf property. *Mauquf* is an object that can be used according to sharia (*maal mutaqawwim*), an object that does not move and can be handed over. The object is known and is the perfect property of the *waqif*. *Mauquf 'alaihi* is the beneficiary of the results of waqf management, which is required to be a good-oriented party and not aim for immorality (Rozalinda, 2015; UU No. 41 Tahun 2004, 2004).

In Indonesia, the institutions that act as regulators regarding waqf regulation are the Indonesian Waqf Board (BWI) and the Ministry of Religion. BWI was formed by the Law of the Republic of Indonesia (RI) No. 41 of 2004 concerning waqf and Government Regulation no. 42 of 2006 concerning the Implementation of Law no. 41 of 2004 concerning waqf as an independent institution in carrying out its duties. BWI is based on Pancasila and the 1945 Constitution and is domiciled in the capital city of the Republic of Indonesia, which is the seat of its central management (Badan Wakaf Indonesia, 2020).

The official data from the Ministry of Religion's Waqf Information System (2021) showed that there was currently 399,034 waqf land spread throughout Indonesia with an area of 53,238.97 hectares with a potential of IDR2000 trillion (Republika, 2019; SIWAK Kemenag, 2021). In terms of use, waqf land is still dominated by worship activities such as mosques at 44.21% (175,886 locations), prayer rooms at 28.28% (112,493 locations), and tombs at 4.44% (17,675 locations). Part of it is used for educational activities, namely for schools by 10.67% (42,459 locations) and pesantren (Islamic boarding schools) by 3.64% (14,465 locations). The remaining 8.77% (34,874 sites) was used for other social activities, including the agricultural sector. Of the total waqf land mentioned above, 60.06% has been certified (SIWAK Kemenag, 2021).

Meanwhile, Indonesian cash waqf potential is enormous, reaching 217 trillion or equivalent to 3.4% of Indonesia's gross domestic product (GDP) (Dirjen Bimas Islam, 2020). This great potential was followed by strength from the institutional side in the form of the number of nazhir of cash waqf, which reached 236 (157 sharia cooperatives and BMTs, 39 foundations, 27 institutions that had Amil Zakat as their parent, 8 institutions and mass organizations, and 5 universities/campus) supported by the spread of thousands of individual nazhir and 21 Islamic financial institutions receiving cash waqf (LKSPWU) (Badan Wakaf Indonesia, 2019; Direktorat Pemberdayaan Zakat dan Wakaf Kemenag, 2020).

Condition of Indonesia's Agricultural Sector

Agriculture is an important and crucial sector in the national economy, namely as a contributor to the increase in national Gross Domestic Product (GDP), employment, national food supply, foreign exchange earner, and a place to depend on most of the population in rural areas (Nuridin, 2016). The agricultural sector's contribution to the national economic pie, as shown in Gross Domestic Product (GDP), was stable at above 10% from 2015 to 2018. The peak occurred in 2015 in the third quarter at 14.49%. The lowest was 10.88 % in the fourth quarter of 2018 (Badan Pusat Statistik, 2019b). In 2020, the agricultural sector was able to grow positively at 1.75 compared to other industries, with a contribution to GDP of 13.70%, the second highest after the manufacturing industry (Badan Pusat Statistik, 2021).

In terms of employment, the agricultural sector in Indonesia is the largest sector that absorbs the working population by the main occupation. It was recorded that 29.76% of the population worked in this sector in 2020, or around 40 million people of Indonesia's total 138.22 million workforce (Badan Pusat Statistik, 2020). Sadly, almost half the number of poor households in Indonesia depend on this sector for a living (Badan Pusat Statistik, 2019a). The Central Bureau of Statistics released by *bisnis.tempo.co* (2021) stated that poor households working in the agricultural sector contributed 46.30 percent, while from the industrial sector, 6.58 percent, and the remaining 32.10 percent from other sectors.

In the strategic plan book of the Ministry of Agriculture 2020 – 2024, it is stated that one of the biggest challenges for agricultural development is to achieve economic growth to improve the welfare of farmers. Most own less than half a hectare (Kementerian Pertanian, 2015, 2020a). Some of the land limitations related to agricultural development include uncontrolled land conversion, limitations in printing new land, decreasing land quality, narrow average land ownership, the uncertainty of land ownership status, and the absence of land for livestock activities. Other severe problems in agricultural development are related to infrastructure, marketing, price fluctuations, production facilities, regulations, institutions, and human resources, and the problem of limited access to capital for farmers (Bantacut, 2014; Kementerian Pertanian, 2015).

To overcome these agricultural problems, the Government of the Republic of Indonesia, through the Ministry of Agriculture, in its strategic plan for 2020-2024, has several strategies, including (1) increasing land availability and use; (2) improving agricultural infrastructure and facilities; (3) development and expansion of seed/seedling logistics; (4) strengthening farmer institutions; (5) development and strengthening of financing; (6) development and strengthening of bioindustry and bioenergy; and (7) strengthening the market network for agricultural products (Kementerian Pertanian, 2020a).

Islamic Financial Instruments in The Agricultural Sector

Islamic financial instruments consist of social and commercial financial instruments. Sharia financial contracts and instruments are general and comprehensive. They can be used in different fields depending on the objectives and substance of the contract/transaction desired by the transaction actors following sharia principles and rules. Obaidullah (2015) stated that two main fundamental principles which relevant to ethics and norms, namely the concept of prohibiting *riba* (Tarmizi, 2020) and uncertainty (*gharar*) (Usmani, 2012). The restrictions in the form of prohibition of transactions above are intended to cumulatively. It has an impact in regulating balance, distribution of justice, and equality between transaction actors in terms of opportunities for their rights and obligations (Usmani, 2012).

In general, the category of Islamic financing/capital in the agricultural sector is divided into two types, namely debt-based financing, including buying-selling and leasing, and equity financings, such as trade partnerships and trust partners (Obaidullah, 2015), either in the form of social contract schemes or commercial or the integration of both to provide a holistic solution in solving problems in the agricultural sector.

- *Bai Muajjal-Murabahab* (credit-cost plus sale). *Bai Muajjal* is a sale transaction where the payment of the price by the buyer is delayed in the future. This *Murabaha* transaction begins with the bank's willingness to buy a buyer's order from the original supplier; then, it is purchased and controlled by the bank. After that, the bank sells it to the buyer at a higher price (cost-plus), where the payment terms are mutually agreed upon within a specific period, either in cash or installments (Iqbal & Mirakhor, 2011; Obaidullah, 2015).
- *Ijarah* (Leasing). Like rent in the conventional context, *ijarah* is the sale of benefits (assets or property of an item for use) within a specific period (Hassan & Lewis, 2007; Usmani, 2012). Concerning transactions in the agricultural sector, *ijarah* is a popular and flexible contract. Whereby Islamic microfinance institutions (IFIs) can purchase and control certain assets (required by farmers) such as land or agricultural equipment and equipment (seeds, seeds, fertilizers, nets) and then rent them out to farmers in need (Obaidullah, 2015).
- *Bai-Salam* (deferred delivery). *Salam* is a buying and selling transaction in which the seller submits an order in the form of a specific product/commodity according to the criteria desired by the buyer in the future in exchange for payment (by the buyer) in cash (advance fully paid, spot price) up front (Obaidullah, 2015; Usmani, 2012). For IFIs, *salam* contracts are an instrument to eliminate uncertainty in future commodity prices. The price (based on the spot price) is usually cheaper than the expected market price (Hassan & Lewis, 2007; Obaidullah, 2015). With this transaction, farmers get upfront capital and certainty over the absorption of their harvest (Majid, 2021b).
- *Musharaka* (partnership) and *Mudharaba* (Trust Financing). In business and the world of commerce, *Musharaka* means a trade partnership/joint enterprise/joint-venture/joint-business in which the profits and losses in the business are borne by all parties involved (Usmani, 2012). In the agricultural sector, *musharaka* involves partnerships between LKMS and farmers on the capital and business/project operations side. *Mudharabah* is a form of partnership (cooperation) where one party acts as an investor (*rabbul maal*) who finances the project, while the other party acts as the project manager (*mudharib*) (Hassan & Lewis, 2007). Although similar to the *musharaka* scheme, *mudharaba* financing does not require the establishment of a new company; LKMS only provides all the capital needed, and the customer (farmer) is responsible for the project being carried out. where profits are divided according to the initial agreement,

and losses not caused by negligence or actions that exceed the limit or violate the contract are entirely borne by the owner of the capital (AAOIFI, 2017; Usmani, 2012).

- Land Management Contract (*Muzārah'ah*, *Mukhabarah*, *Musaqah*, dan *Mugharasah*). *Muzārah'ah* is a profit-sharing-based partnership contract where one party provides land and seeds, and the other party is in charge of planting and maintaining plant objects where the harvest is shared according to an agreement. In *Mukhabarah*, plant seeds come from land cultivators, and agricultural produce is divided between land owners and cultivators according to a ratio. Meanwhile, *Musaqah* is a partnership in plant maintenance, where one party submits a plant/tree that can produce fruits or vegetables, and the other party is in charge of maintaining it. The results are divided according to the agreement. It is different from *Mugharasah*, which is a collaboration between one party where one party provides a plot of land without trees to another party to plant trees on it on the condition that the trees and fruits are shared according to the specified presentation (AAOIFI, 2017; DSN-MUI, 2014; Obaidullah, 2015). Thus, the difference between the types of contracts above is from the side of the party providing the seeds/seedlings for planting.
- *Qordhul hasan* (interest-free loan). This contract is in the form of a loan that is given without expecting a return of principal (Hassan & Lewis, 2007) because it is channeled for social purposes. It is also known as benevolent/interest-free/charitable/good loans (Obaidullah, 2015; Usmani, 2012).
- Alms, zakat, and waqf (charities and endowments). The alms are obligated to every Muslim who meets the requirements referred to as zakat, which means that they have met the minimum limit of certain assets (*nishab*) and have passed one Hijri year (*haul*). It differs from alms, which produce a steady and sustainable/permanent flow of benefits through grants on assets, which are called waqf/alms *jariyah* (Iqbal & Mirakhor, 2011; Obaidullah, 2015).

From a macroeconomic perspective, zakat can be the primary tool in poverty alleviation because it acts as a social safety net to meet the basic needs of farmers, skill enhancement; provision of initial capital; paying off debts of poor farmers who are in debt. Meanwhile, waqf implies the endowment of valuable assets (such as real estate or cash). The benefits from managing these assets are used/channeled for certain purposes, such as economic and social empowerment. Thus, waqf can be used as a source of sustainable funding/benefit targeting poor farmers (Obaidullah, 2015).

Research Method

This paper used a descriptive qualitative approach, which describes or analyzes research results explicitly used for decision-making in a more detailed and narrow (not broad) scope because it focuses on formulating the problem (Sugiyono, 2018). In more detail, the type of qualitative research used is a library/documentary research approach, namely researching and utilizing documents to analyze texts from the past and present, taking into account sources, ranging from personal archives to online records, including journals, books, and reports, official documents, and print media (McCulloch, 2004). To strengthen the analysis to be more valid and robust by paying attention to theoretical and practical aspects from a comprehensive perspective, the researchers conducted in-depth interviews with experts who are involved, concerned, and can answer problem formulations consisting of regulators, practitioners, and academics in waqf and agriculture.

Data Types, Collection, and Analysis

This study uses primary data and secondary data. The primary data in this study came from in-depth interviews with experts/respondents consisting of regulators, academics, and practitioners involved in waqf and agriculture in Indonesia (see Table 2).

The author also used secondary data originating from reputable journal articles both internationally and nationally (at least Sinta 3), official documents in the form of roadmaps or strategic plans of the Ministry of Agriculture and the Indonesian Waqf Board, official statistics, books, reports, and other legal rules/regulations issued by relevant stakeholders in term of the

scientific validity of the data used. All data collected is then analyzed with qualitative content analysis to provide knowledge and understanding of the problem under study through subjective and in-depth interpretation of the data content to develop knowledge (Hsieh & Shannon, 2005).

Table 2. List of respondents

No	Code	Institution/Profession
1	R1	Professor of Economics and Management at Universitas Yarsi, The Commissioner of Indonesian Waqf Board (BWI)
2	R2	Head of Sharia Compliance & Assurance PT Bank Muamalat Indonesia, Head of Sharia Research CIMB Niaga Syariah, Lecturer at Universitas Pancasila and IAIN Samarinda.
3	R3	Head of Center for Digital Research and Transformation BWI, Lecturer at Islamic Economics Department IPB University
4	R4	Vice Chairman I BWI, Sharia Business Practitioner, Lecturer at Several Universities, Islamic Economics and Finance Expert
5	R5	Professor of Economics at FEB IPB University, Researchers at the Center for Tropical Horticultural Studies of IPB (PKHT IPB), WTO Expert Team for Agriculture
6	R6	Millennial Farmer (CEO of Kebun Berkah)
7	R7	CEO of AgroWakaf
8	R8	Senior Staff/Implementation of Productive Rice Waqf Program (WSP) Global Wakaf
9	R9	Head of Nazhir Empowerment & Management Division BWI, Vice Director of Graduate School Universitas Ibn Khaldun Bogor.
10	R10	Chairman of the Productive Waqf Forum
11	R11	Lecturer in Departement of Management, Faculty of Economics and Business Universitas Indonesia, Researcher & Laboratory Microfinance, Ex-Manager UKM Center FEB UI
12	R12	Ex-Head of the Inclusive Finance Division of the National Committee on Islamic Economy and Finance (KNEKS), Social Development Representative AFSI Indonesia
13	R13	General Manager of Wakaf Al-Azhar

The researcher used data/source and method triangulation techniques to strengthen the analysis. Triangulation of data/sources is carried out using several data sources so that weaknesses in other data can be compensated for by the strengths of additional data to increase the validity and reliability of the results (Rugg, 2010). In this study, the data obtained through documentation will be cross-checked using the results of direct, in-depth interviews with expert respondents and vice versa. Meanwhile, method triangulation is carried out by cross-checking between documentary results in previous journals/studies that need to be reviewed more deeply from the implementation side in the field, compared to data from in-depth interviews involving academics, regulators, and practitioners. Thus, this in-depth interview method can cover the weaknesses of library research methods so that it is hoped that the analysis to answer the problem formulation can be more valid and feasible to be reviewed from an academic and practical side.

Result and Discussion

The Potential and Sustainability Strategies of Agricultural Land Through The Paddy Land Waqf Scheme

Waqf has a strategic role in financing and is a cheap source of funds for the agricultural sector, with a relatively high-risk classification compared to other sectors.

The agricultural sector is characterized by price fluctuations and relatively high uncertainty compared to other sectors (i.e., industry/trade) with the characteristics of bulky and perishable yields, thus requiring financing support that has features that can accommodate these characteristics. Therefore, the source of financing originating from waqf funds is an ideal choice considering that waqf funds have a long duration (or even evergreen because of their perpetual nature) and do not have a target cost of funds. Because the main parameter of waqf funds is the benefit compared to the margin. (Respondent R4)

The strategies to create waqf land (hereinafter referred to as waqf of rice fields) in general can be done with two strategies, namely using waqf land. That has been pledged from the start for the agricultural sector or providing rice fields (by buying) and then makes it as waqf asset so that its status becomes waqf of rice fields.

Internal Strategy

The first strategy is to optimize waqf land, which has been from the beginning - based on the waqf pledge deed - intended for the agricultural sector, either for planting media (rice fields), rice milling, or harvest storage warehouses. This is very potential to be done considering that the majority of the total waqf land in Indonesia is still in idle condition. Based on BWI data, it is known that in 2017 there were 420 thousand hectares (90%) of waqf land with idle status. This idle waqf land asset is estimated to have a value of more than IDR 2,100 trillion. The assumption is that the land price per square meter is at least IDR 500,000, primarily since most of the waqf land is located in urban areas where the value of the land will increase from year to year (Akurat. co, 2017; Mitrawakaf.or.id, 2017; Okezone.com, 2017). The above idle waqf lands are generally designated as places of worship (mosques or prayer rooms), tombs, educational institutions, or for socio-economic activities, including the agricultural sector. Considering the potential and existing realities, the waqf of paddy fields with this strategy can be reached in two ways.

- Optimization of agricultural waqf land that has been existing before this is done by reviving agricultural waqf land by the wishes of the wakif.
- Revitalizing the use of waqf land to be used as agricultural land

Azizan et al. (2021), in their research stated that waqf land in remote areas, which are generally idle, is appropriate and suitable for use by revitalizing the condition of the land to be productive for the agricultural sector. The method is used to produce idle waqf land to be revitalized for the productive sector (including agriculture) based on the calculation of nazhir (waqf property manager). The use of idle waqf land for the agricultural sector is not under the initial waqf pledge deed. It is not prohibited by sharia as long as efforts to fulfill the purpose of wakif, for example, the beginning of waqf for mosques. It cannot be done because there are already an adequate number of mosques in the place, so if a mosque is built, it will reduce the benefits of using the waqf assets. In addition, by looking at the critical need for the amount of demand for food raw materials (rice) amid limited supply, then to realize this, waqf land (which was idle) can be considered to be used as agricultural facilities (Azizan et al., 2021).

External Strategy

This strategy is pursued through waqf of agricultural land and incredibly fertile rice fields, which are feared to be converted into non-agricultural land by the owner or converted because of urgency for certain development needs by the Government or the private sector. Prof. Tribowo Yuwono, professor of agriculture faculty at Gadjah Mada University, Yogyakarta, stated that there are four methods of creating perpetual agricultural land with the concept of waqf (Yuwono, 2016).

- First Model. Individuals or institutions with sufficient capital and concern for food production purchase adequate land for rice fields and then donate it as waqf property to the nazhir, who are registered and operate officially and legally under the supervision of BWI. Nazhir then managed this rice field for food production.
- Second Model. Individuals or institutions, private and local/village governments, buy land owned by farmers or groups of farmers that are productive but vulnerable to conversion, then donate the land to nazhir. In this way, farmers can still do food farming without being tempted to sell the land (which they manage because it has been waqf) to third parties for purposes other than food production.
- Third Model. A group of people together (crowdfunding) buys a plot of land for rice fields, then makes it a waqf asset and leaves it to be managed by nazhir.
- Forth Model. The state government carries out this model using waqf of unused or unproductive land for the benefit of food and agricultural production.

The four models above involve the role of the community in general, especially those concerned about the sustainability of food production in the future. With the food land waqf model (rice fields), it is hoped that the protection of farmers and their agricultural land will be much more effective because there is a spiritual dimension, not just legal-formal matters (Yuwono, 2016). This is because based on these two dimensions, the consequences stipulated in Law No. 41 of 2004 (2004) are that agricultural land cannot be used as collateral, confiscated, sold, granted, inherited, exchanged, or transferred in the form of other rights transfers. The results of the management of waqf land are fully used for the welfare of farmers and the public interest. It must always maintain primarily for the sustainability of production (sustainability-oriented).

The benefits that can be obtained with the food land waqf model are the maintenance of waqf assets and the guarantee of the sustainability of agricultural land.

There are two direct benefits at the same time related to agricultural land waqf, namely waqf property that is maintained because it is already in the form of rice fields, and the sustainability of agricultural land (which is eternal) can be pursued. (Respondent R2).

This is a great idea, and it was about 15 years ago that it was discussed. As is the local culture to maintain paddy fields in West Sumatra or Bali, the next challenge with this waqf concept is how to manage it optimally. (Respondent R5)

Institutional Engineering and Business Model of Rice Field Management Using Waqf Scheme

The next challenge in the management of waqf land is about land management by nazhir so that it is optimal to empower and strengthen the farmer's position and provide economic impact to relevant stakeholders. The food production process on waqf rice fields also answers other problems for farmers, namely in terms of limited access to finance to absorption of farmers' crops at competitive prices.

The criteria for cash waqf are financially feasible because cash waqf is identical to funding from banks/other financial institutions. It can be in the form of working capital or capital expenditures. Meanwhile, waqf through money can generally only be used to procure agricultural production factors that are permanent and sustainable, such as agricultural equipment, processing machines, etc. (Respondent R4)

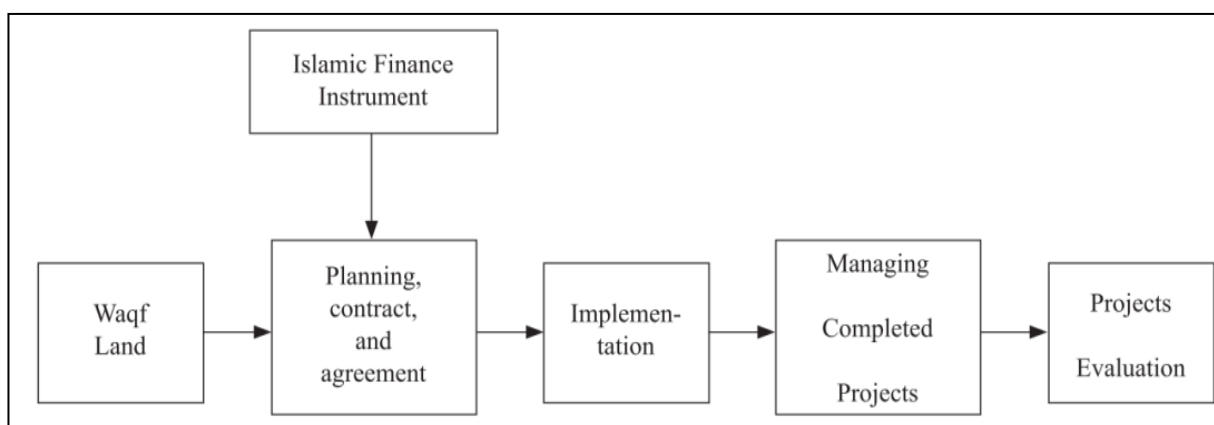


Figure 1. The proposed model of waqf land development (Shafiai et al., 2015)

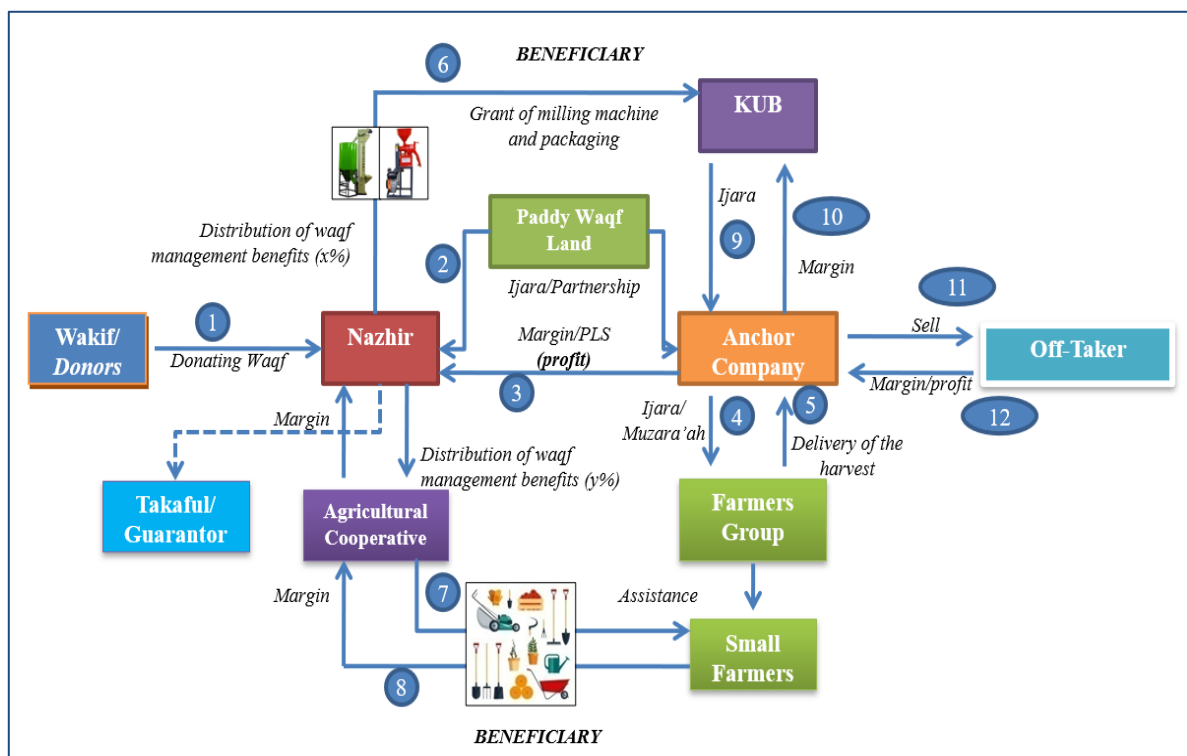
The framework for the development and management of waqf land can be done by referring to the proposed model of Shafiai et al. (2015) (Figure 1). The next stage after the availability of waqf land designated as a medium for food crop production (rice) is planning, contract mapping, and approval with certain institutions concerned in the agricultural sector, followed by evaluation.

Azizan et al. (2021) stated that waqf-based agricultural land management cooperation could be carried out by involving the role of Anchor company which can be in the form of Government-Linked Company (GLC), cooperatives, or small and medium enterprises (SMEs) that have functions and capabilities in the agricultural ecosystem. Nazhir appointed Anchor Company based on reputation, financial performance, business plan, or proposal to develop waqf land for crop yield improvement and agribusiness projects. Anchor company is responsible for developing waqf land, including absorbing farmers' crops (Azizan et al., 2021).

Therefore, it is essential to carry out institutional engineering in the agricultural value chain to provide holistic benefits for farmers, especially regarding the absorption of farming products.

If the risk is high and cannot be transferred, it can be done, such as institutional engineering, by forming a farmer group to apply a joint responsibility scheme. Another way is there is a guarantor roled as off-taker so that there is certainty in purchasing crops. (Respondent R4) There needs to be a food barn program. It doesn't stop paying for production costs but also helps with packaging. The grain is processed into rice, packaged, and sold to the market. Prices in the market are rather decent, and farmers get a decent margin. Today's domestic rice production capacity is still greater; the market will absorb any bad rice. Waqf is concerned with the ecosystem/supply chain. Ensuring that rice is delivered to the market, waqf must enter here. (Respondent R3)

The following is the proposed business model of waqf land management proposed by the author (Figure 2).



Source: Developed by the author based on the literature review of previous models combined with in-depth-interview

Figure 2. The business model of Paddy waqf land management

Description

- Wakif donates cash waqf to nazhir institutions offline and online through certain platforms.
- Paddy land that has been done as a waqf asset can cooperate with two schemes. (1) a lease scheme (getting a fixed income); or (2) a partnership scheme with a *musbaraka/mudharaba/muzara'a/musaga* contract mechanism in which Nazhir provides capital

in the form of Paddy fields and the anchor company manages the land. The results from rice production planted on waqf land are then sold to standby buyers (off-takers), and the profits are shared with nazhir.

- Nazhir receives a margin (if it is rented out) or profit sharing (if it has cooperated with a partnership).
- Anchor company that oversees farmer groups uses an *ijara* (lease) scheme for farmer workers or *muzara'a* on the waqf of rice fields. In terms of using *muzara'a*, the anchor company provides land (rented from nazhir) while farmers provide tools, equipment, and agricultural production facilities.
- Farmers submit their harvests on waqf land cultivated in the form of rice fields to the anchor company.
- The profit margin/profit sharing received by nazhir is distributed (maximum 30% of the profit) in the form of milling machines and packaging and then donated to a collaborative business group (Kelompok Usaha Bersama, KUB) or farmer group or association in need.

If the managed cash waqf has obtained a surplus, then the benefits distributed can be in the form of grants. For example, buying tractors, milling machines, etc., and donating them to farmers or farmer groups. (Respondent R9)

- In addition, the benefits/surplus of waqf management by accumulating from the waqf principal, the money collected will also be distributed in the form of the establishment of cooperatives/shops that provide agricultural infrastructure. This cooperative will later become a vehicle for Nazhir to continue to generate profits. It is hoped that the presence of cooperatives from the results of this waqf can be a means for farmers who have difficulty obtaining inputs. At the same time, limited access to financing for production inputs can be overcome with competitive, reasonable, and not burdensome buying/leasing prices for farmers. Nazhir, through this agricultural cooperative, collaborates with third parties to assist farmers in agricultural training to increase yields and harvest quality

The assistance program provided can be in the form of agricultural counseling. Mentoring funds consist of several funds, not only for ZIS fund but also can use waqf fund. (Respondent R13)

The use of waqf funds for the agricultural sector must be balanced with production assistance programs. (Respondent R10)

In the context of agriculture, assistance can be provided (for example) by Amil Zakat Institutions (for example, LAZ Al-Azhar), which also assists farmer-assisted groups. The more parties involved here, the more farmers will feel supervised and responsible in using waqf funds. (Respondent R2)

The financing must be in groups (GAPOKTAN) so that farmers are not alone, and gather in one group. The group's existence can minimize the risk of untrustworthiness, fraud, and a way of encouragement when difficulties occur. There is also a need for assistance here. (Respondent R3)

- Small farmers pass on the margin from rental, buying, and selling to agricultural cooperatives (founded by nazhir).
- Meanwhile, to complete the production process for the harvest (grain) produced by the farmers, milling and packaging machines donated to KUB can be an alternative for renting either the machine or the power of the anchor company. In this case, it will increase the revenue stream for KUB.
- Anchor company pays margin on rental of milling machine/power to KUB.
- Paddy packaged as rice is then sold to off-takers or directly forwarded to the market.

- Profit is delivered to the anchor company. If you use a partnership scheme, the profit received by the anchor company is then divided between Nazhir with a ratio (a certain percentage) that was agreed at the beginning.

Benefit, Opportunity, Cost, Risk (BOCR) Analysis, and Risk Mitigation

The following is a BOCR analysis of the Paddy field sustainability strategy and the business model for its management to finance the agricultural value chain (Table 3).

Table 3. BOCR analysis

Benefit	Opportunity
1) Agricultural land sustainability; Paddy land cannot be sold, donated, or used as collateral after waqf.	1) Increasing farmers' yields.
2) Sustainability of production and productivity of crops to achieve food security.	2) Decrease in quantity and area of converted paddy fields.
3) Cheap sources of financing for farmers.	3) The presence and involvement of the roles of other parties: the Government (which is in charge of agriculture, villages, and trade Ministry/Officer) and the private sector and non-governmental organizations (NGOs).
4) Absorption of farmers' crops.	4) Other companies that are concerned about the agricultural sector can participate in channeling their CSR funds for program sustainability and management.
5) Ease of access and fairness of buying and renting prices for agricultural inputs.	5) Breaking the financing chain for farmers by moneylenders or middlemen generally burdens and suppresses the position of farmers.
6) Farmer financing sustainability; initial production capital, agricultural tools/equipment, packaging, and marketing.	
Cost	Risk
1) Cost of land acquisition for paddy fields for waqf.	1) The principal of cash waqf is eroded.
2) Campaign for cash waqf funding.	2) Agricultural sector risks: crop failure, seasonal uncertainty, pests and diseases, and other natural risks.
3) The operational cost of cooperation with anchor company and feasibility study for paddy field management.	3) The risk of non-payment of the sales of rice on the contract

Source: Author analysis based on literature reviews and the result of in-depth-interview (2022)

Based on the above risks, in general, the risks are divided into two: the risk of the erosion of the cash waqf principal (Table 4) and the risk of farmers' financing and the agricultural business climate itself (Table 5). The following are some practical risk mitigations that can be pursued based on expert exposure.

Table 4. Risk mitigation to maintain the waqf principal

Kind of risk mitigation	Started by
Shortage of harvest that affects the amount of return on waqf principal will be covered by a surplus of successful crops from other projects.	R1, R8, and R10
A financing restructuring scheme is carried out by extending the duration of payments without any interest or fines and being paid from the next harvest.	R8 and R10
Blended finance scheme: the principal of cash waqf is directly converted into fixed assets in the form of rice fields or agricultural production equipment in the form of tractors, milling machines, and packaging machines which are durable and can generate income by renting out.	R9 and R10
For farmers unable to pay the financing installments for urgent and acceptable reasons (after conducting a review), ZIS funds are used to cover this shortfall.	R10, R13, and R2

Table 5. Mitigation of farmer financing risks and agricultural business climate

Kind of risk mitigation	Stated by
Ensure that the financed object is feasible, starting from economies of scale, production efficiency, marketing guarantees, etc.	R4
Use Islamic insurance or guarantee schemes as stated in Regulation of Indonesian Waqf Board No. 1 in 2020.	R4, R9, and R13
Nazir is obliged to form a reserve with a certain amount accumulated (saved) gradually from the surplus obtained to guarantee the minimum recovery rate. The reserve scheme of the harvest, for example, is around 20-30% of the crop.	R4, R6, R7, and R11
Use of technology in agricultural production.	R12
An adequate system of village granaries (storage/warehouse) keeps prices stable even during harvest time.	R12
If a loss occurs, it can be covered later with the next harvest.	R6 and R10
Nazhir can conduct donation campaigns (infaq and alms) from the community. Then the proceeds are used to buy farmers' crops to be sold to third parties.	R7

Policy Implication and Recommendation

- The Indonesian Waqf Board. The need for regulations regarding the optimization of unproductive waqf land, especially for the land pledged to be used as agricultural land. BWI can also cooperate with relevant regulators such as the Ministry of Religious Affairs, the Ministry of Agriculture, and the National Planning and Development Agency (BAPPENAS) to protect existing productive rice fields by being acquired and donated as waqf assets so that the ownership of the fields becomes eternal.
- The Ministry of Agriculture. This Ministry can coordinate with BWI to provide subsidies in the form of seeds, seedlings, fertilizers, and agricultural inputs to finance farmers. Mainly for assisting farmer groups, it can be considered to use a waqf scheme so that the agricultural (fixed) assets will continue to be maintained because they have become waqf assets that must continue to be productive for the common good. The Ministry of Agriculture can also cooperate with other regulators in the waqf field to discuss the need for insurance/guarantor with sharia concepts to be practiced in the agricultural sector.
- Nazhir (Manager of Waqf Asset). Every nazhir in the region can replicate the proposed business model by making adjustments in the field. The waqf land management model above is a source of inspiration for waqf property management which is integrated with cash waqf through institutional engineering.
- The Anchor Company. Agricultural SMEs or government partner companies can develop cooperation schemes with nazhir (waqf managers) who share the vision and goal of empowerment and increasing farmers' financial inclusion.

Conclusion

This study aims to solve the problem of the sustainability of agricultural land due to conversion, which is motivated by economic motives using waqf instruments and financing for farmers to meet production infrastructure needs. The limitation of agricultural land as the main production factor can be overcome by the scheme/model of the waqf of paddy fields. The internal strategies can pursue, namely optimizing and revitalizing waqf land for agricultural land, and external strategy, namely through waqf of potential agricultural land. The available waqf land can be optimized through collaborative management with anchor companies through institutional engineering involving agricultural cooperatives (established by Nazhir) and joint unit groups (from farmer groups containing individual farmers). Through this scheme, there will eventually be off-takers run by anchor companies, or they can also come from Nazhir's partners. Nazhir will forward the surplus from cash waqf management in the form of a milling machine and packaging grant to KUB so that it can become a revenue stream for KUB and a means of empowering farmers. In the end,

the waqf of rice fields and cash waqf will help sustain agricultural value chain financing outside of improving the welfare of farmers, as stated in the roadmap of the ministry of agriculture for 2019-2024.

Author contributions

Conceptualization: Rifaldi Majid
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 Formal analysis: Rifaldi Majid
 Investigation: Rifaldi Majid
 Methodology: Rifaldi Majid
 Project administration: Rifaldi Majid
 Supervision: Rifaldi Majid
 Validation: Rifaldi Majid
 Visualization: Rifaldi Majid
 Writing—original draft: Rifaldi Majid
 Writing – review & editing: Rifaldi Majid

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