REPUBLIC OF NAMIBIA

Southern Africa
sub-Regional Forum on
Artificial Intelligence
7 – 9 September 2022
#SARFAI2022

Windhoek Statement on Artificial Intelligence in Southern Africa

Windhoek (Namibia), 9 September 2022

PREAMBLE

We, the Ministers in charge of Higher Education, ICTs, Digital Technologies, Communication, Science and Innovation from the Southern Africa countries[1], gathered at the UNESCO-Southern Africa sub-Regional Forum on Artificial Intelligence (SARFAI), co-hosted by the Government of Namibia and UNESCO in Windhoek, from 7 to 9 September 2022.

Recognizing that Artificial Intelligence (AI) is fast transforming the world and the future of humanity, raising complex questions and blurring traditional boundaries of the physical, digital and biological worlds, influencing human thinking, interaction and decision-making, and raising socio-economic, ethical and political risks engendered by the use of AI systems mainly produced outside our region, that often rely on low quality and non-representative data, with limited knowledge of local languages and indigenous knowledge;

Guided by the Recommendation on the Ethics of Artificial Intelligence, adopted by the General Conference of UNESCO at its 41st Session (2021), and addressed to Member States, both as AI actors and as authorities responsible for its effective implementation, and the development of the policy, and legal and regulatory frameworks needed throughout the entire AI system life cycle, to respect human dignity and exploit the full potential presented by the 4th Industrial Revolution;

Conscious of the promising regional networks of AI experts in Southern Africa, and that AI technologies are being widely used in the region, thus requires policymakers, economic actors, and people to understand how AI technologies can impact their lives, and to collaboratively engage in AI policy dialogues and governance to harness the potential of AI for the common good;

Acknowledging that the use of AI in our countries can impact human lives, especially the youth, who constitute approximately 60% of the Sub-Saharan population. AI must contribute to safeguarding human dignity and human rights, as well as gender equality, social justice, economic development, and environmental and ecosystem protection, thus contributing to building a prosperous future for our young generations;

Observing significant gaps in awareness, knowledge and human resource capabilities in the different domains of AI, including on the ethical implications, within government institutions, independent oversight bodies, human rights institutions, judiciary and law enforcement bodies, as well as the private sector and the general public in Southern Africa;

Recognizing the existence of gender bias in artificial intelligence and its profound impact on the lives of women and girls, linked to the low numbers of women in AI and emerging technologies-related research, development and innovation and gender bias in data, and its impact on the whole of society;

Bearing in mind the Universal Declaration of Human Rights (1948) and other international human rights frameworks, whereby Member States have pledged themselves to achieving, in cooperation with the United Nations, the promotion of universal respect for, and observance of human rights and fundamental freedoms;

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1   Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe

Affirming the UNESCO Operational Strategy for Priority Africa (2022-2029) with a flagship programme on "Harnessing new and emerging technologies for sustainable development in Africa, including through the implementation of the recommendation on the ethics of AI", and taking note of the findings of UNESCO's *Artificial Intelligence Needs Assessment Survey in Africa* (2021), and of UNESCO's *Landscape Study of AI Policies and Use in Southern Africa* (2022), that indicate the need to strengthen AI governance and capacities, and to invest more efforts in AI education, research and training;

Taking into account the SADC Protocol on Science, Technology and Innovation (2008), as well as the Decision of the Joint Meeting of SADC Ministers of Education and Training, Science, Technology and Innovation, in Lilongwe, Malawi (2022), "to review its implementation to align with the new policy environment in relation to STI";

Supporting the SADC Industrialization Strategy and Roadmap and the SADC Regional Indicative Strategic Development Plan 2020-2030 which call for the mobilization of financial resources for industrial revolution and substantial higher investment in infrastructure, upgrading and diversifying the capital stock and the provision of the high-technology skills necessary in modern industry, through science, technology and innovation;

Highlighting some relevant regional frameworks, such as the model laws on Data Protection, Cybercrime, e-Commerce, Electronic Transactions, as well as the SADC Cyber Infrastructure Framework, as strong and useful guiding legal frameworks that are relevant to the current and future legislation on AI;

Emphasizing the effective use of AI in disaster risk reduction and resilience-building in supporting both national and regional strategies and the Action Plans in the areas of climate change, and green, blue and circular economies, which will require investment in infrastructure; credible data collection; support of open science; international cooperation; integration of indigenous knowledge and citizen science into AI development and deployment;

Congratulate Southern African countries that have proactively put in place the relevant national advisory Task Forces and committees to ascertain their positioning in the 4th Industrial Revolution;

Reaffirm the Outcome Statement of the UNESCO Forum on Artificial Intelligence in Africa, held in Benguérir, Morocco (2018), that calls for the organization of sub-regional forums in Africa to facilitate exchanges, elaboration of strategic frameworks and action plans in view of an AI Strategy for Africa and the draft SADC Digital Transformation Strategy;

Express our gratitude to the Government of Namibia and UNESCO for organizing the Southern Africa sub-regional Forum on AI (SARFAI) to facilitate both technical and policy dialogues on AI; for hosting the UNESCO World Press Freedom Day International Conference (2021), which adapted the Windhoek 30+ Declaration; and the Africa Ministers of ICT Forum (2021), which discussed the need for multistakeholder approaches to AI governance and the need for transparency and accountability of digital technology and internet companies;

Recommend this Statement to advance standard-setting initiatives, foster cooperation and exchanges of expertise involving all AI stakeholders, as well as to strengthen cooperation between Southern African countries and UNESCO, as foreseen through the SADC-UNESCO Joint Programme of Action 2022-2025, including through the establishment of a Southern African coordination mechanism for the Implementation of the UNESCO Recommendation on the Ethics of AI.

AI and Data Governance

- Develop knowledge in line with African ethical values aimed at understanding the socio-technological implications of AI in order to work with different stakeholders to co-create Africa-centric governance frameworks, with a holistic approach to the sustainable and ethical development and use of AI;

- Adopt anticipatory approaches to AI policymaking and incorporate implementation plans, based on strategic national intent, expressed through well-configured strategies and regulatory frameworks;

- Review, update and develop regulatory and legal frameworks, including science, technology and innovation (STI), ICT, digital transformation, cybersecurity policies, 4IR policies, and sector-specific strategies (such as e-health, e-governance, e-finance and e-learning) in relation to AI;

- Consider legislative tools to safeguard and secure the use of high-risk AI, including facial recognition technologies, and AI use in healthcare and education;

- Facilitate policy dialogue on national, regional and global AI frameworks and strategies;

- Enact national data protection laws to create strong personal data protection safeguards, and guarantee data free flow with trust (DFFT), based on interoperable and common standards, including between the private sector, academia and governments;

- Establish Frameworks for Data Governance, with special attention to essential data sets, in national data centres of Member States, for state sovereignty in a sustainable manner;

- Promote transparency of AI algorithms to allow for public oversight and avoid embedded biases;

- Mitigate the digital divide by fostering open and competitive markets, taking into account vulnerabilities of developing countries, such as the lack of infrastructure, human capacity and regulatory frameworks;

- Promote Pan-African data sets as public assets to create platforms to foster scientific research in line with the UNESCO Recommendation on Open Science, and to protect such data sets from exploitation by third parties;

- Support the creation and use of localized and unbiased datasets for training AI models for inclusive and non-discriminatory outcomes, and reinforcing awareness about, and protection of data ownership; and

- Encourage the development of standards for AI and digital technologies, including facilitating the participation of African experts and standard-setting bodies in global standard-setting processes.

Capacity-Building and Awareness-Raising

- Launch programmes to promote public awareness and literacy to respond to African realities related to the ethical development and use of AI, including for youth, women, and vulnerable and marginalized groups;

- Strengthen the capacities of governments, civil society and the private sector to understand and make sense of AI technologies and applications;

- Strengthen the capacities of governments, civil society and the private sector to develop, use and deploy AI ethically for the benefit of societies and people;

- Establish and enhance the capacity of policy, regulatory and enforcement institutions, also through targeted skills development and support for AI governance; and through leveraging on and including African experts in UNESCO "AI experts without borders" initiative with the support of SADC; and

- Pilot and deploy innovative tools and approaches to AI capacity-building, including UNESCO's Readiness Assessment Methodology, Ethical Impact Assessment and Competency Framework on AI and Digital Transformation for Civil Servants.

Investment and Infrastructure

- Expand investments towards infrastructure development, to address issues such as access to electricity, connectivity, spectrum, data centres, cybersecurity (CSIRTs), cloud and high-performance computing and user terminal devices, including by leveraging SADC regional mechanisms for such infrastructure;usage and affordability gap; and the unequal distribution of unpaid work and of the caring responsibilities in our societies." This session will highlight the context of women in AI in Southern Africa and discuss strategies to strengthen the contributions of women in AI and to eliminate gender biases in AI Systems.

- Build upon the regional and national high-performance computing platforms and infrastructures already in place for the role that these infrastructures play in running AI-based applications and services in relevant areas such as health, agriculture, climate change, tourism and weather forecasting;

- Develop innovative funding mechanisms that build upon models such as the Universal Service Fund (USF) in the telecom sector, to support innovation ecosystems and start-ups;

- Establish ICT, innovation and technology hubs, including in rural and economically disadvantaged areas aimed at facilitating access, use, development and deployment of digital technologies, including AI, in supporting the creation of smart communities;

- Support the establishment of AI incubation centres, digital skills and talent hubs, and attract venture capital funding to encourage digital entrepreneurship initiatives and the incubation of technology-based companies for addressing the social problem of unemployment;

- Establish well-balanced strategies dedicating adequate domestic public funds to support the ethical development and deployment of AI, and mobilize development cooperation partners to reinforce domestic priorities to enable Africa to leapfrog in science, technology and innovation; and

- Strengthen mutual understanding of the AI-related investment needs among technology experts and policymakers who determine the funding of these initiatives.

Education

- Leverage Africa's fastest growing and youngest population in the world, turning this demographic dividend into an economic opportunity by providing quality education and lifelong learning opportunities for all, through leveraging the potential of digital technologies, with a specific focus on AI technologies, especially for girls and women;

- Strengthen ongoing regional initiatives regarding digital infrastructure to support science, technology, innovation and higher education ecosystem, such as the NRENs (National Research and Education Networks) of the Member States and UbuntuNet, for its role in promoting digital transformation initiatives in education that can be reinforced by AI;

- Promote the decolonization of the design and application of AI technologies, including by decolonizing education at all levels, developing Africa-centric AI curricula and involving communities to co-design inclusive and ethical AI applications, taking into account heritage and indigenous knowledge systems;

- Invest in and promote digital, media, information literacy and AI-related skills to strengthen critical thinking and competencies and empower human capital;

- Develop transdisciplinary curricula, for instance, Science, Technology, Engineering, Arts and Mathematics (STEAM) at all levels of education, including TVET, and remove disciplinary barriers among students in the domain of AI, especially coding, also by means of streamlining the approval processes for curricula, in order to keep pace with the rapid development of AI and other emerging technologies;

- Develop teacher competencies in AI-related skills, responding to the needs of African countries, and in line with UNESCO's ICT competency framework and the UNESCO Recommendation on the Ethics of AI; and

- Establish and support African AI and emerging technology institutes, centres of excellence (CoE), centres of specialisation (CoS) and regional research clusters. This is to expand coordination and leverage synergies between national centres, and foster strong links between education, research and commercialisation.

Research, Development and Innovation

- Increase investment in ethical AI-related research, development and innovation;

- Promote context-relevant and evidence-based research and innovation to inform AI governance and the development of applications in education, health and agriculture, among others;

- Identify, nurture and retain AI talents, including through financial incentives and support to develop relevant AI solutions; and

- Facilitate academic and student exchanges by reducing barriers to regional mobility, including through innovative initiatives such as the "Africa Innovation by Bus", implemented by the South African University of Johannesburg.

Environment and Disaster Risk Reduction

- Leverage AI to combat climate change, preserve biodiversity and address complex socio-environment challenges, such as mining and extraction of natural resources and conflict between humans and the wildlife;

- Promote environmental conservation and sustainability, including by leveraging indigenous knowledge and encouraging citizen-based science;

- Conduct a comprehensive assessment and identify opportunities to use AI for risk mitigation and disaster management; and

- Promote and implement the Recommendations on the Ethics of AI and on Open Science, leveraging initiatives and networks such as the Africa Open Science Platform.

Gender

- Support the development and implementation of gender-responsive policies and programmes, including programmes that enhance girls' and women's participation in Science, Technology, Engineering, Arts and Mathematics (STEAM), encourage female entrepreneurship, leadership and management in industries and regulatory entities, as guided by the Charter of the SADC Women in Science, Engineering, and Technology Organization (SADC WISETO);

- Promote the generation and use of data sets that reflect diversity and promote gender inclusion; and

- Establish, support and facilitate civil society organisations and networks to connect and empower women around the world, such as the Global Network of Women for Ethics of AI.

Collaboration and Partnerships

- Implement multistakeholder approaches to AI governance, such as the triple, quadruple and quintuple helix models to bring together the private sector, academia, civil society and government; in particular, ensure the engagement of youth organisations, gender equality advocates and stakeholders, small and medium enterprises, persons with disabilities, environment and climate change experts and under-represented groups in multistakeholder processes;

- Create linkages between different AI fora at a technical and policy level to reinforce the Pan-African and regional knowledge networks of experts working on AI, and facilitate the participation of women and youth;

- Promote regional and sub-regional approaches, platforms and mechanisms, such as a steering committee, to coordinate the implementation of the Recommendation on the Ethics of AI (2021), in order to address the issues, gaps and challenges identified in this document; to enhance policy harmonization and coordination across national borders; and to improve resource mobilization in collaboration with SADC and the AU;

- Promote the active and mutually beneficial engagement of African countries in multilateral platforms such as the Intergovernmental Bioethics Committee, and global initiatives, including the Global Forum on the Ethics of AI, an annual high-level event to advance state-of-the-art knowledge and skills on the challenges raised by AI-related technologies;

- Support regional alignment on key policy areas, including the AUC Data Policy Framework, the AU Digital Transformation Strategy, the Draft AU AI Continental Strategy, the Draft SADC Digital Transformation Strategy, and the UNESCO Recommendation on the Ethics of AI; and

- Strengthen mutually beneficial partnerships with the private sector for ethical AI development and use.

SCOPE OF APPLICATION

The Statement, in line with the Recommendation on the Ethics of AI, refers to AI as "systems which have the capacity to process data and information in a way that resembles intelligent behaviour, and typically includes aspects of reasoning, learning, perception, prediction, planning or control".

This Statement aims to:(i) contribute to the promotion of scientific research, technical and policy dialogues, exchanges of knowledge and practices on AI among professional networks in Southern Africa; (ii) guide the Member States in their policymaking and legislation with actionable recommendations; and (iii) facilitate SADC's design and implementation of strategic orientations and policies on AI, in the framework of the SADC Regional Indicative Strategic Development Plan (RISDP 2020-2030).

This Statement shall be submitted to the 2023 Joint Meeting of SADC Ministers responsible for Education and Training and Science, Technology and Innovation, for discussion and adoption, with a clear action plan, with timelines, and a monitoring and evaluation framework that ensures our shared accountability in the execution of actions.

The implementation of the recommendations contained in this Statement shall benefit from the technical support of international cooperating partners under the framework of the SADC-UNESCO Joint Programme of Action 2022-2025, regarding AI governance and capacity-building efforts.