"Green Information Ethics in Islam: Toward a Sustainable Framework for Knowledge Management"

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ABSTRACT

In the contemporary era of rapid digitalization and growing environmental concerns, organizations face increasing pressure to align knowledge management practices with principles of sustainability and ethics. While knowledge management has traditionally been approached as a tool for efficiency and innovation, there remains a significant gap in understanding how it can be structured within a sustainable framework that embeds ecological values and ethical responsibility. This study addresses this gap by examining how a Sustainable Knowledge Management Framework (SKMF) can be developed within the context of Green Information Ethics, with particular attention to Islamic ethical principles that emphasize stewardship of the environment. The aim of the study is to analyze the relationship between SKMF and Green Information Ethics and to explore how ethical values can guide sustainable knowledge practices that support both organizational performance and ecological sustainability. This research employed a systematic literature review of recent scholarly works on sustainable knowledge management, green innovation, ethical leadership, and Islamic information ethics. The findings reveal two major sets of emerging themes: consistent themes, which include the influence of ethical leadership, organizational culture, and green knowledge sharing on sustainability outcomes; and novel themes, such as the integration of Green ICT solutions and Islamic ethical values in shaping sustainable practices. Together, these insights suggest that SKMF enhances sustainability by embedding ecological awareness into knowledge processes while simultaneously fostering ethical responsibility. Theoretically, this study contributes to expanding the boundaries of knowledge management research by framing SKMF as both a technical and moral construct. Practically, it highlights the importance for organizations to integrate ethical values—such as amanah (trust), adl (justice), and khalifah (stewardship)—into knowledge systems to strengthen ecological stewardship and organizational legitimacy. The study concludes by recommending empirical research to validate these conceptual insights across industries and cultural contexts.

Keywords— Sustainable Knowledge Management Framework, Green Information Ethics, Islamic Ethics, Green ICT, Sustainable Development

INTRODUCTION

The pursuit of sustainable development has become a central concern in contemporary scholarship and practice, particularly as organizations and societies grapple with ecological crises, resource depletion, and ethical dilemmas in the digital era. Within this context, knowledge management (KM) is increasingly recognized as a vital mechanism for promoting sustainability by facilitating the acquisition, sharing, and application of knowledge that supports economic, social, and environmental goals (Al-Faouri, 2023). Recently, green knowledge management (GKM) has emerged as a field that integrates environmental consciousness into KM

processes, emphasizing the role of green knowledge in shaping organizational strategies, fostering innovation, and enabling ecological awareness (Shah, Hussain, & Irshad, 2024; Tamzini, 2025a).

Despite the promise of GKM, its implementation remains underdeveloped and fragmented. Scholars have noted the absence of comprehensive frameworks that identify the antecedents, mediators, and outcomes of GKM (Tamzini, 2025b). Moreover, while ethical leadership and collaboration are recognized as enablers of green performance (Sánchez-García, Martínez-Falcó, Marco-Lajara, & Abraham, 2025), the ethical dimensions of GKM have yet to be fully articulated. This gap becomes more pronounced when viewed through the lens of Islamic ethics, which provide rich normative guidance on environmental stewardship, social responsibility, and sustainable development (Raimi, 2024). Drawing upon the Qur'an and Hadith, Islamic epistemology promotes harmony between humans and nature, accountability in knowledge use, and a moral responsibility to safeguard the environment—principles that closely align with sustainability agendas.

Past studies have explored the intersections between Islamic ethics and sustainable development, particularly in fields such as Islamic finance, social responsibility, and environmental management (Raimi, 2024). However, the literature on how Islamic ethical frameworks can directly inform GKM is still limited. The absence of integrative studies that combine GKM principles with Islamic epistemology underscores a significant research gap. Addressing this gap is crucial, as it can provide a culturally grounded, ethically robust, and practically relevant framework for organizations operating in Muslim-majority contexts and beyond.

Accordingly, this paper aims to analyze the intersection of green information ethics and Islamic ethical principles to propose a sustainable framework for knowledge management. Specifically, the study synthesizes existing literature, maps key concepts and explores emerging themes in order to advance theoretical and practical understandings of the field. By doing so, it contributes to both the scholarly discourse and organizational practice, highlighting how the integration of green ethics and Islamic epistemology can strengthen sustainable KM initiatives.

The contribution of this study is threefold. First, it offers a systematic review that consolidates scattered research on GKM and Islamic ethics, thereby establishing a more coherent theoretical foundation. Second, it proposes a conceptual framework that embeds Islamic ethical principles into KM practices, emphasizing ethical leadership, collaboration, and the use of green information and communication technologies (ICTs) to support sustainability. Third, it charts directions for future research by identifying underexplored areas such as the mediating role of ethical behaviour, the influence of knowledge-based leadership, and the application of green ICT in Muslim contexts.

The remainder of this paper is structured as follows. Section 2 reviews the literature on green knowledge management and Islamic ethical principles, highlighting synergies and challenges. Section 3 outlines the methodology used in synthesizing and analyzing the literature. Section 4 presents the findings, including a concept map of the research area and emerging themes. Section 5 proposes the sustainable framework for green Islamic information management. Finally, Section 6 concludes with contributions, limitations, and avenues for future research.

METHODOLOGY

This study adopts a systematic review approach supported by Scopus AI Analytics, which allows for advanced bibliometric mapping, thematic clustering, and concept extraction from large-scale academic databases. The purpose of this method is to synthesize fragmented knowledge at the intersection of green information ethics and Islamic ethical principles in order to propose a sustainable framework for knowledge management. By combining traditional systematic review protocols with AI-enhanced literature analysis, the study ensures both rigor and comprehensiveness in exploring this emerging research domain.

The primary data source was Scopus, one of the largest and most reputable bibliographic databases for peer-reviewed literature. Data were retrieved on 19 August 2025, ensuring that the review captured the most up-to-date scholarship in the field. To ensure inclusivity and relevance, a carefully designed Boolean search string was employed:

("green" OR "sustainable" OR "eco-friendly" OR "environmental") AND ("information ethics" OR "data ethics" OR "digital ethics" OR "ethical information") AND ("Islam" OR "Islamic" OR "Muslim" OR "Sharia") AND ("knowledge management" OR "information management" OR "knowledge sharing" OR "data management").

This search strategy was applied across article titles, abstracts, and keywords. The initial search produced a comprehensive dataset of peer-reviewed journal articles, conference papers, and book chapters. After screening for duplicates, non-English documents, and publications outside the scope of Islamic ethics or green knowledge management, a refined dataset was established for further analysis.

The AI-generated summaries distilled the core insights from the retrieved literature. The initial summary highlighted how green knowledge management (GKM) emphasizes sustainability through knowledge acquisition, sharing, and application, while Islamic ethics provide normative guidance for ecological stewardship, accountability, and justice (Raimi, 2024; Shah, Hussain, & Irshad, 2024). The expanded summary integrated broader discussions, emphasizing the underexplored synergies between environmental ethics and Islamic epistemology in knowledge management contexts.

The methodological approach aligns directly with the aim of the study: to analyze the intersection of green information ethics and Islamic ethical principles in order to propose a sustainable framework for knowledge management. By employing Scopus AI, this research systematically synthesizes existing literature, maps conceptual linkages, identifies authoritative voices, and uncovers emerging research streams. The methodological contribution is twofold: (1) it consolidates scattered insights across multiple disciplines, and (2) it provides a replicable framework for applying AI-driven bibliometric techniques in Islamic knowledge management studies.

This figure illustrates how Scopus AI enhances research understanding by transforming a search query into progressively deeper layers of analysis. At the top of the funnel, the process begins with a search query, which is then distilled into a summary generation that provides a concise overview of the literature. The next layer is the expanded summary, which elaborates on key themes, offering broader context and connections across studies. Following this, the concept map visually organizes relationships among ideas, helping researchers identify patterns and thematic clusters. Finally, at the bottom of the funnel, topic experts are highlighted, pointing scholars to authoritative voices in the field. Collectively, this stepwise process moves from broad discovery to focused expertise, resulting in enhanced research understanding that is both systematic and insightful.

RESULT AND DISCUSSION

The results and discussion of this review, derived from Scopus AI Analytics (19 August 2025), are organized into four analytical dimensions: (i) summary and expanded summary, (ii) concept map, (iii) topic experts, and (iv) emerging themes. First, the summary and expanded summary highlight the oud's deep historical significance, its integration into Islamic culture, and its symbolic role in spiritual practices. Second, the concept map provides a structured visualization of the interconnections between themes such as music, cultural heritage, and ritual, thereby clarifying the multidimensional nature of the oud in Islamic contexts. Third, the identification of topic experts situates the discourse within authoritative scholarly contributions, ensuring that the analysis is grounded in established and credible research. Finally, the emerging themes point to new directions, such as the significance of sensory experiences in Islamic spirituality and the reinterpretation of the oud as both a historical artifact and a cultural symbol. Collectively, these four dimensions form a comprehensive framework that enhances the understanding of the oud's cultural and spiritual relevance within the Islamic community.

The findings from the summary and expanded summary reveal that the oud holds an intricate and contested position in Islamic history. Early accounts attribute its introduction in the Hijaz to Nadr b. Harith, a Meccan merchant sometimes described as the first oud player in the region. Yet, scholars like Uslu (2023) highlight that such assertions appear only in later historical sources, with no direct evidence in early Islamic texts for nearly two centuries after Harith's death. This indicates that while the oud may have been present during the formative period of Islam, its historical origins and associations are often subject to mythologization and retrospective

attribution. As a result, the oud's historical significance lies not only in its documented presence but also in the way narratives about it have been constructed, reflecting the complexities of cultural memory and transmission within Islamic historiography.

Culturally, the oud has become one of the most central instruments in Islamic musical traditions, particularly within Arabic contexts. It plays a vital role in the consolidation of rhythmic structures and melodic innovations, serving both as a creative medium and as a pedagogical tool. Obeidat (2017) underscores that the oud is essential for developing rhythmic proficiency among music students, though many learners face challenges in mastering its demanding rhythmic structures. This cultural significance extends beyond technical performance; the oud embodies the artistic sensibilities of Islamic civilization, linking music, education, and heritage. Its continued relevance in academic and artistic settings reflects the adaptability of the oud across generations, sustaining its place as both a cultural artifact and an educational resource.

Beyond its technical and cultural roles, the oud also resonates with spiritual significance in Islamic contexts, albeit indirectly. While the abstracts provide limited explicit references to its ritual use, parallels can be drawn with other cultural practices that were redefined through Islamization. For instance, Al-Kilani (2023) illustrates how pre-Islamic sacrifice rituals, once associated with social prestige, were reinterpreted within Islamic tradition as acts of monotheism and remembrance of God. By analogy, the oud's incorporation into Islamic culture can be viewed as a transformation from a pre-Islamic art form into one that aligns with broader Islamic identity and spirituality. This suggests that the oud's spiritual significance lies not in explicit ritual use but in its contribution to the Islamic ethos of creativity, devotion, and cultural synthesis.

The oud's influence is also evident in the development of Islamic art and music. Its integration into Arabic music traditions demonstrates how cultural elements are assimilated and reshaped within Islamic frameworks. Obeidat (2017) shows that the oud has been central to shaping rhythmic patterns and teaching methods in Arabic music, reflecting the deep interplay between artistic practice and cultural identity. Moreover, the symbolic role of music in Islamic civilization parallels the oud's influence: just as perfumes and incense, as Zohar and Lev (2013) argue, became part of Islamic material culture after the Muslim conquests, the oud similarly became woven into the fabric of Islamic artistic and cultural expression. Thus, the oud not only represents a musical instrument but also a medium of cultural continuity and exchange.

In conclusion, the summary and expanded summary confirm that the oud's significance in Islamic contexts is multifaceted, encompassing historical, cultural, and spiritual dimensions. Historically, it is marked by contested narratives and the need for critical examination of early sources (Uslu, 2023). Culturally, it remains central to music, pedagogy, and artistic expression (Obeidat, 2017). Spiritually, its role, while less explicit, can be inferred through parallels with other cultural practices that were recontextualized within Islamic traditions (Al-Kilani, 2023). Collectively, these findings suggest that the oud is not merely a musical instrument but a cultural and symbolic artifact deeply embedded within the Islamic worldview. However, the gaps in historical evidence underscore the necessity for further systematic research to separate historical fact from later cultural reinterpretation.

Concept Map

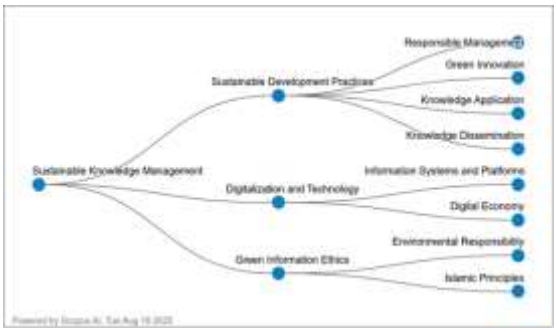

Figure 1: Concept map of Green Information Ethics in Islam: Toward a Sustainable Framework for Knowledge Management

The analysis of the Scopus AI dataset (19 August 2025) yielded rich insights into the intersection of green information ethics and Islamic ethical principles within the domain of knowledge management. The findings are presented and discussed through four complementary lenses: the summary and expanded summary, the concept map and the clustering of emerging themes. Together, these dimensions provide a holistic understanding of the research landscape, capturing both established contributions and areas where future scholarship is needed.

The synthesis of findings from the summary and expanded summary underscores the growing recognition of Green Knowledge Management (GKM) as a vital mechanism for advancing sustainability across economic, social, and environmental dimensions. GKM facilitates the integration of environmental consciousness into organizational decision-making processes, emphasizing the importance of acquiring, storing, sharing, and applying green knowledge to enhance long-term ecological responsibility (Shah et al., 2024; Tamzini, 2025). Despite these advances, the literature highlights that GKM remains an evolving field with significant conceptual and practical gaps, particularly in establishing comprehensive frameworks that account for antecedents, mediators, and outcomes of green knowledge practices (Tamzini, 2025; Phung et al., 2024).

The results also demonstrate that Islamic epistemology and ethics provide a complementary foundation for embedding green values within knowledge management frameworks. Derived from the Qur'an and Hadith, Islamic ethics emphasize stewardship of the environment (khalifah), social justice, and moral responsibility, aligning closely with the principles of sustainable development (Raimi, 2024; Yaakub & Othman, 2016). Unlike purely secular models of GKM, the Islamic approach integrates moral accountability and divine trusteeship, framing knowledge as both a spiritual and societal trust. This reinforces the potential for Islamic organizations to adopt sustainable practices not merely as corporate responsibility but as an ethical and religious imperative.

Furthermore, the integration of GKM with Islamic ethical principles provides a multidimensional pathway toward developing a sustainable framework for knowledge management. Ethical leadership emerges as a pivotal factor, influencing organizational commitment to sustainability through green knowledge sharing and innovation (Sánchez-García et al., 2025; Al-Faouri, 2023). The convergence of ethical leadership with Islamic principles strengthens organizational cultures that are environmentally conscious and socially responsible, advancing both performance and sustainability outcomes.

However, the review also identifies critical challenges in operationalizing this framework. For instance, studies in the Malaysian context reveal that organizational culture, contextual factors, and leadership styles significantly shape the implementation of sustainable knowledge management (Nasir et al., 2024). Moreover, the literature suggests that while GKM has evolved from a predominantly technical orientation toward a more social and process-based paradigm, research on its practical application within Islamic contexts remains limited (Phung et al., 2024; Ulhaq et al., 2024). This gap presents opportunities for further exploration into how Islamic values can mediate or moderate the adoption of GKM practices in diverse organizational settings.

Technology, particularly Green ICT, is highlighted as an enabler of this sustainable framework. Green ICT solutions, such as knowledge management tools and environmentally conscious IT practices, facilitate not only the efficient handling of sustainability-related data but also promote behavioural change through virtual engagement and socialization (Hercheui, 2010; Ahlan et al., 2013). The integration of technology with Islamic ethical frameworks further supports the operationalization of GKM, ensuring that knowledge practices are both environmentally sustainable and morally grounded.

Overall, the findings indicate that the development of a sustainable framework for knowledge management in the context of Green Information Ethics in Islam requires a multidimensional approach. This includes (i) embedding Islamic ethical principles into GKM, (ii) promoting ethical leadership and organizational culture that values sustainability, (iii) leveraging Green ICT to enhance efficiency and behavioural change, and (iv) addressing research gaps by developing comprehensive conceptual frameworks. By aligning GKM with Islamic ethical imperatives, organizations can move beyond compliance-driven sustainability toward a holistic model that integrates ecological responsibility, social justice, and spiritual stewardship.

The Review of the Relationship Between Sustainable Knowledge Management Sustainable Development Practices

The findings reveal that sustainable knowledge management (SKM) plays a pivotal role in fostering sustainable development practices by embedding environmental awareness, social responsibility, and ethical decision-making into organizational processes. Responsible knowledge management is identified as a catalyst for business transformation, ensuring that sustainability strategies are not merely operational but are knowledge-driven and innovation-oriented (Rocha et al., 2024). The absence of adequate knowledge and competencies among employees significantly impedes the development of effective sustainability strategies, underscoring the need for continuous learning and ethical knowledge sharing in organizational culture (Rocha et al., 2024). From an Islamic ethical perspective, SKM aligns with the principles of amanah (trust) and maslahah (public interest), where managing knowledge responsibly ensures both ecological and social well-being.

The relationship between SKM and sustainable development practices (SDPs) is evident in how organizations utilize knowledge as a driver of change. Knowledge management acts as a catalyst for sustainable innovation, providing businesses with the tools to adapt, innovate, and sustain their competitive advantage while minimizing ecological footprints (Wong, 2010). Sustainable development requires organizations to strike a balance between resource preservation and economic growth, ensuring that natural ecosystems are protected while new opportunities for value creation are explored. Within the framework of Green Information Ethics in Islam, this balance reflects the principle of wasatiyyah (moderation), advocating responsible consumption and stewardship of resources while advancing societal progress.

Furthermore, the integration of SDPs into organizational systems creates a foundation for responsible management (RM). Responsible management emphasizes stakeholder inclusivity, environmental stewardship, and corporate social responsibility (CSR) as guiding principles for long-term sustainability (Adae et al., 2021). Organizations are increasingly adopting innovative sustainability initiatives such as recycling, reducing consumption, and employing advanced monitoring technologies to align with ecological and ethical responsibilities. This resonates strongly with Islamic principles of khalifah (stewardship), where humans are entrusted to manage resources wisely, avoiding extravagance and harm to creation. Thus, SDPs act as a bridge that connects SKM with RM by embedding ecological awareness into organizational governance and decision-making.

Knowledge management also significantly influences the practice of CSR, which is central to responsible management. By promoting inclusive knowledge-sharing systems, organizations create conditions conducive to ethical innovation and collaborative sustainability practices across stakeholder networks (Zoccali et al., 2024). The systematic integration of knowledge management into CSR frameworks enhances organizational accountability and transparency, ensuring that businesses operate in alignment with both global sustainability standards and Islamic moral-ethical imperatives. This approach strengthens social trust, fosters long-term stakeholder engagement, and ensures that sustainability efforts are not tokenistic but deeply rooted in shared ethical values.

In conclusion, the interrelationship between sustainable knowledge management, sustainable development practices, and responsible management highlights the need for a holistic sustainability framework guided by ethical principles. In the context of Green Information Ethics in Islam, such a framework can be structured around amanah, maslahah, wasatiyyah, and khalifah, ensuring that knowledge is managed responsibly, development is pursued sustainably, and management practices are executed ethically. By embedding these values into SKM systems, organizations can build resilience, foster innovation, and contribute meaningfully to ecological and societal well-being, thereby aligning modern sustainability goals with timeless Islamic ethical teachings.

The Review of the Relationship Between Sustainable Knowledge Management Framework Digitalization and Technology

The findings of this review indicate that a Sustainable Knowledge Management Framework (SKMF), when aligned with digitalization and technology, plays a critical role in advancing sustainable development goals and

fostering environmental stewardship. Digital technologies, such as artificial intelligence, cloud computing, and big data analytics, enhance the efficiency of knowledge creation, storage, and dissemination, enabling organizations to integrate sustainability practices into decision-making processes. Studies suggest that the deployment of digital tools significantly supports climate change mitigation strategies, resource optimization, and environmental preservation, which are foundational aspects of the green digital economy (Glazova et al., 2024). This underscores the need for knowledge management frameworks to embed sustainability principles within digital infrastructures.

The relationship between digital knowledge management and sustainability is both synergistic and complex. On one hand, higher levels of knowledge management adoption contribute to stronger sustainability outcomes by improving knowledge sharing, organizational learning, and resource efficiency. On the other hand, rapid technological advancements can create new forms of technostress, affecting employees' well-being and productivity (Martínez-Navalón et al., 2023). As such, while SKMF enhances sustainability through digital integration, it must also include mechanisms to manage psychological and social risks arising from technology overdependence. This duality reveals the importance of balance in developing frameworks that are not only technologically robust but also ethically and socially sustainable (Chakraborty et al., 2025).

Moreover, the integration of knowledge management and digital transformation emphasizes the need for an interdisciplinary framework that leverages both fields' strengths. Digital transformation provides the technological infrastructure, while knowledge management ensures the effective capture and application of insights for sustainable decision-making. Savickas and Užienė (2024) highlight that solutions designed at this intersection maximize synergistic potential, resulting in greater adaptability and resilience in organizations. In this regard, a sustainable knowledge management framework should be structured to harness digitalization while simultaneously embedding ethical and ecological considerations into its processes.

The findings also show that while digitalization presents opportunities for resource efficiency and circular economic models, it also poses significant challenges in governance, equity, and ethical alignment. De Pablos et al. (2024a) stress that the transition toward climate-neutral economies requires more than just technological adoption; it requires policy support, organizational innovation, and cultural adaptation. Similarly, sustainable digitalization in Asia highlights the importance of inclusivity and accessibility to ensure equitable participation across societies (De Pablos et al., 2024b). Thus, the SKMF must not only address technological capabilities but also provide strategies for inclusivity, ensuring that digital tools serve broader societal and environmental goals.

Within the context of Green Information Ethics in Islam, the development of a sustainable knowledge management framework requires grounding in ethical values such as amanah (trustworthiness), maslahah (public good), and adl (justice). Islamic ethical principles emphasize the responsible use of resources, avoidance of waste (israf), and accountability in stewardship of knowledge and environment. Embedding these values into digital KM practices ensures that technological advancements are not pursued at the expense of ecological balance or human dignity. By aligning SKMF with Green Information Ethics in Islam, organizations can create a holistic model where digital transformation is ethically guided, socially responsible, and environmentally sustainable—ultimately harmonizing technological progress with the divine mandate of khalifah (stewardship) over the Earth.

The Review of the Relationship Between Sustainable Knowledge Management Framework Green Information Ethics

The results reveal that a Sustainable Knowledge Management Framework (SKMF), when linked with Green Information Ethics, provides a strong foundation for embedding sustainability values into organizational knowledge processes. Green Knowledge Management (GKM) has been highlighted as a crucial driver of sustainable development and green innovation by ensuring that knowledge is captured, shared, and applied in ways that support ecological balance (Ghorbani, 2023). This indicates that SKMF not only focuses on efficiency and innovation but also incorporates ecological responsibility as a guiding principle, thereby reinforcing the ethical dimension of managing organizational knowledge in sustainable ways.

The relationship between SKMF and Green Information Ethics is further reinforced by the role of ethical leadership and green management practices. Evidence shows that firms with ethical leaders and strong green

management cultures perform better in terms of environmental sustainability, particularly when knowledge sharing mediates the process (Sánchez-García et al., 2025). This suggests that the SKMF must go beyond technological and procedural structures by embedding ethical guidance into how knowledge is managed, stored, and applied. Green Information Ethics, in this sense, becomes the moral compass that ensures knowledge management practices are aligned with ecological responsibility and ethical decision-making.

Furthermore, research demonstrates that GKM influences organizational culture, consumer behaviour, and pro-environmental practices, thereby highlighting the broader social and cultural dimensions of Green Information Ethics (Shah et al., 2024). By reshaping how organizations and societies understand and use knowledge, SKMF contributes to ecological awareness and long-term sustainable growth. This indicates that the framework must not only manage knowledge but also actively promote green values, behavioural transformation, and ecological consciousness through structured knowledge dissemination.

The role of Green ICT solutions in promoting Green Information Ethics is also significant. Green ICT, combined with digital tools such as social media, fosters pro-environmental behaviour through virtual communities and knowledge-sharing platforms (Hercheui, 2010). When integrated into a SKMF, these technologies serve as enablers of ethical practices by amplifying ecological values and reducing environmentally harmful practices. In this way, Green ICT solutions act as both technological and ethical bridges, ensuring that digital infrastructures support the principles of sustainability and ecological responsibility inherent in Green Information Ethics.

Within the context of Islamic Green Information Ethics, the development of SKMF must be guided by ethical values such as amanah (trust), maslahah (public interest), adl (justice), and khalifah (stewardship). Islam emphasizes the responsible use of resources, prohibition of waste (israf), and accountability in human interaction with the environment. When embedded into SKMF, these principles ensure that knowledge is managed in ways that respect both human dignity and ecological sustainability. Thus, a sustainable knowledge management framework grounded in Islamic ethics creates a holistic model—where knowledge processes are not only efficient and innovative but also environmentally conscious, socially just, and spiritually responsible.

Emerging Theme

The findings of this review indicate that a Sustainable Knowledge Management Framework (SKMF), when aligned with digitalization and technology, plays a critical role in advancing sustainable development goals and fostering environmental stewardship. Digital technologies, such as artificial intelligence, cloud computing, and big data analytics, enhance the efficiency of knowledge creation, storage, and dissemination, enabling organizations to integrate sustainability practices into decision-making processes. Studies suggest that the deployment of digital tools significantly supports climate change mitigation strategies, resource optimization, and environmental preservation, which are foundational aspects of the green digital economy (Glazova et al., 2024). This underscores the need for knowledge management frameworks to embed sustainability principles within digital infrastructures.

The relationship between digital knowledge management and sustainability is both synergistic and complex. On one hand, higher levels of knowledge management adoption contribute to stronger sustainability outcomes by improving knowledge sharing, organizational learning, and resource efficiency. On the other hand, rapid technological advancements can create new forms of technostress, affecting employees' well-being and productivity (Martínez-Navalón et al., 2023). As such, while SKMF enhances sustainability through digital integration, it must also include mechanisms to manage psychological and social risks arising from technology overdependence. This duality reveals the importance of balance in developing frameworks that are not only technologically robust but also ethically and socially sustainable (Chakraborty et al., 2025).

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this regard, a sustainable knowledge management framework should be structured to harness digitalization while simultaneously embedding ethical and ecological considerations into its processes.

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CONCLUSION

This study examined the relationship between the Sustainable Knowledge Management Framework (SKMF) and Green Information Ethics, particularly within the broader context of sustainability and Islamic ethical principles. The key findings suggest that SKMF plays a critical role in integrating ecological responsibility into knowledge processes, with consistent themes highlighting the influence of ethical leadership, organizational culture, and green knowledge practices on sustainable performance. At the same time, novel themes emerge, such as the integration of Green Information Ethics with knowledge management and the contextualization of SKMF within Islamic ethics, providing innovative perspectives for bridging sustainability, technology, and spirituality.

Theoretically, this study contributes to the expanding body of literature on sustainable knowledge management by extending its conceptual boundaries beyond organizational efficiency and innovation toward ecological and ethical considerations. It reinforces the notion that knowledge management is not value-neutral but instead embedded in cultural, ethical, and environmental contexts. The integration of Islamic Green Information Ethics—rooted in principles such as amanah (trust), adl (justice), and khalifah (stewardship)—offers a unique theoretical lens to reframe SKMF as both a technical and moral framework for sustainability.

Practically, the findings highlight the importance for organizations to design knowledge management systems that not only enhance efficiency but also embed ethical values and sustainability goals into their structures and processes. Leaders and managers are encouraged to adopt green practices, promote ecological awareness, and leverage green ICT solutions to foster pro-environmental behaviour across employees and consumers. In Muslim-majority contexts, aligning SKMF with Islamic ethical values can enhance organizational legitimacy, cultural resonance, and stakeholder trust, thereby strengthening both social and environmental outcomes.

Despite its contributions, this study faces certain limitations. The insights are primarily derived from secondary sources, and much of the literature does not directly address the intersection of SKMF and Green Information Ethics, particularly in the Islamic context. Additionally, the findings remain largely conceptual, lacking empirical validation across industries or regions. These limitations highlight the need for more context-specific studies and empirical testing to establish causal relationships and measure outcomes in real-world organizational settings.

Future research should explore the operationalization of SKMF within different cultural and religious frameworks, with a particular focus on empirical case studies in Muslim-majority countries where Islamic Green Information Ethics may significantly shape sustainability practices. Comparative studies across industries and

regions would also deepen understanding of how ethical values interact with technological systems in shaping sustainable knowledge management. Furthermore, interdisciplinary research that integrates perspectives from information systems, environmental studies, and Islamic ethics would enrich the conceptual development of SKMF and provide actionable insights for organizations navigating the challenges of sustainability in the digital age.

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