



UNESCO – Southern Africa sub-Regional Forum on Artificial Intelligence

Safari Court Conference Centre, Windhoek, Namibia

7-9 September 2022

“Towards a sustainable development-oriented and ethical use of artificial intelligence”

CONCEPT NOTE

I. Background

The advent of Artificial Intelligence (AI) is fast transforming the world and the future of humanity, raising very complex questions at the interplay between technical, ethical, political, legal, and economic considerations and interests. Incontestably, the rapid technological advancements in AI, as well as other emerging and converging technologies, such as nanotechnology, modern biotechnology, and information technology are key drivers of this so-called 4th Industrial Revolution (Industry 4.0). But at the same time, these technologies are blurring traditional boundaries of the physical, digital and biological worlds, therefore impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human.

In the context of this rapid technological advancement, many countries are positioning themselves to take full advantage of the technological innovations presented by AI. These countries aim at leveraging AI and other innovations to advance their national development agendas. Other countries however run the risk of being left behind, or worse being marginalised and penalised by a management and governance of big data that concerns them, but in which they are mere consumers, with no say and no capacity to influence. In other words, the key question for the coming decades is the following: *If the AI technologies are to be leveraged for sustainable development, what ethical and human rights-based foundations are needed as a prerequisite?*

Recognizing the important role that AI can play for development in Africa and notably its impact on UNESCO's fields of competence, UNESCO organized the first *UNESCO Forum on Artificial Intelligence in Africa* in Benguerir, Morocco, in December 2018. The event discussed issues and challenges related to AI development in Africa, including equity and ethics and encouraged intra-African cooperation in AI. The Forum adopted the *Benguerir Outcome Statement* that notably called for the integration of AI into national development policies and strategies in line with African cultures, values and knowledge systems. The Forum also called for the organization of sub-regional Forums in Africa to facilitate exchanges, elaboration of strategic frameworks and action plans in line with unique sub-regional and national contexts, in view of an AI Strategy for Africa.

UNESCO has since remained an important platform to facilitate global and continental debates on AI with the organization of key AI-related events such as *the Global Conference on the Principles for AI: Towards a Humanistic Approach* (March 2019); *The UNESCO Forum on AI and Education* (2019,2020,2021), or the *African ICT Ministers Forum* (November 2021) among others.

In 2021, UNESCO Member States unanimously adopted the first ever global [Recommendation on the Ethics of AI](#) during the 41st session of the Organisation's General Conference in November 2021. Resulting from a two-year multi-stakeholder consultation process, this first global normative instrument provides a comprehensive basis to make AI systems work for the good of humanity in the various “Areas of policy actions” where individuals, states, and societies can contribute positively to anti-discrimination and anti-racism policies, preservation of the environment, education and learning, the future of work, ensuring quality public health, access to information and fighting dis-/mis-information, promotion of cultural diversity, and advancement of gender equality.

The [Artificial Intelligence Needs Assessment Survey in Africa](#) UNESCO conducted in 2020 to understand the policy priorities and capacity-building needs of African countries indicates major needs to strengthen AI governance by fostering legal and regulatory frameworks, to enhance capacities in AI governance, and to invest more efforts in AI education, research and training. The survey also highlighted the significant human resource gap in African countries in addressing the ethical implications of AI. It noted that AI priorities for African countries are varied, but they offer opportunities for cooperation. In 2021, these key findings of the survey resonate meaningfully with the UNESCO's Recommendation of Ethics of AI that provides key guiding principles to address the major gaps identified in the survey.

Building on these important stepping-stones towards a global consensus and approach to AI, advancing regional and national conversations on the topic, including with an anticipatory approach, is essential in Africa just like in other regions of the world. The effectiveness of such an approach will be determined by the actual adoption of appropriate policy options that should emerge from informed and thought-out debates.

II. Overview of the Forum

It is in this context that UNESCO, in collaboration with the Government of the Republic of Namibia and under the leadership of the Ministry of Higher Education, Technology and Innovation of Namibia, will organize the **UNESCO-Southern Africa sub-Regional Forum on Artificial Intelligence**, to be held in **Windhoek**, on **7-9 September 2022** under the theme ***“Towards a sustainable development-oriented and ethical use of artificial intelligence”***, targeting the 9 countries in the UNESCO Southern Africa sub-region¹. The Forum will explore the trends, benefits and risks in Southern Africa in the context of the SADC Protocol on Science, Technology and Innovation (2008), the Sustainable Development Goals (SDGs), and the Agenda 2063 of the African Union. It will also be open for the participation of members of the Southern Africa Development Community (SADC) beyond Southern Africa² as observers. The Forum will be a unique opportunity for deliberation among African Member States from Southern Africa on how they can leverage synergies and shape a shared agenda for the development and use of AI in the region for the common good, with strong and clear ethical and human-rights-based foundations, including in relation to the role of Open Science and engineering in the Fourth Industrial Revolution. Because the continent is exposed to risks of data exploitation and mining, a lack of public awareness and understanding of the threats, and a lack of capacities to influence both the technical development and the global legal frameworks, the Forum will focus on the social, cultural, economic and ethical impacts of AI in the sub-region, in line with the 2021 UNESCO Recommendation on Ethics on AI. By so doing, experts, policy makers, and financial partners will develop a common understanding of the benefits, opportunities and risks that AI technologies present for Southern Africa from the perspective of inclusion, equality, ownership and sustainability.

For Namibia particularly, hosting the UNESCO-Southern Africa sub-Regional Forum on Artificial Intelligence, comes at an opportune time when H.E. Dr. Hage Geingob, President of Namibia, has established the Presidential Task Force on the Fourth Industrial Revolution (4IR) with the mandate to conduct a country readiness assessment for leveraging the Fourth Industrial Revolution. Dovetailing the Namibian National Conference on AI in the context of the Presidential Task Force on the 4IR with the UNESCO-Southern Africa sub-Regional Forum-on AI will enrich the national debates with technical inputs from the sub-regional level to drive forward the national momentum.

For UNESCO, this Forum is held against the backdrop of the unanimous adoption of the UNESCO Operational Strategy for Priority Africa (2022-2029) by UNESCO Member States at the 41st session of the General Conference of UNESCO (November 2021), which includes a specific flagship programme on *“Harnessing new and emerging technologies for sustainable development in Africa, including through the implementation of the recommendation on the ethics of artificial intelligence”*.

The Forum will also serve as a platform for streamlining the global and continental debates on AI to the regional and country levels, to encourage participating countries from the region to ignite national debates towards a structured approach to AI development and use while ensuring the development of context-relevant policy options for its governance. Concurrently, the event presents an excellent platform for capacity strengthening and awareness-raising on the latest trends in AI development, research and governance and will provide an opportunity for countries to learn about UNESCO's AI ethics readiness and impact assessment tools and competency frameworks for capacity building. These tools will help Member States lay the ground for relevant policy and capacity building work. The Forum will also consider how governments should engage in a constructive multistakeholder dialogue with all national, regional and international partners including the private sector, and integrate AI into national development policies and strategies, as a vector for the emergence of African economies based on African cultures, values and knowledge systems.

1 Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe.

2 Angola, Comoros, Democratic Republic of Congo, Madagascar, Mauritius, Seychelles and United Republic of Tanzania.

Renowned AI scholars, experts and industry leaders from the sub-region and from all over the globe will be invited to participate in the forum. This will present an excellent opportunity for establishing much-needed cooperative networks in AI for the benefit of the region.

III. Goals and Objectives

The Forum aims to provide a platform for Member States, international organizations, civil society, academia, the AI industry, and other stakeholders to:

- i. Convene a multistakeholder platform to discuss the different dimensions of the applications of AI, its challenges and opportunities and share best practices in Southern Africa with a view of strengthening cooperation and partnership for promoting ethical, equitable, inclusive, and transparent use of AI;
- ii. Unpack the profound complexity of the use of AI in Southern Africa in critical areas such as data governance and protection of fundamental freedom, education, science and engineering, climate change, media and cultural industries;
- iii. Discuss the effective implementation of the UNESCO Recommendation on Ethics of AI in Southern Africa, by exploring the AI policy options and strategies that could guarantee equality, justice, and freedom of all;
- iv. Reflect on ways to strengthen scientific capacity at all levels of the education system to address the lack of a critical mass of experts in AI in Southern Africa;
- v. Discuss a streamlined Southern Africa sub-regional approach to AI policies, strategies and capacity building initiatives;
- vi. Produce concrete recommendations for the development of a comprehensive action plan for the development of AI in Southern Africa that could maximize the use of AI in the attainment of the SDGs and Agenda 2063.

IV. Expected Outcomes

An outcome Statement with endorsed actionable recommendations for the development and ethical use of AI in Southern Africa will be agreed upon during the Ministerial session. The outcomes of the Forum will also be presented to the concerned SADC Ministerial Meetings for further decision, as a contribution to the implementation of the SADC Protocol on Science, Technology and Innovation (2008), and to the SADC Regional Indicative Strategic Development Plan (RISDP, 2020-2030) that aims at enhancing the 'regional technological capability and capacity through science, technology and innovation'.

The prototypes of the Readiness and Impact Assessment tools UNESCO is developing in support of the implementation of the 2021 Recommendation on the Ethics of AI will be consolidated with the technical inputs and suggestions from the Member States and experts; and a synthesis report to document the main achievements and outcomes of the Forum will be published.

The UNESCO Multisectoral Regional Office for Southern Africa, located in Harare, Zimbabwe, will support the Member States from Southern Africa in implementing the agreed actionable outcomes of the Forum, notably in relation to fostering AI in UNESCO's areas of competence and in the implementation of the UNESCO Recommendation on Ethics for AI, as agreed in the UNESCO/SADC Secretariat Joint Programme of Action (2022-2025).

V. Themes and Subthemes

Under the theme ***"Towards a sustainable development-oriented and ethical use of artificial intelligence"***, the three-day Forum is designed to facilitate forward-looking debates, knowledge sharing, sector-wide strategy planning, networking, and partnership incubation with a particular focus on Southern Africa. Keynote speeches, technical consultations and Ministerial level interaction will take place during the Forum along the following areas:

Exploring the AI Landscape in Southern Africa:

- **Setting the Stage – Status of AI development and Utilisation in Southern Africa:** While the new and emerging technologies such as AI are yet to be fully democratized, they are already impacting our daily lives and will continue to do so. This session will provide a mapping of the development and use of AI in Southern Africa with concrete examples from start-ups from the sub-region, highlight the potential ethical risks and challenges if legislation and governance systems are not created, identify key stakeholders and

set the stage for further discussions in the Forum. It will also provide an opportunity to facilitate knowledge exchanges with innovative start-ups that are leveraging AI for sustainable development, while devising on how countries can analyse and anticipate any threats or risks for their population.

AI Governance and Standard-Setting:

- **AI Policy Making in Southern Africa – Needs, Process and Content:** With the advent of AI and notably its potential to support innovation and development, many countries are developing AI Strategies to harness the benefits of AI on a national level. This session will provide a platform for experience and best practice exchanges in policy making in Southern Africa. The session will also contribute to the AU consultation, led by the AU Working Group on AI, on an AU Continental Strategy on AI. It builds on the UNESCO Needs Assessment survey in Africa, work on Multistakeholder AI Development and the Smart Africa Blueprint for AI in Africa.
- **Delivering on UNESCO’s Global Standards on the Ethics of AI – Exploring Applications in the SADC Countries:** Learning from the current practices and policies in place in Southern Africa, this session will discuss the role of ethics in framing the normative and regulatory frameworks and institutions Member States will need to ensure an ethical use of AI. Because automated AI systems are bound to make decisions based on big data, this raises major ethical/moral as well as Human rights issues regarding the right to privacy and data protection, human oversight and determination, responsibility, and accountability, etc., which are some of the principles enshrined in the UNESCO 2021 Recommendation on the Ethics of AI. This session will discuss how the SADC countries should embrace confidently the Fourth Industrial Revolution, while safeguarding human dignity, fundamental freedom, and human autonomy.
- **A Special Event, “Readiness and Ethical Impact Assessments – Building the National Capacities in Africa to Harness the Power of AI”** will feature the UNESCO’s global instruments to support Member States implement the 2021 Recommendation on the Ethics of AI. Moving from ethical norms and principles to policies, the attention will be given to the concrete modalities of strengthening institutions, enacting legislations, and enhancing accountability frameworks that should ensure benefits from AI technologies, while addressing the associated ethical risks. More specifically, the prototype of the UNESCO’s instruments for AI Ethical Impact and Readiness Assessment will be discussed with policymakers of the SADC countries, focusing on how the principles of the Ethics of AI enshrined in the 2021 Recommendation can concretely translate into the protection of human dignity, equality, and non-discrimination.

Capacity Building for AI Development and Application:

- **AI and STEM Education, Scientific Research, and Skills Development:** Education approaches and systems need to improve and adapt to the new realities brought by AI. The COVID-19 pandemic also heightened the need of integrating technology in education and building capacities of teachers and educators. The development of AI relevant skills, education curriculum and teaching competences for AI skills is essential. This session will discuss the ongoing and recommended approaches for the development of a critical mass of AI experts in Southern Africa.
- **Capacity Building for Civil Servants:** The Southern Africa region faces significant risks due to climate change. The region is already highly exposed to the effects of periodic warming of the Pacific or El Niño Southern Oscillation (ENSO) and the cold episode of ENSO or La Niña. These cycles respectively cause severe droughts and floods in the region. The region is also highly dependent on its natural resources for the mining and tourism industry. AI can play an important role in facilitating environmental management and disaster risk reduction in the region. This session will focus on concrete examples and best practices of the use of AI in these key areas.
- **AI and Environmental Management and Disaster Risk Reduction in Southern Africa:** The Southern Africa region faces significant risks due to climate change. The region is already highly exposed to the effects of periodic warming of the Pacific or El Niño Southern Oscillation (ENSO) and the cold episode of ENSO or La Niña. These cycles respectively cause severe droughts and floods in the region. The region is also highly dependent on its natural resources for the mining and tourism industry. AI can play an important role in facilitating environmental management and disaster risk reduction in the region. This session will focus on concrete examples and best practices of the use of AI in these key areas.

The principles of Inclusion and Equality in the development and use of AI:

- **Gender Equality in the Development and Use of AI:** One of the key policy-areas of the UNESCO Recommendation on Ethics of AI regards to harnessing the potential for digital technologies and artificial intelligence to contribute to achieving gender equality. The Member States are invited to “ensure that the potential of AI systems to advance the achievement of gender equality is realized. They should ensure that these technologies do not exacerbate the already wide gender gaps existing in several fields in the analogue world, and instead eliminate those gaps. These gaps include: the gender wage gap; the unequal representation in certain professions and activities; the lack of representation at top management positions, boards of directors, or research teams in the AI field; the education gap; the digital and AI access, adoption, 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.
- **Youth and AI:** Africa’s current population of 1.2 billion is estimated to double to 2.4 billion, nearly one-third of the world’s population by 2050 according to UN forecasts. This rapid population growth means that over 60% of the African population is under 35 years, making the Africa workforce one of the youngest in the world. AI, if correctly exploited, offers opportunities for the education, training and employability of African youth, hopefully turning the demographic dividend, to an opportunity. The important role of entrepreneurship, in and through AI will be emphasized. But if not adequately regulated and well understood, AI technologies can also strengthen youth’s addiction to ICTs and jeopardize their freedom, with subsequent cognitive, social, and mental risks notably for the younger ones. This session will focus on the opportunities provided by AI in empowering youth in all contexts (formal, non-formal, informal) in Southern Africa, and the kind of transition that is needed to ensure decent work for all. It will also unpack the latest scientific evidence on how AI has also the potential of jeopardizing youth and societies if it nurtures addiction and isolation.

Strategic Partnerships for AI in Southern Africa:

- **Partnerships for An Enabling Environment for AI:** While AI technology has the potential of supporting national development objectives, it is complex and requires specific expertise for optimization and scaling. Multistakeholder partnerships therefore play a key strategic role in developing enabling environments for AI for development. A dedicated ministerial session will focus on the need for the development of strategic multistakeholder partnerships for AI and will specifically highlight the important role played by the regional and continental Organisations such as the AU and SADC, as well as the private sector and civil society. The outcome of the discussions will contribute the implementation of the UNESCO/SADC Secretariat Joint Programme of Action (2022-2025).

Side events on practical AI and hands-on sessions on robotics will also be organised for students and youth in order to expose them to innovative technologies. Public exhibitions will be staged by students, the private sector and partners, in the vicinity of the main venue of the Forum.

VI. Format of the Event

The Forum will be held in hybrid format (both in presential and online) and will be articulated into three key segments:

- **Technical Panels (Day 1 & 2):** The Technical Panels will convene senior experts on AI from relevant from Southern Africa and beyond, to examine and discuss the status of AI development and utilisation in Southern Africa. The different panels will discuss themes relevant for the development of AI in Southern Africa reflecting from a human rights point of view in ensuring an equal, ethical, and inclusive utilisation of the AI technologies. Each thematic session will agree on a set of recommendations for countries within the region, to address the existing capacity and institutional gaps in AI. The Technical Segment discussion will feed into the Outcome Statement to be endorsed by the Ministerial Round Table.
- **Ministerial Round Table 1 on Visions and Recommendations (Day 3 morning):** The Ministerial Round Table 1 will convene the Ministers of ICT and Digital Technologies, or Science and Technology from Southern Africa for high-level political engagement on the key visions and recommendations that should guide Member States in Southern Africa in elaborating norms, institutions, and capacities for a responsible and sustainable use of AI. The outcome of the session will be an Official Statement and endorsed actionable recommendations whose implementation will be supported by the UNESCO Multisectoral Regional Office for Southern Africa and will be presented the relevant SADC Ministerial Meetings for decisions.

- **Ministerial Round Table 2 on Partnerships (Day 3 afternoon):** The second session of the Ministerial Round Table will focus on the need for the development of strategic multistakeholder partnerships for AI and will specifically highlight the important role played by the regional and continental Organisations, the private sector and civil society. It will allow the Ministers of ICT and Digital Technologies, or Science and Technology from Southern Africa, to dialogue with institutions from the region and beyond, strategically interested in investing resources and expertise, to help inform policy discussions on the future of AI technologies in Southern Africa and on the enabling factors for the sustainable growth and development of AI. The outcome of the discussions will contribute the implementation of the UNESCO/SADC Secretariat Joint Programme of Action (2022-2025).

VII. Target Participants

The Forum is expecting around 400³ participants in presential, including Ministers and senior technical experts from participating Member States, the SADC Secretariat, AU representatives, representatives of United Nations agencies and other international organizations, non-governmental organizations, leaders of the AI industry, academic experts, policymakers and any other relevant stakeholders.

VIII. Working Languages

For plenary and breakout sessions, interpretation will be provided in English, French and Portuguese, both onsite and online.

3 No. of participants in presential will depend on the COVID-19 situation.

