

EDITORIAL

Managing Artificial Intelligence for Accelerating the Implementation of the United Nations Sustainable Development Goals

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ABSTRACT

The special issue on *Managing Artificial Intelligence for Accelerating the Implementation of the United Nations Sustainable Development Goals*, positioning it within the urgent global context of advancing the 2030 Agenda. The special issue is closely aligned with the United Nations (UN) Sustainable Development Goals (SDGs) by examining how Artificial Intelligence (AI) can act as a catalyst for comprehensive, sustainable, and data-driven development across critical areas such as poverty reduction, healthcare, education, climate action, and sustainable cities. In the current scenario, which is marked by rapid digital transformation, increasing global inequalities, and escalating environmental challenges, AI presents both unprecedented opportunities and complex ethical considerations. This issue addresses these dynamics by emphasising responsible AI governance, equitable access, and the integration of technological innovation with human-centred development principles. A distinctive feature of this special issue lies in the diversity of its contributions, bringing together interdisciplinary research, policy analyses, and applied case studies from academics, practitioners, and policymakers across different regions and sectors. The

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collection reflects a balance between theoretical insights and real-world applications, including contributions from both conference presentations and open-call submissions. The uniqueness of this issue is further demonstrated through its comprehensive thematic coverage—spanning governance, business transformation, and environmental sustainability while maintaining a strong focus on actionable outcomes and global collaboration. By bridging gaps between research, policy, and practice, this special issue offers timely and relevant insights for accelerating SDG implementation in an increasingly complex and interconnected world.

KEYWORDS: *Artificial Intelligence; Sustainable Development Goals; Digital Transformation; Technological Innovation; Human-Centred Development; Ethical Considerations.*

INTRODUCTION

As the global community approaches the 2030 deadline for achieving the UN SDGs, the urgency to identify innovative, scalable, and inclusive solutions has become more pronounced. Despite notable progress in certain areas, many countries remain off-track in meeting key targets related to poverty alleviation, climate action, health systems, and social equity. This widening implementation gap has intensified the search for transformative approaches that can operate across sectors and geographies with speed and precision.

The World Association for Sustainable Development (WASD) has undertaken a strategic and timely initiative to contribute to the advancement of the UN SDGs through the development of this special issue. This initiative reflects WASD's strong institutional commitment to fostering sustainable, inclusive, and knowledge-driven development by leveraging emerging technologies such as Artificial Intelligence (AI). By curating high-quality, peer-reviewed research that addresses critical global challenges, WASD aims to bridge the gap between academic scholarship, policy formulation, and practical implementation.

WASD serves as a leading global platform committed to advancing knowledge, policy, and practice at the intersection of sustainable development, science, and technology management. It brings together a wide network of academics, policymakers, practitioners, industry experts, and international organisations to foster meaningful dialogue and collaboration on pressing global challenges.

WASD's contribution to the UN SDGs is both strategic and sustained. Through its peer-reviewed journals and special issues, such as this one, WASD disseminates high-quality, evidence-based research that directly addresses key SDG priorities, including poverty reduction, quality education, climate action, and sustainable economic growth.

These publications not only advance academic scholarship but also provide practical insights and policy recommendations that support implementation at national and global levels.

Importantly, this special issue underscores WASD's proactive role in integrating technological innovation with sustainable development priorities. By focusing on the responsible and ethical use of AI, the initiative not only highlights opportunities for accelerating SDG progress but also addresses critical concerns related to governance, inclusivity, and equity. In doing so, WASD reinforces its position as a key global actor dedicated to advancing the SDG agenda through research, collaboration, and impactful knowledge dissemination.

In addition, WASD's international conferences are often organised in collaboration with UN agencies and global partners which serve as important platforms for knowledge exchange and multi-stakeholder engagement. These events bring together diverse voices to evaluate progress on the SDGs, share best practices, and co-develop innovative solutions.

Artificial Intelligence has emerged as one of the most promising enablers in this context. AI refers to computational systems capable of performing tasks that typically require human intelligence, including learning, reasoning, prediction, and decision-making. Its relevance to sustainable development lies in its ability to process vast and complex datasets, generate predictive insights, and support evidence-based policymaking. Through data-driven decision-making, AI enables governments and organisations to design more targeted interventions, optimise resource allocation, and enhance institutional effectiveness.

This special issue builds on this growing recognition of AI's transformative potential. It brings together a diverse and interdisciplinary set of contributions that examine how AI can be strategically managed, governed, and aligned with long-term development objectives. In addition, this special issue is responsibly deployed, ensuring that its applications adhere to ethical standards, human rights principles, and sustainability considerations. The issue highlights the importance of ethical governance, which refers to frameworks and policies that ensure AI systems are transparent, accountable, fair, and free from bias. It also emphasises inclusivity, ensuring that the benefits of AI are accessible to all populations, particularly marginalised and underserved communities, and cross-sector collaboration, involving partnerships between governments, academia, industry, and civil society.

The special issue is closely linked to the International Sustainability Conference titled “*United Nations: What Next After Agenda 2030 and SDGs*”, held in December 2025 in London. The conference served as a global platform for dialogue among policymakers, researchers, UN agencies, and practitioners to reflect on progress made through Voluntary National Reviews (VNRs) and to explore forward-looking strategies for accelerating SDG implementation. A key theme of the conference was the integration of AI into sustainability frameworks, including its role in analysing national performance, identifying policy gaps, and supporting real-time monitoring of SDG indicators.

The benefits of leveraging AI for sustainable development are substantial. These include improved efficiency in public service delivery, enhanced environmental monitoring and climate modelling, smarter urban planning, and increased financial inclusion through digital technologies. AI also enables early warning systems for disasters and strengthens data ecosystems for tracking development progress.

However, the adoption of AI is not without limitations and challenges. Key concerns include data privacy risks, algorithmic bias, lack of transparency in decision-making processes (often described as the “black box” problem), and unequal access to technological infrastructure between developed and developing countries. These issues contribute to the risk of a widening digital divide, where some populations benefit significantly from AI advancements while others are left behind. Furthermore, the absence of robust regulatory frameworks in many regions raises questions about accountability and ethical oversight.

This special issue critically engages with these challenges while showcasing innovative solutions and best practices. By integrating theoretical perspectives with empirical research and policy-oriented analyses, it provides a comprehensive understanding of how AI can be harnessed to support the SDGs in a manner that is both effective and equitable. The contributions collectively underline that while AI is not a solution, its strategic and ethical application can significantly accelerate progress towards achieving a more sustainable and inclusive future.

ABOUT THE SPECIAL ISSUE

This special issue is designed to critically examine the strategic role of AI in accelerating the implementation of the UN SDGs, with a strong emphasis on aligning technological innovation with sustainability, inclusivity, and ethical responsibility. It brings together interdisciplinary research, policy-oriented analyses, and applied case studies to

demonstrate how AI can be effectively governed and deployed across key sectors such as healthcare, agriculture, education, climate action, and urban development.

Particular attention is given to the development of robust governance frameworks that ensure transparency, accountability, and fairness in AI systems, as well as to the promotion of equitable access to AI technologies in order to avoid deepening existing global inequalities. The issue also highlights the importance of fostering collaboration between public and private stakeholders, recognising that multi-sector partnerships are essential for scaling impactful solutions.

Contributions to this special issue were carefully curated through two complementary channels: high-quality papers selected from the WASD International Sustainability Conference and submissions received through an open call published by the World Journal of Science, Technology and Sustainable Development (WJSTSD). All manuscripts underwent a rigorous double-blind peer-review process to ensure their academic integrity, methodological robustness, and practical relevance, resulting in a well-balanced collection of contributions that reflect both cutting-edge research and real-world applications in the field of AI for sustainable development.

Structure of the Special Issue

The special issue is organised into three sections, comprising a total of 16 papers.

- **Section One: Governance, Ethics, and Strategic Management of AI**

This section focuses on policy, governance, leadership, and institutional frameworks for managing AI responsibly while supporting SDGs.

- **Section Two: AI for Sustainable Business, Society, and Behavioural Transformation**

This section focuses on economic systems, consumer behaviour, financial practices, and social dynamics shaped by AI for sustainability.

- **Section Three: AI Applications for Environmental Sustainability and Climate Action**

This section explores how AI technologies contribute to environmental management, climate mitigation, and sustainable resource use, aligned with SDGs.

The issue includes a balanced mix of conference papers and regular call submissions, reflecting both applied insights and theoretical advancements.

ABOUT THE JOURNAL

The World Journal of Science, Technology and Sustainable Development (WJSTSD) is an international, peer-reviewed journal that provides a platform for interdisciplinary research on sustainable development. The journal encourages dialogue among

academics, policymakers, and practitioners, aiming to develop coherent and practical solutions to global challenges. WJSTSD is committed to advancing knowledge at the intersection of science, technology, and sustainability, with a particular focus on innovation, policy integration, and global development.

ABOUT THE CONFERENCE

The International Sustainability Conference titled “*United Nations: What Next After Agenda 2030 and SDGs*” was held from 2–4 December 2025 at the London City Institute of Technology, Queen Mary University of London. Organised by the WASD in collaboration with global partners and several UN agencies, the conference provided a timely and high-level platform to reflect on global progress towards the SDGs and to explore future pathways beyond 2030. Its focus on integrating AI into sustainable development discussions positioned the event at the forefront of contemporary policy and research debates.

The conference was strongly aligned with the UN SDG agenda, particularly in its emphasis on evidence-based assessment and inclusive development. A central component of the discussions revolved around Voluntary National Reviews (VNRs), enabling participants to critically evaluate how countries are progressing across the 17 SDGs, identify implementation gaps, and share lessons learned. The integration of AI into these discussions highlighted its growing relevance in analysing complex datasets, improving monitoring mechanisms, and supporting more responsive and adaptive policymaking.

Participants represented a diverse and global community, including academics, policymakers, UN officials, researchers, industry experts, and representatives from non-governmental organisations. Contributions came from both developed and developing countries, ensuring a broad range of perspectives and experiences. This diversity enriched the dialogue, fostering cross-cultural exchange and encouraging collaborative approaches to shared global challenges. The active involvement of higher education institutions further reinforced the role of universities as key drivers of innovation, research, and capacity building in support of the SDGs.

The conference followed a structured timeline, with abstract submissions received between August and October 2025, followed by full paper submissions between September and November 2025. The rigorous review and selection process ensured the inclusion of high-quality and impactful contributions. The event itself was marked



by dynamic sessions, panel discussions, and knowledge-sharing activities, making it a highly successful gathering both in terms of participation and intellectual output.

One of the key outcomes of the conference is reflected in this special issue, which features a selection of refined and peer-reviewed papers presented during the event, alongside contributions from the journal's open call. This integration ensures continuity between conference discussions and academic publication, strengthening the dissemination of knowledge and extending the impact of the conference beyond the event itself.

CONTRIBUTIONS OF THIS SPECIAL ISSUE

This special issue makes a significant contribution to advancing knowledge by presenting cutting-edge research on the application of AI across multiple SDG domains. It is structured into three sections comprising a total of 16 papers, drawn from both conference presentations and regular call submissions.

Section One: Governance, Ethics, and Strategic Management of AI for Sustainable Development includes five papers.

- **Innovation, Regulation, and Creative Destruction: Governing the Speed of AI**

This paper explores the dynamic relationship between rapid AI innovation and the need for effective regulatory frameworks. Drawing on the concept of creative destruction, it examines how accelerated technological change can disrupt existing systems while creating new opportunities and highlights the importance of balancing innovation with governance to ensure sustainable and equitable outcomes.

- **Ethics in Artificial Intelligence: Who is in Charge?**

This contribution addresses the critical question of accountability in the development and deployment of AI systems. It discusses ethical challenges such as bias, transparency, and responsibility, and evaluates the roles of governments, private sector actors, and international institutions in establishing robust ethical oversight mechanisms.

- **Reframing Organisational Performance in the Digital Era: The Role of AI Readiness and Digital Capabilities**

This paper investigates how organisations can enhance their performance in the digital age by building AI readiness and strengthening digital capabilities. It emphasises the need for strategic alignment, organisational adaptability, and investment in digital infrastructure to fully leverage AI-driven transformation.

- **Pathways to Sustainable Performance: Psychological Safety and Organisational Learning in the Context of Sustainable Leadership**

This study highlights the importance of human and organisational factors in achieving sustainable performance. It focuses on how psychological safety and continuous learning within organisations can foster innovation, support effective leadership, and enable the successful integration of sustainable and AI-driven practices.

- **Strategic AI Ecosystem for Global SDG Partnership: A Public–Private Collaboration Model for Sustainable Development Governance**

This paper proposes a collaborative AI-driven framework that brings together public and private stakeholders to support effective governance and accelerate progress towards the SDGs.

Section Two: AI for Sustainable Business, Society, and Behavioural Transformation consists of five papers.

- **Scientific Tourism Model Applied to Conferences Supported by Knowledge Management**

This paper explores how knowledge management can enhance the impact of conferences by integrating a scientific tourism approach, promoting learning, collaboration, and the dissemination of research insights.

- **AI and ML Driven Transformation and Proofing Sustainable Business Strategies in Developing Markets**

This paper examines how Artificial Intelligence (AI) and Machine Learning (ML) can transform business strategies in developing markets, enhancing sustainability, efficiency, and competitive advantage

- **Does AI-Driven Personalisation have the Ability to Create a Sustainable Consumer Behaviour: Moderating Role of Level of Digital Awareness**

This study investigates whether AI-driven personalised experiences can influence sustainable consumer behaviour, highlighting the role of digital awareness in shaping outcomes.

- **Financial Leverage and Dividend-Earnings Management in Amman Stock Exchange-Listed Service Companies: Evidence, AI Integration, and Sustainability Implications**

This paper analyses how AI integration affects financial practices, including leverage and dividend-earnings management, and its implications for sustainable corporate governance.

- **Role of Artificial Intelligence-Based Automation and Accuracy of Financial Reporting in AIS in Increasing Sustainability in Corporate Practices**

This study explores how AI-based automation improves the accuracy of financial reporting within Accounting Information Systems (AIS), supporting sustainable and transparent corporate practices.

Section Three: AI Applications for Environmental Sustainability and Climate Action presents five papers.

- **Artificial Intelligence (AI)-Augmented Carbon Accounting with EcoScopeAI: Strengthening SDG 12 and SDG 13 through CSRD and CBAM Integration**

This paper presents an AI-based carbon accounting approach using EcoScopeAI to enhance corporate sustainability reporting and support climate action aligned with SDG 12 and SDG 13.

- **An Artificial Intelligence (AI) Food System Conceptual Climate Finance Framework for Mitigating Climate Change in the Western Cape**

This study proposes an AI-driven framework for climate finance in food systems, aimed at reducing emissions and supporting sustainable agriculture in the Western Cape.

- **A Nature–AI Integrated Framework for Advancing Sustainable Development Goals in Iraq**

This paper develops a hybrid Nature–AI framework to address environmental, social, and economic challenges, promoting integrated and sustainable development in Iraq.

- **Artificial Intelligence, Environmental Awareness, and the Future of Sustainable Behaviour: A Sociological Study in Abu Dhabi**

This paper examines how AI can influence environmental awareness and promote sustainable behaviour, using sociological insights from Abu Dhabi.

- **Securing the Green Grid: AI and Cyber Defense for Sustainable Renewable Energy**

This study explores the role of AI in enhancing cybersecurity and protecting renewable energy systems, supporting sustainable and resilient energy infrastructure.

This balanced composition reflects both theoretical and applied perspectives, ensuring a rich and diverse body of work. The special issue is highly policy-relevant, offering evidence-based insights and practical recommendations for policymakers, international organisations, and development practitioners working towards the SDGs.

BIOGRAPHY



Professor Allam Ahmed is a Professor of Knowledge Management and Sustainable Development; Founding President World Association for Sustainable Development; Founding Director SDGs Universities Initiatives; and Honorary Professor Faculty of Medicine and Dentistry and Senior Policy Fellow Global Policy Institute, Queen Mary University of London. He is a Fellow (FCIM) and Chartered Marketer of the Chartered Institute of Marketing (CIM), UK; Fellow (FFPH) Faculty of Public Health, UK; PhD in Economics in two years at Edinburgh Napier University, UK; awarded the Royal Agricultural University (RAU) Scholarship and Prestigious Book Prize for Best MSc/MBA Dissertation; Listed in the Who's Who in the World 2009-2021 and 2021 Who's Who in the World Lifetime Achievement Award, Who's Who in Finance and Business 2009/2010 and Who's Who in America 2012-2014 published by Marquis Who's Who, USA.



Professor Arshi Naim is a Top 2% Scientist (Stanford and Elsevier, 2024 and 2025), is a distinguished academic with over 22 years' experience in business management, digital marketing and higher education. She has published more than 100 Scopus-indexed articles and has authored books with leading international publishers. She holds a PhD in Business Management and has extensive global teaching and leadership experience. For 14 years, she led accreditation and quality assurance initiatives at King Khalid University, Saudi Arabia. She currently serves as Professor of Business Management and Sustainability at the London Institute of Sustainable Development, UK, Professor of Business and Economics, Al-Quds University, Jerusalem, Palestine and as a Research Supervisor at INTI University, Malaysia. A certified QM Master Reviewer, Dr Arshi also holds professional and executive education credentials from Oxford, Harvard and Accenture. She actively collaborates with institutions worldwide to promote academic excellence, research impact and innovation.