VOICES
OF SUSTAINABILITY
BY THE ZAYED SUSTAINABILITY PRIZE

JULY 2023

CAN AI SAVE THE PLANET

Voices of Sustainability Summary Report

01

ABOUT VOICES OF SUSTAINABILITY

Voices of Sustainability is a thought leadership platform launched by the Zayed Sustainability Prize to explore the challenges and opportunities of the global transition to an inclusive and prosperous future. Each month, the series hosts some of the top global thought leaders to discuss the latest trends and themes in the sustainability agenda.

02

INTRODUCTION

The Zayed Sustainability Prize hosted the 26th episode of its virtual fireside chat series called Voices of Sustainability, featuring Micheline Ayoub, Executive Director, Sustainability in the Digital Age and Global Hub Director, Canada, Future Earth; and Julius Mugwagwa, Associate Professor, Innovation & Development Associate Professor and Global Health Thematic Director at University College London. The thought-provoking discussion revolved around the transformative potential of artificial intelligence (AI) in tackling sustainability challenges.

The episode delved into the opportunities and complexities associated with developing and deploying sustainable AI solutions. The panelists discussed how AI can contribute to environmental conservation, resource management, climate change mitigation, and other critical sustainability issues. The conversation also highlighted the importance of ethical considerations, responsible AI development, and the need for collaborative efforts to harness AI's power for a more sustainable future.

03

SUMMARY REPORT

On 31 July 2023, AI policymaker, Micheline Ayoub, and Julius Mugwagwa, an expert in governance and development implications of technology and innovations, participated in a Voices of Sustainability virtual fireside chat hosted by the Zayed Sustainability Prize.

Titled 'Can AI save the planet?', the conversation focused on the opportunities and complexities associated with developing and deploying sustainable AI solutions and was moderated by Tim Baldwin, Acting Provost and Chair of the Department of Natural Language Processing, Mohamed bin Zayed University of Artificial Intelligence with 30 years' experience researching AI. The panelists explored the potential of AI in addressing sustainability challenges while being mindful of its impact on the environment, workforce and humanity in general.

Julius Mugwagwa kickstarted the discussion by emphasising the importance of contextually relevant AI solutions. He points out that AI holds immense potential to democratise science, allowing conservation efforts to operate at a pace and scale necessary to address the world's environmental challenges effectively. By harnessing AI's power, researchers can utilise monitoring and analytical tools to support human-based decision-making for preserving the environment and safeguarding biodiversity worldwide.

While AI offers promising solutions, Julius highlighted several concerns and ethical considerations surrounding its widespread implementation. He raised questions about AI models' contextually correct outputs and how to ensure that AI is trained on regionally and locally relevant data. Moreover, he underlined the urgency of addressing the power dynamics between private sectors and governments, emphasising the need for recalibrating human-centric approaches to AI development to mitigate existing inequalities.

> We believe that justice should be established between partners and technology. The trust building exercise is critical to facilitate the equity and to up to, to amplify the voices of those who do not have a voice.
>
> **Micheline Ayoub**

To counterbalance the concerns, Micheline Ayoub shared inspiring examples of AI applications that positively contribute to sustainability efforts. At Sustainability in the Digital Age, she is involved in two significant projects—one focusing on equitable futures for nature-based solutions in Canada and the other on data-driven insights for sustainable agriculture. Through AI algorithms, these projects monitor carbon, biodiversity, and water conservation, aiding in the prioritisation of nature-based solutions that benefit local communities and indigenous peoples.

Micheline and Julius stressed the importance of a human-centred approach to AI development. They outline guiding principles, including inclusive data stewardship, robust AI applications, and ensuring accountability through transparency. These principles align with efforts to create an ethical and transparent AI environment, where AI decisions are made collaboratively and reflect diverse perspectives and needs.

The dialogue concluded with the experts reiterating the transformative potential of AI in addressing sustainability challenges. The examples provided demonstrate that AI can be a powerful tool for conservation, climate action and sustainable development when wielded responsibly and ethically. By adhering to guiding principles and incorporating contextually relevant approaches, AI can indeed contribute positively to saving the planet.

The episode “Can AI save the planet?” served as a compelling conversation that instilled hope for the future of AI in sustainable practices. The lessons learned from this dialogue can help to guide researchers, governments and organisations as they work together to harness the full potential of AI in preserving our environment, securing our future, and creating a sustainable world for generations to come. Through ongoing dialogue and collaboration, we can unlock AI’s power for the greater good and embark on a journey towards a truly sustainable planet.

04

PARTICIPANTS

Micheline Ayoub, MSc, PhD

Executive Director & Global Hub Director
Sustainability in the Digital Age
Future Earth Canada Hub

Micheline Ayoub is the Executive Director of Sustainability in the Digital Age and the Future Earth Canada Hub and brings over 20 years of experience promoting science-based evidence and cutting-edge technology on a local and international scale. Micheline's expertise ranges from data management and governance to multi-stakeholder partnership development, to the use of AI for multitopic data analysis in sustainable agriculture.

Julius Mugwagwa

Associate Professor
Innovation & Development and Global Health
Thematic Director at University College London

Julius Mugwagwa is an Associate Professor in Innovation and Development at University College London. He will be Professor of Health Innovation and Public Policy from 1 October 2023. He also currently serves as the Global Health Thematic Director of UCL's Global Governance Institute. He has worked in veterinary research, pharmaceutical R&D and quality assurance and harmonisation of medicines regulatory systems in Africa. He is an accomplished scholar and published author in the areas of global health, health innovation and health system strengthening, buttressed by his research and teaching interests in the governance and development implications of technologies and innovations. Julius is currently co-writing a Handbook of Health and Innovation which will be published at the end 2023 by Edward Elgar Publishing.

The conversation was moderated by:

Tim Baldwin

Acting Provost & Department Chair
MBZUAI

05

OUTCOMES

AI-driven solutions can help bridge the gap between environmental conservation efforts and technological advancements by utilising, monitoring and analytical tools to support decision-making in conservation and environmental protection.

Ethical considerations and safeguards are imperative to ensure the responsible and sustainable use of AI, encompassing stringent measures to protect data privacy, uphold contextual relevance, and mitigate global power imbalances in its application.

Examples of positive AI contributions to climate action include using AI algorithms to monitor and prioritise nature-based solutions and regenerative practices in agriculture.

The integration of AI through best practices goes beyond technical aspects, necessitating a thoughtful approach that considers contextual relevance, empowers local communities, and actively reconfigures power dynamics between the private sector and governments, striving to eliminate any potential exacerbation of existing inequalities.

AI-powered analytics and real-time data processing can significantly enhance disaster resilience by accurately predicting and assessing the impact of natural disasters, aiding in effective emergency response and resource allocation.

Watch the full episode the Zayed Sustainability Prize's YouTube channel

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