



GREEN ECONOMY AND ISLAMIC SUSTAINABILITY: ASSESSING ORGANIC VEGETABLE FARMING THROUGH THE MAQASID SHARIA FRAMEWORK

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Abstract

This research is grounded in the gap between the ideal implementation of green economy, as formulated by the United Nations Environment Programme (UNEP), and its actual application in organic vegetable farming at Women Farmers' Group Kartini Makmur, Semarang City, which has not yet significantly improved members' welfare. This study analyzes the implementation of the green economy concept at women farmers' group Kartini Makmur and examines it from the maqashid syariah perspective, addressing two questions: (1) how green economy is implemented in organic vegetable farming at women farmers' group Kartini Makmur, and (2) how this implementation is viewed from the maqashid syariah perspective. The research employs a qualitative method with a case study approach. Primary data were obtained through observation and interviews with women farmers' group members, sub district officials, and residents, complemented by secondary data from documentation, books, and journals, then analyzed using the Miles and Huberman technique with source triangulation. The findings show that green economy implementation at women farmers' group Kartini Makmur is uneven across the three UNEP indicators: the low carbon indicator is well fulfilled through self-produced organic fertilizer and plant-based pesticides, the resource efficient indicator remains suboptimal due to simple water management and manual cultivation, while the socially inclusive indicator is uneven since economic benefits have not been distributed to members. Viewed through Yusuf al-Qardhawi's six maqashid syariah, the practice reflects most objectives of syariah, except hifdz al-mal, which remains suboptimal because sales proceeds are not distributed to members and marketing reach remains limited.

Keywords *Green Economy, Organic Vegetable Farming, Maqashid Sharia, Women Farmers Group, Yusuf al-Qardhawi*

INTRODUCTION

The world currently faces a triple planetary crisis encompassing climate change, environmental pollution and degradation, and the massive loss of biodiversity. This crisis is no longer merely an ecological issue but has become a determining factor for global economic stability. In 2023, global economic growth slowed to 3.2 percent from 3.5 percent the previous year, reflecting the pressure of geopolitical uncertainty and climate change on the real economy (Wahyuning, 2022). In facing these pressures, the concept of green economy has emerged as a new paradigm offering a middle path between economic growth, social equity, and environmental conservation. For Indonesia, this transition is a strategic imperative for escaping the middle-income trap and achieving developed country status by 2045. Bappenas has positioned the green economy as a key pillar of economic transformation through the Low Carbon Development Indonesia (LCDI) initiative, which emphasizes the decoupling of economic growth from greenhouse gas emissions through renewable energy, the circular economy, and low carbon agriculture (Bappenas, 2022).

From an Islamic perspective, this value of sustainability has long been embedded in *maqashid sharia*, namely safeguarding religion, life, intellect, lineage, property, and the environment. The principles of green economy align deeply with these values, particularly in safeguarding life, intellect, property, and lineage. One crucial sector for implementing the green economy is agriculture. Conventional farming, which relies on chemical inputs, often has negative impacts on the environment and health, so organic farming emerges as an alternative aligned with green economy and *maqashid sharia* alike. One concrete form of this implementation is the Women Farmers Group, a women based agricultural institution promoted by the Semarang City Government in response to the shrinking of farmland due to urbanization. Data from the Semarang City Agriculture Office recorded a decline in agricultural land area from 2,421.3 hectares (2018) to 2,216.53 hectares (2022), making the strengthening of women farmers' groups an important strategy for urban agriculture (urban farming).

Several women farmer groups in Semarang City include the Puspitasari group in Sampangan Village, Gajahmungkur District; the Mandiri group in Cepoko Village, Gunungpati District; the Nandur Sedekah group in Sukorejo Village, Gunungpati District; and the Kartini Makmur group in Ngaliyan Village. Each group has a different mechanism for managing and distributing its produce. The Puspitasari women farmers' group (established in November 2018) distributes its harvest to members and local residents at an affordable price of around Rp5,000 per bundle well below market rates while the remaining proceeds are managed as the group's cash fund (Anistia Rizki & Hidayat, 2025). The Mandiri women farmers' group (Cepoko Village) delivers more quantifiable direct economic benefits, with members earning an average monthly income of IDR 1,968,810 from agricultural activities and the sale of processed products at Semarang City MSME bazaars (Anindita et al., 2019). Meanwhile, the Nandur Sedekah women farmers' group (established 2017) initially distributed its entire harvest free of charge to members, and as the group developed it began selling the harvest to members at affordable prices, while still maintaining its orientation toward direct benefits for members (Hardiani et al., 2024). Unlike the three groups above, the Kartini Makmur women farmers' group in RW 06, Ngaliyan Village, which was only established on 16 February 2025, applies a mechanism in which all proceeds from organic vegetable sales are not distributed to members but are instead fully reinvested as the group's operational capital. According to UNEP, the implementation of the green economy is marked by three main indicators: low carbon, resource efficiency, and socially inclusive, which aim to encourage poverty reduction and the equitable distribution of economic benefits (UNEP, 2011). Preliminary research indicates that the implementation of the green economy within the Kartini Makmur women farmers' group has not yet fully achieved these objectives: members' wellbeing has not significantly improved, resource efficiency remains suboptimal, and the workload of female members remains heavy.

Previous research on green economy and *maqashid sharia* (Khaddafi et al., 2024) (Pohan & Hardi, 2024) (Annisa & Harahap, 2023) has generally focused on normative to conceptual alignment or macroeconomic measurement and has not yet explored the implementative dimension at the micro community level of urban women farmers. This

research is important because the implementation of green economy has so far been assessed mainly from environmental and economic efficiency aspects, whereas its primary goal according to UNEP is the improvement of human welfare and social justice. The maqashid sharia perspective was chosen because it offers a holistic, benefit oriented framework of assessment, making it relevant as an analytical tool for evaluating the quality of green economy implementation in real economic practice, particularly in the case of the Kartini Makmur women farmers' group, whose full reinvestment mechanism makes it a relevant case for in depth study.

This research seeks to answer two main problems. First, how the concept of green economy is implemented in the organic vegetable farming activities of the Kartini Makmur women farmers' group, particularly when viewed through UNEP's three main indicators, namely low carbon, resource efficient, and socially inclusive. Second, how this implementation of green economy, when examined further from the perspective of maqashid sharia according to Yusuf al-Qardhawi, is able to reflect the six objectives of sharia namely safeguarding religion, life, intellect, property, lineage, and the environment in the organic farming practices carried out by this women farmers group. This research aims to analyze the implementation of the green economy concept in organic vegetable farming activities by the Kartini Makmur Women Farmers' Group, as well as to analyze that implementation from the perspective of maqashid sharia.

METHOD

This research uses a qualitative approach with a case study method (case study). The qualitative approach was chosen because it aims to gain an in depth understanding of how members of the farmers group apply green economy principles in their daily lives and the extent to which these practices reflect the values of maqashid sharia, taking into account the complexity of interrelated social, economic, environmental, and spiritual factors. The case study method was used because this research focuses on a single unit of analysis, the Kartini Makmur Women Farmers' Group in RW 06, Ngaliyan Village, Semarang City, which allows for an in depth and contextual exploration of the phenomenon of green economy implementation at the micro community level.

Primary data in this research were obtained through direct observation and in-depth interviews with members of the Kartini Makmur women farmers' group in RW 06, the Ngaliyan Village office, and local residents. Secondary data was obtained from books, research journals, theses, articles, and other relevant written sources to support and reinforce the primary data. Data collection was carried out through three complementary techniques. Observation was conducted directly in the organic farming area managed by a women farmers' group to examine farming practices and the application of maqashid sharia values in supporting the green economy.

Data analysis in this research uses the Miles and Huberman interactive model, which consists of three stages. Data reduction was carried out to simplify complex field data through selecting, focusing attention on, and grouping data relevant to the research focus. Data display was carried out by systematically arranging and organizing data, in the form of both narrative descriptions and diagrams, to make it easier to understand and interpret.

Drawing and verifying conclusions was carried out by re-examining the data and findings to ensure their validity and consistency, so that the resulting conclusions are logical, objective, and scientifically accountable.

The validity of the data was tested through two techniques. Triangulation was carried out in two forms: source triangulation, by comparing and cross-checking information obtained from women farmers' group members, the village office, and local residents to ensure the consistency of information; and technique triangulation, by cross checking data from the same source through three different data collection techniques in depth interviews, direct observation, and documentation. In addition, a member check was carried out by reconfirming the data or the researcher's interpretation with the informants to ensure it matched the meaning and actual experiences they conveyed.

RESULTS

This study analyzed the implementation of green economy in organic vegetable farming at KWT Kartini Makmur using three UNEP indicators: low carbon, resource efficiency, and social inclusion. The findings were further examined through six dimensions of *maqashid syariah* proposed by Yusuf al-Qardhawi.

The low-carbon indicator was implemented through the use of organic fertilizers and botanical pesticides. Organic fertilizers were produced from locally available materials, such as vegetable waste, dry leaves, animal manure, and rice husks, while botanical pesticides utilized plant-based materials. These practices reduced dependence on synthetic agricultural inputs.

The resource-efficiency indicator was implemented through the utilization of vacant land and the reuse of organic waste for agricultural inputs. However, implementation was not yet optimal because water management remained simple, relying on a storage tank and external water sources when necessary. Farming activities were also predominantly manual, resulting in considerable physical workloads for members.

The social-inclusion indicator was reflected in women's participation, routine meetings, training, and educational activities. KWT Kartini Makmur had 54 registered members, with approximately 40 actively participating. Approximately 14 members were inactive due to age, household responsibilities, and limited direct economic benefits. Farming income was managed collectively for operational needs and seeds rather than distributed directly to members.

From the perspective of *maqashid syariah*, the implementation was relatively good in *hifdz al-din*, *hifdz al-aql*, *hifdz al-nasl*, and *hifdz al-bi'ah*. *Hifdz al-nafs* was fulfilled but not optimal due to the physical demands of farming, while *hifdz al-mal* was the least optimal because the activities had not generated significant direct economic benefits for individual members.

DISCUSSION

Based on the results of observation, interviews, and documentation at the Kartini Makmur women farmers' group organic farming site, a picture emerged of the implementation of the green economy based on UNEP's three indicators, namely low

carbon, resource efficient, and socially inclusive, which must be assessed as an integrated whole rather than partially.

1) Low Carbon. The Kartini Makmur women farmers' group consistently applies the low carbon principle by producing its own organic fertilizer and botanical pesticides. The group prioritizes natural materials such as tempeh, shrimp paste, animal manure, and rice husks fermented with EM4 into compost, while pest control is carried out using sprays made from garlic, chili, and lemongrass. This practice has been shown to be consistently carried out by all administrators and members, and was confirmed by the village office, which affirmed that the initiative grew purely out of the members' internal awareness rather than external instruction. This organic waste fermentation process also helps prevent methane emissions and reflects the principle of a circular economy, so that the low carbon indicator is considered to have been well fulfilled

2) Resource Efficient. Although the women farmers' group has succeeded in turning a 22×22 meter plot of land into a productive garden with at least 15 types of plants, resource efficiency has not yet been optimal. The irrigation system still relies on a water tank without an independent backup such as drip irrigation or rainwater harvesting, making it vulnerable to interruption and dependent on assistance from local residents. In addition, the entire cultivation process is still carried out manually, creating a heavy physical burden for the members, all of whom are women, and even forcing the group to pay outside labor for heavy work such as clearing new land. This condition shows that resource efficiency concerns not only natural inputs but also human labor efficiency a dimension that remains a weak point for the Kartini Makmur women farmers' group.

3) Socially Inclusive. Of the 54 registered members, only about 40 people (74%) actively participate on a regular basis, while 14 people (26%) are inactive due to old age, the double burden of household responsibilities, and the lack of direct financial incentives. In terms of economic benefits, all sales proceeds are placed into the group's cash fund for operational needs of the garden, so members have not yet felt any additional cash income and only benefit from savings on household expenses by consuming their own vegetables. This condition runs counter to the principle of equitable distribution of economic benefits in the green economy (Sa'idah et al., 2023). By contrast, access to knowledge shows relatively good achievement through regular monthly meetings and outreach from relevant agencies, supported by active mentoring from the village office. Local residents also feel the benefit of a greener environment and easier access to fresh organic vegetables, although they acknowledge that the impact on improving the community's economic welfare has not yet been very significant.

Overall, the implementation of the green economy at the Kartini Makmur women farmers' group produces two main effects: the realization of the group's financial independence through reinvesting sales proceeds into its operational fund, and improved local food security for residents of RW 06 through access to fresh and affordable organic vegetables. However, the achievement of the socially inclusive and resource efficient indicators still requires improvement so that economic benefits and work efficiency can be felt more equitably by all members.

The organic vegetable farming activities of the Kartini Makmur women farmers' group are also analyzed through the perspective of the six maqashid sharia according to Yusuf al-Qardhawi, namely *hifdz al-din*, *hifdz al-nafs*, *hifdz al-aql*, *hifdz al-mal*, *hifdz al-nasl*, and *hifdz al-bi'ah*.

1) *Hifdz al-Din* (Safeguarding Religion). The value of safeguarding religion is reflected in the spiritual motivation underlying the farming activities of the women farmers' group members. Farming is intended as a form of worship making beneficial use of land while also providing healthy vegetables for family and local residents. This intention is in line with Kartini Makmur women farmers' group vision, which explicitly includes a religious dimension: "to have taqwa toward God Almighty and to enhance religious social life". This commitment grows out of the members' internal awareness rather than instruction from the village office, so that the implementation of *hifdz al-din* is considered to have been well realized through the intention of worship and the awareness of protecting the environment as a form of obedience to Allah SWT.

2) *Hifdz al-Nafs* (Safeguarding Life). One of the main motivations for members of the women farmers' group to choosing organic farming is concern for the health of themselves, their families, and the surrounding community, since the resulting vegetables are free of harmful chemical residues. Local residents who purchase products from the women farmers' group also experience these health benefits, as the vegetables are considered fresher and safer for consumption. On the other hand, because all members are women, there are limitations in carrying out physically demanding farming activities, such as tilling the soil, which must be assisted by outside labor. Thus, the implementation of *hifdz al-nafs* has been realized but is not yet fully optimal, since the fairly heavy physical workload for members still requires further attention.

3) *Hifdz al-Aql* (Safeguarding Intellect). Members of the Kartini Makmur women farmers' group have gained a variety of new knowledge and skills since joining the group's activities, ranging from seedling techniques and plant care to independently producing natural fertilizer and pesticides. The regular monthly meetings serve as a forum for both coordination and learning, reinforced by technical mentoring from relevant agencies. The educational tourism activities developed by the women farmers' group also a concrete form of implementing *hifdz al-aql*, since they disseminate knowledge of organic farming to the general public, students, and other farmers groups who visit. Thus, the implementation of *hifdz al-aql* is reflected in this ongoing knowledge transfer and educational tourism program.

4) *Hifdz al-Mal* (Safeguarding Property). In practice, the activities of the Kartini Makmur women farmers' group have not yet fully succeeded in realizing the principle of *hifdz al-mal*. The proceeds from vegetable sales have not become direct income for members, as they are entirely returned to the group's cash fund for the garden's operational needs. The marketing reach, which is still limited to the surrounding area, is also a factor that reduces the potential economic benefit that could be obtained. Thus, the implementation of *hifdz al-mal* within the Kartini Makmur women farmers' group remains suboptimal, as it has not yet succeeded in providing significant economic benefits to individual members.

5) *Hifdz al-Nasl* (Safeguarding Lineage). The commitment of the Kartini Makmur women farmers' group to environmentally friendly farming practices is a concrete manifestation of concern for the sustainability of future generations. Gardening activities also serve as a learning tool for family members, since members' children and grandchildren are often brought along and introduced to how to plant and care for crops. The educational tourism activities that introduce organic farming practices to visiting young people and students also carry a strong dimension of *hifdz al-nasl* as a long term investment. Thus, the implementation of *hifdz al-nasl* has been well realized.

6) *Hifdz al-Bi'ah* (Safeguarding the Environment). *Hifdz al-bi'ah* is al-Qardhawi's original contribution to the development of contemporary maqashid sharia theory, as affirmed in his book *Ri'ayat al-Bi'ah fi Syari'at al-Islam* that modern environmental damage threatens all five principal objectives of sharia at once, so that environmental protection must be elevated to the status of an independent essential maqashid (Al-Qaradawi, 2001). Organic fertilizer and natural pesticides are used consistently to keep the soil fertile, while vegetable scraps and organic waste are reused as compost material. The conversion of previously unmanaged vacant land into productive land also reflects a form of environmental concern, which local residents experience as a greener and cleaner environment, even though its benefit to economic welfare is not yet optimal. Thus, the organic farming activities of the Kartini Makmur Women Farmers Group tangibly reflect the application of *hifdz al-bi'ah* (environmental preservation), establishing the group as a model of eco-friendly urban organic farming grounded in strong sharia values.

CONCLUSION

Based on the results and discussion of the implementation of the green economy in organic vegetable farming by the Kartini Makmur Women Farmers Group from the perspective of maqashid sharia, two conclusions can be drawn. First, the implementation of the green economy at the Kartini Makmur women farmers' group is uneven across the three UNEP indicators. The low carbon indicator has been well fulfilled through the use of self-made organic fertilizer and plant based botanical pesticides, which grew out of the members' internal awareness. The resource efficient indicator is not yet optimal, as the water management system remains simple and relies on a storage tank and assistance from residents, while the entire cultivation process is carried out manually, burdening the members, all of whom are women. The socially inclusive indicator shows uneven achievement; access to knowledge is relatively good through outreach and regular meetings, but the equitable distribution of economic benefits is not yet optimal, since all sales proceeds are placed into the group's cash fund without distribution to members, and about 26% of members are inactive due to age, the double burden of household responsibilities, and the lack of direct economic benefit.

Second, from the perspective of Yusuf al-Qardhawi's six maqashid sharia, the organic vegetable farming activities of the Kartini Makmur women farmers' group have reflected most of the objectives of sharia. *Hifdz al-din* is realized through the intention of worship and the awareness of protecting nature as a trust from Allah. *Hifdz al-nafs* has been realized but is not yet optimal, as the manual cultivation process creates a heavy physical burden

for members. *Hifdz al-aql* is reflected in the transfer of organic farming knowledge and educational tourism. *Hifdz al-nasl* is realized through instilling environmental awareness in the younger generation. *Hifdz al-bi'ah* is evident in composting practices, the use of vacant land, and urban greening. Meanwhile, *hifdz al-mal* remains suboptimal, as sales proceeds are not distributed to members and the marketing reach remains very limited.

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