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A Case Study on the Sustainability of Kumalarang Smallholder Farmers

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A B S T R A C T

Sustainability is not just about protecting the environment; it is also about empowering communities to make informed choices, manage risk, and invest in a sustainable future. This study aims to explore the sustainability of smallholder farmers. The research is qualitative, and semi-structured interviews are conducted with ten smallholder farmers to describe their experiences of sustainable agriculture and its influence on farming practices and livelihood changes. Purposive sampling is used by the researchers as they intentionally select participants according to a particular criterion. The researchers can use a case study to develop a rich understanding of the difficulties and benefits linked to the incorporation of sustainable methods for smallholder farmers within the region. Farmers welcomed the support they get from the government but said it does not go far enough to meet their financial requirements, letting them achieve sustainable livelihoods. The government must hear smallholder farmers out, but sustainable agriculture programs and access to markets should be the focus. To produce more understanding and close the gap of research on smallholder farmers we recommend that future researchers investigate deeper to understand the importance of sustainable agriculture among smallholder farmers.

Keywords: smallholder farmers, sustainability, sustainable agriculture

1. Introduction

Smallholder farmers have a unique role in the new global development agenda but smallholder farmers experience myriad challenges in developing and sustaining their livelihoods. The impacts of both environmental degradation and climate change are usually more severe for smallholder farmers because smallholder farmers have less access to human, social and financial capital and information. Poor water management in many countries has resulted in land degradation in irrigated areas through salinization and waterlogging. Inappropriate use of fertilizers and pesticides has led to water pollution and damage to larger ecosystems, where excess nitrates from agriculture enter water systems. Fertilizer nutrient runoff from agriculture has become a major problem in intensive systems, causing algal bloom and destroying wetlands and wildlife habitats. While a couple of studies assess the quality of sustainable agriculture of smallholder farmers, more studies are still needed.

This study aims to bridge this gap his study aims to understand and guide smallholder farmers in their agricultural practices as part of their operations that enable smallholder farmers to achieve sustainable agriculture by enhancing comprehensive sustainable farming practices. This study focuses on how sustainable farming practices approaches could be applied to support the development of a sustainable agricultural sector for Local Smallholder farmers, examine their challenges, and propose tailored solutions to enhance their prospects of long-term success.

2. Review of Related Literature

Smallholder farmers are the backbone for implementing the Sustainable Development Goal (SGD). Most smallholder farmers have farms operating 2 hectares of land or less (United Nations Conference on Trade and Development [UNCTAD], 2015). In addition, UNCTAD argues that smallholder farmers are critical actors in the quest for a more encompassing and socially and environmentally sustainable agricultural development approach. The number of smallholder farmers and their share in total cultivated area has been increasing over time in some Asian countries. Small farms are characterized by smaller applications of capital but higher use of labour and other family-owned inputs, and a generally higher index of cropping intensity and diversification (Thapa, G., & Gaiha, R. (2014). The Western Cape Department of Agriculture describes that the farming systems of the various producers are complex, and their livelihood strategies are diverse (2017).

Smallholder farmers are facing several challenges in producing food in a sustainable manner as well as in diversifying from their dependence on cereal production to the production of high-value commodities (Temu et al., 2015). Climate change will have serious consequences for agriculture,

particularly for smallholders in poor developing countries. In low-lying areas, agriculture will be adversely affected by flooding and salinization due to sea level rise and saltwater intrusion in groundwater aquifers (Tosi et al., 2021). Soil fertility was low overall, and certain farming practices appeared to limit the sustainability of agricultural production (Mungai, 2016). Smallholder farmers' contribution to the total value of agricultural output is also significant in many countries of Asia. Several sustainable agricultural pathways emerged to tackle the complex set of interrelated environmental such as land degradation and climate change, and socio-economic challenges linked with agricultural production (Oberč, 2020).

Research emphasizes the need for policies that prioritize sustainable agricultural development. Continuous education on sustainable farming practices is essential for improving the skills and knowledge of smallholder farmers. Training programs focusing on 11 sustainable agricultures have been shown to increase productivity and environmental stewardship (Kassam et al., 2021). Supportive policies that promote access to markets, land rights, and fair pricing are critical for enhancing the adaptive capacity of smallholder farmers (Fan & Rue, 2020). Addressing these challenges through research and policy enhancements will promote sustainable farming practices for smallholder farmers of long-term success.

3. Methodology

This research is anchored on the Sustainable Livelihoods Framework by Chambers and Conway in 1992. This theory highlights the importance of understanding the complex factors that influence the livelihoods of rural people, particularly smallholder farmers. It emphasizes the interaction between five capital assets: financial, human, 12 natural, physical, and social. People and their capacity for a livelihood, intangible assets (claims and access), tangible assets (stores and resources), and activities for a living are the components of a livelihood (Yanuartati, 2023). The diversity of livelihood capital amplifies one's capacity to respond to shocks and challenges, accumulate resources, give a broader range of options for decisions and actions, spread risk, and therefore bolster resilience (Zhang et al., 2024).

This theory was relevant to the study since it acknowledges that farmers' livelihoods are not just about farming. They are influenced by a wide range of factors, including access to resources, social networks, skills, and economic opportunities and threats. This is important since many Filipinos, particularly farmers, engage in multiple activities to make ends meet. Additionally, this will encourage sustainable practices that not only improve livelihoods but also protect environmental resources, ensuring long-term viability (Matiwane & Matiwane, 2023). By undertaking this approach, organizations and the government are provided with the opportunity to identify and develop tailored interventions aimed at enhancing livelihood resilience for the sustainability of smallholder farmers of Kumalarang.

4. Findings and Conclusion

The goal of the study was to comprehensively assess the agricultural practices, economic viability, and environmental impacts associated with smallholder farmers in Kumalarang. With the assistance of a detailed summary and analysis, the researchers came up with the following conclusions.

Smallholder farmers highlight the key challenges and farmers' needs to work towards sustainable agriculture. Participants emphasized the importance of agricultural inputs, agricultural mechanization, carabaos, and sources of agricultural needs for improving crop yields. Such proactive strategies include leveraging government support, enhancing land health, and diversifying income through livestock and credit options. However, barriers such as inadequate distribution of government support, complex compliance requirements, and inconsistent assistance hinder progress. Faced with challenges, farmers have adapted by developing 80 adaptive strategies, such as crop diversification and community collaboration, to overcome these challenges. Additionally, participants identified critical needs such as better market access, reliable government support, effective irrigation, and improved financial resources. Addressing these needs is essential for improving food security and promoting rural development. By consolidating leadership, carrying out focused interventions, and collaborating among stakeholders, farmers can be empowered to create a sustainable agricultural landscape. Improved policies can enable stakeholders to enhance access to agricultural inputs and training for smallholder farmers, ensuring sustainable agricultural practices in food security and rural development.

The research found that numerous smallholder farmers desire the continuous support of the government along with training and arrangements for sustainable advancing production and productivity.

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