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Exploring the wisdom of Traditional Agriculture related Ecocentric systems: A Study of Atanwala Village, Sri Lanka

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Abstract *— This study examines the eco-centric agricultural systems preserved within Atanwala Village, Sri Lanka, as a model to inform and inspire contemporary design thinking. Rooted in the principles of ecocentrism, which prioritise harmonious relationships between living and nonliving elements of an ecosystem, Atanwala's agricultural practices embody a sustainable approach that integrates environmental, social, cultural, and economic dimensions. These systems, which are increasingly under threat from rapid modernisation, offer valuable insights into creating sustainable design solutions that align with global objectives for ecological preservation and community resilience.*

The research employs Interpretive Phenomenological Analysis (IPA) to analyse qualitative data collected through observational fieldwork and semi-structured interviews with Atanwala residents engaged in traditional paddy cultivation. This methodology facilitates an in-depth exploration of the eco-centric practices that have allowed the village to maintain its agricultural heritage while addressing the challenges of environmental and economic sustainability. The study focuses on three sustainability pillars: environmental, social and cultural, and economic. Each is closely examined to uncover how Atanwala's practices holistically integrate these values into their agricultural systems.

Environmental sustainability in Atanwala is evident in practices that rely on natural inputs and minimise ecological disruption. Techniques such as organic fertilisation, natural pest control, and soil conservation underscore the village's commitment to preserving biodiversity and maintaining soil health. By avoiding chemical fertilisers and pesticides, the community fosters an agricultural system that supports long-term ecological balance and resilience. This approach exemplifies the integration of ecocentric principles into daily practices, ensuring that the needs of the environment are prioritised alongside human activities.

Social and cultural sustainability is deeply embedded in the agricultural practices of Atanwala. Communal labour, traditional rituals associated with planting and harvesting, and the intergenerational transfer of knowledge serve as cornerstones of the village's social fabric. These practices foster strong

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social cohesion and reinforce cultural heritage, promoting a sense of shared responsibility for sustainable agriculture. Rituals and celebrations tied to the agricultural calendar not only strengthen community bonds but also serve as a means of preserving cultural identity in the face of modernisation.

Economic sustainability is achieved through efficient resource use, adaptability to environmental changes, and resilience against external pressures. By relying on local resources and sustainable methods, Atanwala's agricultural systems ensure stable livelihoods and economic viability. The village's model highlights the potential for traditional practices to offer economic stability without compromising ecological integrity or cultural values. This balance provides a blueprint for integrating sustainability into broader economic systems.

The study identifies and analyses these eco-centric values using a structured methodology. The research follows a seven-phase approach: planning, literature review, pilot study, data collection, transcription, data analysis, and synthesis. Observational fieldwork and semi-structured interviews were central to the data collection process, allowing researchers to capture nuanced insights into the lived experiences of the Atanwala community. Data analysis was conducted in three stages: primary coding, focused coding aligned with stages of the paddy cultivation cycle, and categorisation under the three sustainability pillars. This comprehensive approach ensured that the findings accurately reflect the interconnected nature of Atanwala's agricultural systems.

The research findings reveal the transformative potential of Atanwala's eco-centric practices to inform the "empathise" phase of contemporary design thinking. By integrating principles such as resource conservation, cultural reverence, and communal responsibility, the study advocates for a shift from anthropocentric to eco-centric design methodologies. This transition broadens the scope of design to consider the needs of the entire ecosystem, promoting innovation that is both environmentally inclusive and socially equitable.

The insights gained from Atanwala's agricultural systems also underscore the importance of traditional knowledge in addressing modern sustainability challenges. The village's practices demonstrate that sustainable solutions can be rooted in heritage and adapted to contemporary contexts. For instance, the use of organic inputs and natural pest control methods reflects an understanding of ecological systems that modern agricultural practices often overlook. These eco-centric values offer a framework for rethinking design processes to prioritise environmental integrity, social cohesion, and economic resilience.

Visually, the research presents its findings using conceptual frameworks and diagrams to illustrate the interconnected sustainability pillars. For example, a Venn diagram highlights the overlap between environmental, social, cultural, and economic sustainability, showing how shared values such as resource management and cultural beliefs underpin the village's agricultural practices. These visual tools help convey the holistic nature of Atanwala's systems and their relevance to contemporary design challenges.

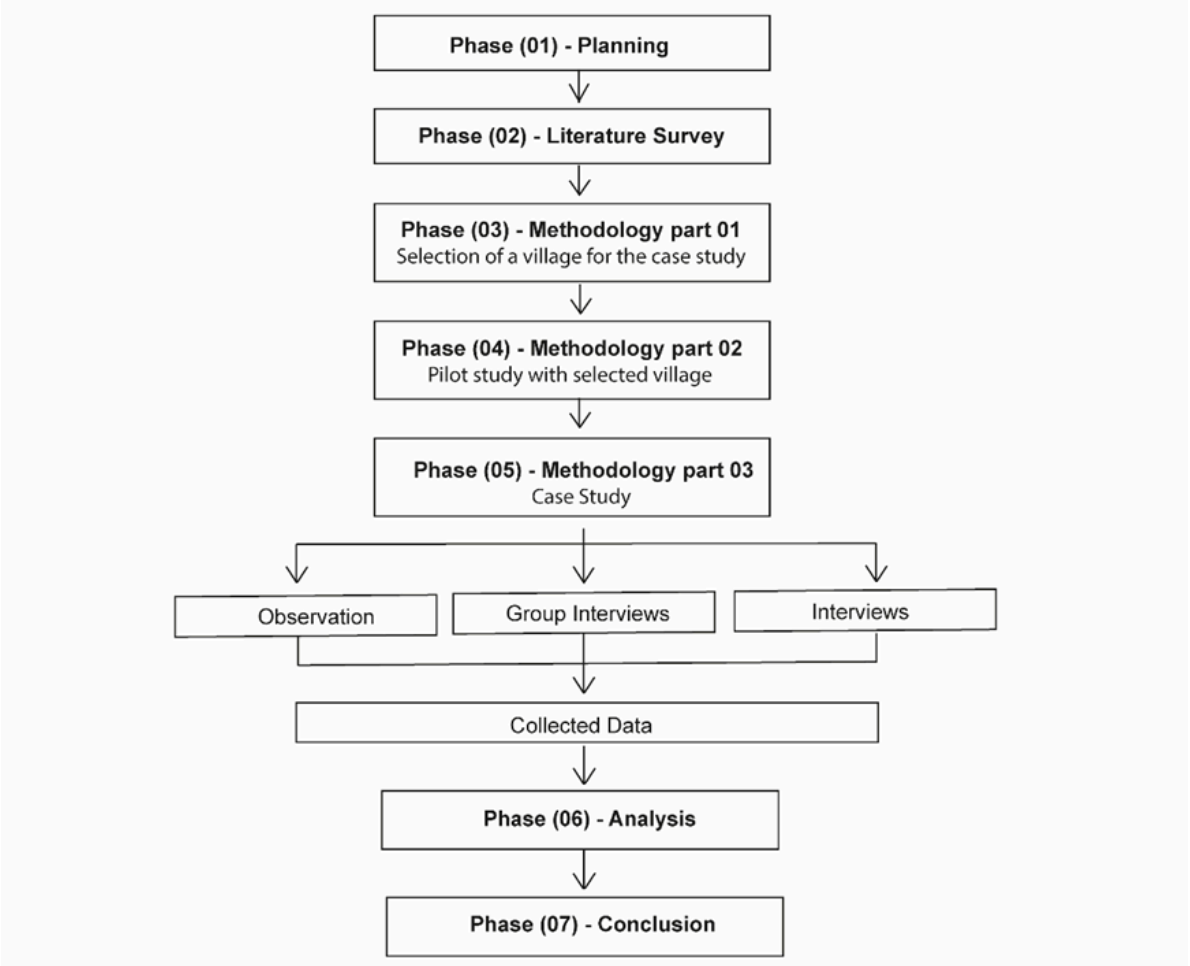
The implications of this research extend beyond the context of Atanwala Village. By demonstrating how eco-centric principles can be embedded into the design process, the study provides a model for addressing sustainability in diverse fields, from architecture and urban planning to product and service design. The findings also align with global sustainability goals, emphasising the need for innovation that respects ecological limits and promotes social equity.

Atanwala's agricultural practices highlight the potential for traditional systems to offer sustainable solutions in a rapidly changing world. The study's focus on eco-centric values contributes to a growing body of knowledge that seeks to bridge the gap between traditional wisdom and contemporary innovation. By adopting these principles, designers can create products and services that reflect ecological resilience, cultural sensitivity, and economic viability.

In conclusion, this research underscores the transformative potential of traditional eco-centric agricultural practices to inspire contemporary design thinking. Atanwala Village serves as a powerful example of how sustainability can be achieved through a balance of environmental, social, cultural, and economic considerations. By drawing on the wisdom of traditional systems, the study advocates for a holistic approach to design that prioritises the needs of the entire ecosystem. This work highlights the importance of integrating eco-centric values into the design process to address global sustainability challenges and foster a more inclusive and resilient future.

Keywords: *Ecocentrism, traditional agriculture, sustainability, design thinking, cultural heritage, ecological design integration.*

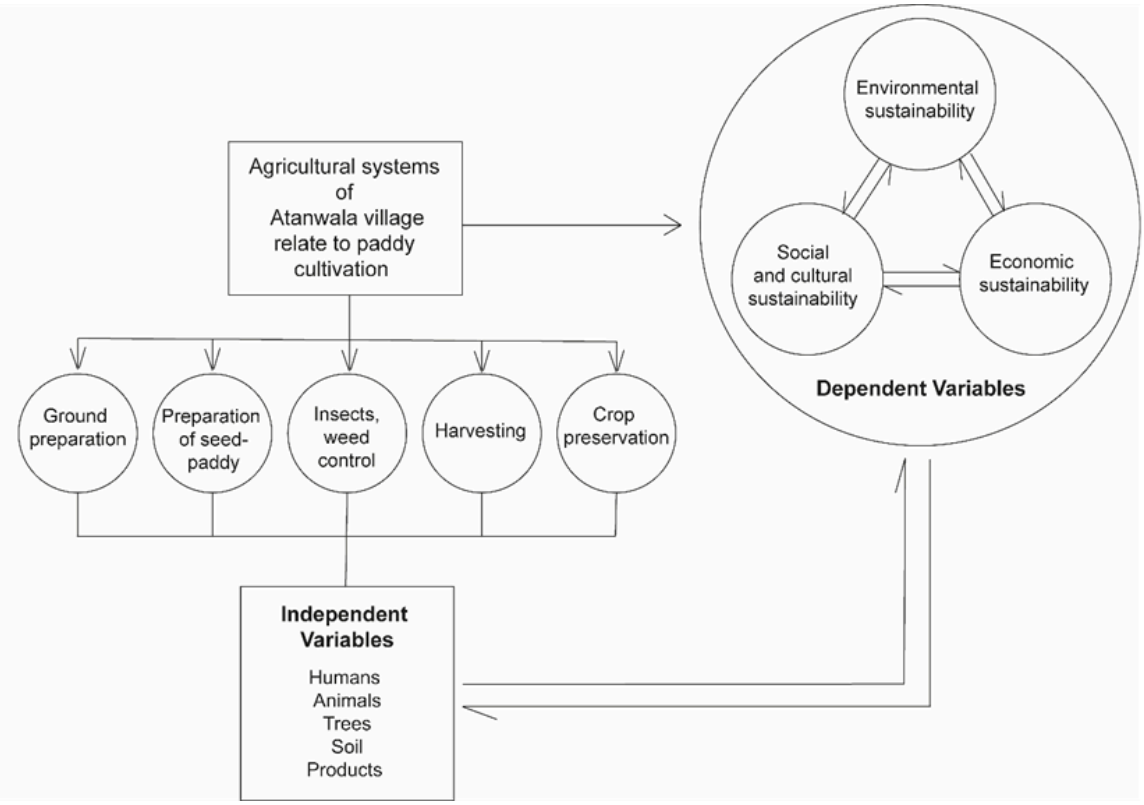
Figure 1
The structure of the research plan



Note. Source: Author

Figure 2

Conceptual framework



Note. Created by the author

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