COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Twenty-sixth session
Geneva, 27-31 March 2023

Submissions from entities in the United Nations system, international organizations and other stakeholders on their efforts in 2022 to implement the outcomes of the WSIS

Submission by

United Nations Educational, Scientific and Cultural Organization

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 26th session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

UNESCO
Contribution to the 2022 report to the Commission of Science and Technology for Development
on the implementation of the World Summit Information Society (WSIS) outcomes

Table of Content

Part One: Executive Summary

In a global context marked by the digital transformation, UNESCO continues to support the implementation of the WSIS outcomes as the lead-facilitator for Action Lines C3 (Access to information and knowledge); C7 (ICT Applications: e-Learning and e-Science); C8 (Cultural diversity and identity, linguistic diversity and local content); C9 (Media); and C10 (Ethical dimensions of the Information Society).

This effort contributes to the implementation of UNESCO's vision for the development of inclusive, open, diverse, participatory and sustainable knowledge societies that positively impact universal access to information, the quality of education, open scientific cooperation, and respect for cultural diversity, in line with the 2030 Agenda for Sustainable Development and the African Union's Agenda 2063.

Action Line C3: Access to Information and Knowledge

Within the UN system, UNESCO has been designated as the custodian agency for the monitoring of SDG Indicator 16.10.2, which tracks progress towards public access to information. Under this mandate, UNESCO's Internet Universality Indicators (IUI) are one of the key instruments to counter information access challenges and maximize opportunities to assure four fundamental R.O.A.M principles - Human rights based, Open, Accessible to all, Multi-stakeholder participation, to Internet Governance policies.

Key outcomes of ROAM-X national assessments were presented at the WSIS Forum 2022, where the Dynamic Coalition on ROAM-X[1] was recognized as a long-term multistakeholder platform to engage and shape a better Internet for all, in line with United Nations Secretary-General's Roadmap for Digital Cooperation, and the future Global Digital Compact.

The pertinence of assessing the digital ecosystem as a tool to support the development of Internet through multistakeholder participation preserving openness, accessibility, and resilience was highlighted in regional and subregional events on the ROAM-X framework organized by UNESCO through the year.

Raising awareness regarding the importance of access to information for development and advocating for the right to information for strengthening human rights were at the heart of the celebrations of the 2022 International Day of Universal Access to Information, with a global event hosted by Uzbekistan. Celebrated every year on 28 September, since 2017 UNESCO held close to 120 commemorations of the day, adopted back in 2015, and proclaimed a UN International Day in 2019.

The importance of Public Private Partnership for the sustainable development of ICT and information services affordable to all was highlighted at WSIS 2022[2] which called for more efforts from government, private sector and academia to build a better digital ecosystem with ubiquitous network penetration and proper digital literacy and skills for all, while preventing erosion of freedom of expression and exposure to disinformation and misinformation. As digital security was identified as a growing challenge, global efforts were recommended to ensure a safe and secure and meaningful access, including by establishing international consortium on cyber security.

---

[1] ROAM-X also includes 79 cross-cutting Indicators (category X) concerning gender and the needs of children and young people, sustainable development, trust and security, and legal and ethical aspects of the Internet.
[2] WSIS High Level Policy Session 9: https://www.itu.int/net4/wsis/forum/2022/Agenda/Session/466

UNESCO leads the way towards public access to information by making its publications and materials more accessible, in terms of licensing, content and languages. For example, in 2022, UNESCO's first graphic novel on Artificial Intelligence (AI) aims at boosting youth's understanding of the impacts of AI on humankind. Also, a micro-learning course on defending human rights in the age of Artificial Intelligence is being made available in 30 languages[3].

Action Lines C7: e-Science and e-Learning

The need for real-time information has never been more important: post pandemic world witnessed a sharp rise in data and information – on real time basis – for example to find out the effectiveness of vaccines, humanitarian aid or carbon disclosure. Inspired by the Recommendation on Open Science, UNESCO fosters both multidimensional strategies and multistakeholder involvement to make scientific information more accessible and inclusive for the people. Several global efforts are underway to establish new strategies at the highest possible levels, develop policies that benefit from the proven modality of South-South collaboration and innovate new non-market workflows for scientific communication.

Ensuring connectivity, equity and quality at all levels of education was a paramount theme across UNESCO's action in 2022, stemming from the COVID-19 pandemic which revealed from the one hand the fragility of education systems and the flagrant inequalities in terms of access to technology. On the other hand, it also highlighted the potential of innovation and the need to transform learning and education. In this vein, UNESCO's Global Education Coalition continues to bring together United Nations agencies, international organizations, private sector, and civil society representatives engaged in advancing COVID-19 Education Response from around the world at global, regional and countries levels.

Recognizing that technology may open new and more inclusive avenues for teaching and learning, the Rewired Global Declaration on Connectivity for Education, released in December 2021, established that technology is an important site of educational opportunity and innovation at various levels.

During the process leading to the Transforming Education Summit, a key initiative launched by UN Secretary-General (SG) in the framework of Our Common Agenda, countries and United Nations organizations voiced recognition that content is often the weak link when it comes to digital learning even though it is arguably the simplest and least expensive to develop. In this regard, the International Commission on the Futures of Education recognizes that Open Educational Resources (OER) are also essential for supporting educators, students, and young professionals for Education for Sustainable Development (ESD) journeys. The UNESCO Recommendation on OER endorsed by all UNESCO Member States in 2019 provides the keys for transforming and delivering education as a global public good.

The Transforming Education Summit (16-19 September 2022) reflected the recognition that there is an alarming shortage of public options for public education on the internet: many countries still do not have publicly sanctioned digital platforms for education and, even when they do, the platforms and the learning content they host are often of very low quality. Progress to build digital spaces supporting education, boosted by COVID-19 induced school closures, has lost momentum and, in many places, backtracked. Over one-third of national digital learning platforms built during the pandemic are no longer functional or maintained. Despite the growing ubiquity of connected technology, public digital

---

[3] Expected in the second half of 2023

learning platforms and learning resources either do not exist or are difficult to find, difficult to navigate, lack quality and breadth, and are inaccessible to large numbers of learners and teachers.

UNESCO also seeks to strengthen the digital capacities of more mature professionals in the judiciary and in the civil service, in particular concerning the applications, the potential and risks linked to Artificial Intelligence. Within its Global Initiative on AI and the Rule of Law, in 2022 UNESCO developed a global MOOC on AI and the Rule of Law as a response to the issues identified through a needs assessment surveying over 1200 judicial operators in 100 countries[4]. Six national, regional and global-scale trainings and dialogues were held for judicial operators based in Africa and Asia and the Pacific.

Furthermore, in order to foster the digital capacity-building of civil servants and other stakeholders, UNESCO published a report on AI and Digital Transformation Competencies for Civil Servants within the framework of the UN Broadband Commission for Sustainable Development's Working Group on AI Capacity Building, in collaboration with Nokia. This project has leveraged a multi-stakeholder leadership model to directly assess and respond to the critical capacity needs for public sector digital transformation globally, including from a developing country perspective. It will be also used as the foundation of a Digital Capacity Building Navigator developed by a joint facility[5] of UN entities and international organisations.

Action Line C8: Cultural diversity and identity, linguistic diversity and local content

The growing link between the digital environment and cultural heritage, creation and expression, continues to transform society, as ICTs play a major role in the protection and promotion of cultural heritage, the diversity of cultural expressions and local content.

Following the COVID-19 acceleration of the digitization of culture, UNESCO works to ensure that the connection between digital transformation, cultural diversity and the creative economy remains in line with sustainable development goals. However, this rapid digital transformation has generated a concentration of supply of cultural content, data, markets and income in the hands of a few high-income countries. Therefore, ensuring that the digitalization of culture is equally distributed across the globe and beneficial to all, requires targeted national policies and international frameworks.

The UNESCO World Conference on Cultural Policies and Sustainable Development – MONDIACULT 2022 held in Mexico (28-30 September 2022) attracted nearly 2,600 participants from intergovernmental organizations, cultural institutions and civil society organizations, as the largest world conference devoted to culture in the last 40 years. With 135 of the 150 participant States represented at the highest level by ministers of culture, the Conference aimed to shape a more robust and resilient cultural sector, fully anchored in today's global context, including the digital transition, with a view to promote sustainable development, solidarity and peace.

As an immediate follow- up to the United Nations General Assembly's decision (A/RES/74/135)A/74/396) to proclaim the period of 2022-2032 as the International Decade of Indigenous Languages, UNESCO hosted a High-level launch event on 13 December 2022, in co-operation with United Nations Department for Economic and Social Affairs (UNDESA), the Office of the United Nations High Commissioner for Human Rights (OHCHR), and the members of Global Task Force for Making a Decade of Action for Indigenous Languages

---

[4] In 2020

[5] UNESCO, United Nations Development Programme (UNDP), International Telecommunication Union (ITU) and the Deutsche Gesellschaft für Entwicklungszusammenarbeit (GIZ) convened a Joint Facility for Global Digital Capacity Development

The event aimed to raise awareness of duty bearers on the critical situation of Indigenous languages around the world, and to foster international cooperation for the implementation of the Global Action Plan of the International Decade of Indigenous Languages.

In this context, UNESCO, continuing to emphasize the value of linguistic diversity and multilingualism for construction of Knowledge Societies, has facilitated a number of activities, events and processes in support of multilingual local content for the promotion of Indigenous languages, including a dedicated WSIS Forum 2022 Special Track on ICTs and Indigenous Languages, which featured an online hackathon to ideate ICT solutions contributing to the intergenerational transmission, preservation, revitalization, and promotion of indigenous languages.

Action Line C9 - Media

Enhancing the status of press freedom is at the heart of UNESCO's mission to promote the free flow of ideas through words and images as a tool for promoting peace and dialogue. The organization recognizes that freedom of expression is a fundamental human right in itself and an enabler of other rights.

The 2022 World Press Freedom Day Global Conference (3rd May, Punta del Este, Uruguay) brought together close to a thousand participants from 86 countries. A total of around 3,400 registered to join more than 60 sessions online and offline for three days.

The Conference was an action platform for partners and stakeholders to come together and identify solutions for the most pressing challenges of the digital era and develop concrete solutions, including to address the threats posed by increased surveillance to press freedom and privacy. On the same occasion, UNESCO issued a new edition of its World Trends in Freedom of Expression and Media Development, providing data and analysis of relevant issues. To highlight these findings and engage with local stakeholders working on freedom of expression issues, UNESCO field offices organized over 50 regional and national events for World Press Freedom Day. Many of these included official regional launches of the 2021/2022 Global Report or were informed by the Report's key findings, putting global trends in a local context.

Action Line C10 – Ethical dimensions of the Information Society

In November 2021, the 193 Member States at UNESCO's General Conference adopted the Recommendation on the Ethics of Artificial Intelligence, the very first global standard-setting instrument on the subject. This landmark text defines values and principles that will guide countries in building legal frameworks to ensure that AI is deployed as a force for the common good. In particular, The Recommendation goes beyond ethical values and principles in proposing specific and concrete policy actions in 11 policy areas, including chapters on gender and the environment & ecosystems, to ensure inclusive and ethical outcomes. To advance the implementation of the Recommendation, in 2022 UNESCO has been building solid partnerships with Member States, development partners as well as private sector companies at various levels.

At the global level, an informal and open-ended network comprising 70 Member States was launched to support UNESCO's work on implementation and to create a space to share experiences and good practices for the full implementation of the Recommendation.

At the regional level, a regional council on the Implementation of the Recommendation is being established in Latin America and the Caribbean region, with the support of the Corporacion Andina de Fomento (CAF).

At the national level, several countries initiated processes to establish institutional infrastructures, such as national steering committees on the ethics of AI, to oversee the piloting of the capacity-building tools under development.

UNESCO furthermore fostered dialogue on ethical principles relevant to the judicial context, such as privacy, transparency and accountability, and impacts linked to human rights, including through various capacity building events, organised for judges and judicial operators based in Africa, Asia and the Pacific[6].

Part Two: Analytical Overview of Trends and Experiences

Access to information and knowledge (C3)

UNESCO's Internet Universality Indicators (IUI) assessment has attracted high-level attention and support from IT ministers, policy makers and multi-stakeholder actors, to strengthen access to information and knowledge, freedom of expression, privacy and ethical and human rights-based norms.

Through its multi-dimensional lenses and context-based approach, the ROAM-X assessments[7] support the identification of areas of strength as well as gaps in national digital strategies: by understanding what is working, where change is needed and through bench-learning, the framework enables Member States to develop evidence-based practices and policies in support of their national sustainable development strategies and visions.

In March 2022, UNESCO, jointly with the CIPESA, the Collaboration on International ICT Policy for East and Southern Africa, convened a regional dialogue on implementing the ROAM-X based IUI in Africa. The event, supported by the UNESCO International Program for Development of Communication (IPDC), gathered leading national actors and experts who shared best practices and lessons learned from implementing national assessments of ROAM-X indicators in Benin, Ethiopia, Ghana, Kenya, Niger and Senegal.

In this regard, the need to put in place follow-up actions for the implementation of the assessment recommendations was highlighted at the African Internet Governance Forum 2022 (Lilongwe, Malawi), while the transformative impact of the indicators was recognized at the 15th International Conference on Theory and Practice of Electronic Governance (ICEGOV, Portugal).

As access to information laws are key in enabling access to public official information, UNESCO is a leading UN agency contributing to the increasing number of relevant legal frameworks. Between 2001 and 2022, close to 100 countries enacted access to information laws. UNESCO shares good practices and provides technical assistance to the many Member States working to adopt access to information laws or improve the implementation of already existing legal frameworks, including through the training of staff and development of manuals.

In addition to technical assistance and promotion of awareness for the right to information, UNESCO invited all UN Member States, to participate in annual surveys on SDG indicator 16.10.2. The number of jurisdictions that participated in the UNESCO survey exercise grew from 69 in 2020 to 123 in 2022. Such a monitoring also serves as a means for countries to identify weak spots and provides an incentive to improve legal frameworks and implementation.

---

[6] See the C7 – e-Learning section
[7] https://en.unesco.org/internet-universality-indicators/national-assessments

Access to information and knowledge is also the focus of the UNESCO/IFLA Public Library Manifesto 2022, endorsed by the IFAP[8] Bureau on 18 July 2022, and launched at the 87th World Library and Information Congress 2022 (WLIC, Dublin, Ireland). This Manifesto proclaims UNESCO's belief in the public library as a living force for education, culture, inclusion and information; and as a powerful tool in tackling the emerging challenges of digital transformation, combating disinformation, and advancing human rights online for achieving the 2030 Sustainable Development Goals.

E-learning (C7)

The [Rewired Global Declaration on Connectivity for Education](#)[9] underlined how technology is today an important site of educational opportunity and innovation. It can help automate once-laborious administrative tasks, provide immediate feedback and support, and bridge formal education with informal learning. When appropriately steered, technology opens new and more inclusive avenues for teaching and learning.

In 2022, UNESCO used this declaration to also raise awareness about the many risks that technology interjects in education — many of them novel or still only coming into focus, such as learning inequalities, increased student isolation, narrowed educational experiences, and privatized education, undermining its standing as a public good. The Declaration made clear that, going forward, countries and communities need new guideposts to make technology a stronger and more reliable ally of the humanistic aims of education.

Different actors, including UNESCO, aim at implementing the three core principles of the Declaration to guide international, national and local efforts to ensure that connected technologies advance aspirations for inclusive education based on the principles of justice, equity and respect for human rights.

The first principle is to center the most marginalized. Too often, technology and innovation only benefit the privileged. Countries must recalibrate policies and actions in ways that work for those most in need of opportunity. Asking how technology will work for refugees, for students with disabilities, for girls and women, and for teachers in remote areas must be a starting point, not an afterthought.

The second principle is to expand investments in open, free, and high-quality digital education content. Too often, technology initiatives start and end with internet-connected devices. Connectivity must open doors to rich learning resources and facilitate interactions that advance learning and development. All countries should have public options for public education on the internet.

The third principle is that the digital transformation of education requires pedagogical innovation and change. Countries need to stop trying to replicate models of in-person schooling in digital spaces. Online and virtual environments demand new types of learning content and new forms of teaching and learning that must be paired with the best in-person education.

In this respect, UNESCO's Transforming Education Pre-Summit (June 2022, Paris) included a High-level segment consisting of Ministerial and Stakeholder engagement and a Global Engagement Day with technical meetings on Thematic Action Tracks and engagements with key stakeholders. The Pre-Summit provided in particular an inclusive and open forum for countries having advanced their national

---

[8]   https://www.unesco.org/en/articles/milestone-launch-ifla-unesco-public-library-manifesto-world-library-and-information-congress-2022 - UNESCO's Information for All Programme (IFAP), established in 2001, provides a platform for all the stakeholders in the knowledge societies to participate in international discussions on policy and guidelines for action in the area of access to information and knowledge.

[9] released in December 2021

consultations to present preliminary outcomes of their consultations and share key elements of their commitment to transform education to inspire other countries to come forward with bold commitments and actions at the Summit.

The Rewired Declaration was seminal to digital learning track of the UN Transforming Education Summit, the largest gathering of the global education community in a generation. It was the basis for the Pre-Summit Discussion Paper and the Call to Action which established that countries need three 'keys' to unlock the benefits of digital learning:

Key #1 Content: High quality, curriculum-relevant digital teaching and learning content must be made available to all learners, teachers and caregivers through digital learning platforms.

Key #2 Capacity: Capacity to use digital technology to improve learning must be strengthened to ensure teachers, learners and other education stakeholders have the skills and knowledge needed to leverage digital tools for learning using evidence-based approaches.

Key #3 Connectivity: Digital connectivity helps ensure that all schools and individuals can benefit from the educational advantages that come with good quality internet connections.

E-science (C7)

Providing new possibilities for gathering and sharing scientific knowledge, new technologies have contributed to transform science into "science 2.0" also fueling the processes that are paving way for the fourth industrial revolution. From the proliferation of big scientific data, increasing usage of machine learning and AI applications in science, major shifts are taking place in how science was hitherto done and communicated. The adoption, in 2021, of the UNESCO Recommendation on Open Science highlights the global acceptance on the value of "open science", alongside the renaissance of "virtual" science and the use of citizen science to solve complex development problems. In this context, the sphere of e-Science is guided by movements at the level of open access, open data, open science, open source, open government, and open educational resources, which are making a significant contribution to the evolution of the scientific knowledge-sharing practices. UNESCO is working to create a common ground approach to the future of open knowledge for science that embraces the diversity of the "open" landscape and creates a sustainable and coherent approach to this future that works for everyone everywhere.

In this regard, UNESCO looks at the entire ecosystem of Access to Scientific Knowledge, as its applications influence the achievement of the Sustainable Development Goals, including climate resilience or the creation of the conditions for food and water security. However, much depends on how information or the processed knowledge are collected, processed and transacted between those who produce this knowledge and among concerned stakeholders. This shift would not only have to be realized in how the knowledge torch bearers would inform the affected public, but how the general public can be involved in the whole process. Thus, there is a pressing need to analyze the changing context of how technology facilitates the development of new tools, content and processes for scientific communication.

Cultural diversity and identity, linguistic diversity and local content (C8)

The largely disproportionate digital content pertaining to culture, provided by digital platforms, as well as the imbalanced provision of cultural goods and services, strains the diversity of cultural expressions. Particularly affected by the digital divide are Indigenous communities, whose culture, arts and languages have been fast declining due to social and economic marginalization and assimilation by dominant communities.

The 2005 Convention for the Protection and Promotion of the Diversity of Cultural Expressions calls upon Member States to introduce policies relevant to the digital environment[10] and the monitoring framework for its implementation covers digital environment and media diversity[11].

In 2022, UNESCO launched the [fifth global consultation on the 1980 Recommendation concerning the Status of the Artist](#). The consultation is expected to strengthen data collection and highlight good practices with regards to the status of artists in the digital environment. Member States are called upon to "assist artists and organizations of artists to remedy, when they exist, the prejudicial effects of new technologies on their employment or work opportunities.

Committed to continue working on the preservation, revitalization and support of linguistic diversity and multilingualism, both online and offline, including through monitoring and implementation of the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003), and the lead role in the International Decade of Indigenous languages, UNESCO facilitated in 2022 a number of events and processes:

- the celebration of World's Kiswahili Language Day in recognition of the global relevance of Kiswahili, among the widely used languages of the African family (July);
- the 7th Meeting of the Global Task Force for Making a Decade of Action for Indigenous Languages (September);
- the World Translation Day commemorating the work of translators, interpreters and other language specialists in ensuring access to information for Indigenous Peoples.

The regional consultations held in 2022 in preparation to MONDIACULT 2022 underlined the need to ensure the fair remuneration of artists, culture professionals and practitioners, address inequalities in the global exchange of cultural goods and services, foster an inclusive digital transition, facilitate equitable access to cultural markets, support culture professionals and developing regulatory frameworks, notably in the digitization of culture and online platforms to advance linguistic diversity and the diversity of online content, while ensuring equitable representation of minority groups.

In February 2022 UNESCO launched, "[ReIShaping Policies for Creativity: Addressing culture as a global public good](#)" a flagship global report published every four years providing a global overview of the state of the cultural and creative sectors. It shows that online activities are growing exponentially, with 62.1% of total music revenues coming from streaming in 2020 and that 80% of Parties to the 2005 Convention support the digital transformation of cultural institutions and industries. The Report stresses the need for adequate regulation or legislation frameworks in respect of cultural content production and distribution in the digital economy and for more intersectoral governance models.

The Report further calls for investing in policies adapted to the digital environment, breaching the digital divide by increasing access and building digital skills, designing business models that fairly remunerate creators online, invest in local content and enhance its discoverability on digital platforms, as also highlighted at the WSIS 2022 meeting on 'The digitization of culture and the creative economy: benefits, challenges and roadmaps'.

The May 2022 edition of UNESCO's online "[Culture and Public Policy" Tracker](#) focused on culture in the digital environment, and the transformations brought by digital technologies, whose potential to

---

[10] The 2019 [Open Roadmap](#) to implement the 2005 Convention in the digital environment
[11] The reported measures and policies featured in the interactive [Policy Monitoring Platform](#), includes 269 measures on media diversity and 312 on the digital environment.

strengthen accessibility of culture and the quality of education respecting cultural diversity was highlighted at the International Expert Meeting on Culture and Arts Education (Seoul, Republic of Korea).

Media (C9)

Digital transformation has a growing impact on freedom of expression, access to information and privacy. The rapid technological change and the role of online platforms therein, presents a challenge to policymakers and regulators to respond to such changes, by stimulating positive externalities such as pluralism or participation, and countering negative externalities, such as disinformation or hate speech, to name just two urgent matters.

Independent journalism is in peril, faced with increasing crackdowns on press freedom, ongoing threats against the safety of journalists, and the erosion of business models. However, the first step to effectively respond to these urgent challenges, is to understand them. The global report on World Trends in Freedom of Expression and Media Development, published every four years, provides a macro-level perspective that informs UNESCO Member States, international organizations, civil society groups, academia, and individuals seeking to understand the changing global media landscape.

The 2021/2022 global report finds that 85% of the world population experienced a decline in press freedom in their country over the past five years. Additionally, journalists are under enormous pressures not least from acute threats to their safety, including digital threats. At the same time, a shift of advertising revenue from news media to social media and search companies has eroded the business model of the media industry.

The report outlined these key findings:

- Journalists are under attack. From 2016 to the end of 2021, UNESCO recorded the killings of 455 journalists, who either died for their work or while on the job. At the same time, imprisonment of journalists has reached record highs.
- New legal measures undermine, instead of bolster, press freedom. Since 2016, dozens of countries have adopted or amended laws and regulations which threaten freedom of expression and press freedom online.
- News media's traditional business model is at a breaking point. Growing numbers of media outlets have been forced to cut down on staff or close their doors permanently. Just two companies, Google and Meta, now receive approximately half of all global digital advertising spending.
- Data can aid the understanding of and support to the media sector and freedom of expression. Yet, in the countries and communities where journalism is most at risk, the health of the news system often remains a black box.

Ethical dimensions of the Information Society (C10)

Today the world is confronted by not only the emerging but also converging technologies, such as the convergence taking place between neurotechnology and Artificial Intelligence. In addressing the ethical questions raised by this rapid development and the convergence of technologies to achieve the SDGs 3, 5 10 and 13, UNESCO has positioned itself at the forefront of the global debate, building on the UNESCO International Bioethics Committee report which analyzes ethical, legal and regulatory implications of neurotechnology.

The major achievement in this regard was the adoption of the Recommendation on the Ethics of Artificial Intelligence by the UNESCO General Conference in November 2021 – the first global

normative instrument in this field, which constitutes an ambitious and wide-ranging new template for the ethical development and deployment of AI.

By adopting the instrument, Member States were encouraged to apply the provisions of the Recommendation by taking appropriate steps, including the necessary legislative or other measures, in conformity with the constitutional practice, governing structures of each State, and international law, including international human rights law, to give effect within their jurisdictions to the principles and norms of the Recommendation. In 2022, UNESCO supported the implementation of the Recommendation in various ways, particularly through knowledge sharing and creation, supporting Member States, and the launch of the Ethical Impact Assessment and the Readiness Methodology tools.

Perspectives on how to support the implementation of the Recommendation were also discussed through the UNESCO's Information For All Program (IFAP) - Information Ethics Working Group which convened a global discussion (April 2022) engaging leading experts and stakeholders across the world, followed by a number of regional conferences.

The work regarding the ethics of science and technology is also advanced through the work of the International Bioethics Committee of UNESCO (IBC), Report on the ethical issues of neurotechnology and the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) report on the ethical implications of the Internet of Things.

Part Three: Innovative policies, programmes, projects and future actions or initiatives

Access to information and knowledge (C3)

UNESCO's national assessments of Internet Universality ROAM-X indicators are progressing in 44 countries (six completed) across five continents, including 5 Small Island Developing States - SIDS (Tuvalu, Tonga, Fiji, Solomon Islands and Vanuatu). With its multi-stakeholder approach and mechanisms being strengthened, the framework can be used as a holistic tool to foster the uptake of human rights and inclusivity in the policy-making process regarding Internet governance and digital transformation at the regional, national, global level.

UNESCO is planning to update the current 303 indicators in consultation with international experts to reflect new priorities and needs, such as green digital transformation. UNESCO also seeks to evaluate the impact of the recommendations formulated in the concluded assessments in order to strengthen the implementation processes of the ROAM principles.

UNESCO will continue building partnerships with relevant stakeholders, notably through the Dynamic Coalition of IUIs, to scale up the impact for ethical and inclusive digital transformation.

UNESCO provides policy advice to Member States in the field of access to information and is developing policy guidelines for the promotion of public domain information. The Tashkent Declaration on Universal Access to Information, adopted by the participants in the 2022 International Day for Universal Access to Information global conference, calls for a renewed commitment to recognizing and respecting the right of access to information. The Declaration, referring to the 2030 Agenda for Sustainable Development, Goal 16, calls on stakeholders to reaffirm their commitment to the right to access to information, considering recent developments, such as the impact of digitalization on Access to Information, the challenges related to artificial intelligence, the importance of access to information legal guarantees and modalities of their implementation.

Ensuring the alignment with human rights, openness and accessibility for a digital transformation of education systems that benefits all, was highlighted during the Transforming Education Pre-Summit (June 2022). In this context, the UNESCO OER Recommendation and the United Nations General Assembly Resolution A/RES/75/267 on Media and Information Literacy and related guidelines can be leveraged by Governments to provide solutions for creating the crucial ecosystems needed for the establishment and maintenance of safe, free, high-quality open educational content and platforms, while enabling peoples' critical engagement with information, technologies and media.

In partnership with the UNESCO Media and Information Literacy and Intercultural Dialogue University Network (MILID Network), UNESCO organized (in May 2022) three key events on media and information literacy as part of the Third World Higher Education Conference (Barcelona, Spain) on the importance of empowering all students with fundamental competencies of quality 21st Century education and on the need to create public engagement and cooperation around Media and Information Literacy.

UNESCO gathered in Mollina, Spain, young media and information literacy experts to discuss how to integrate media and information literacy into the work of youth. Their inputs contributed to the "Draft Guidelines for Youth Organizations to Integrate MIL in their Policies and Strategies", and to the "Draft Plan of Action for Youth Engagement in Policies and Strategies related to Media and Information Literacy and Access to Information."

Nigeria hosted the 2022 Global Media and Information Literacy Week. Closely linked to the UN Secretary-General's "Our Common Agenda", the event focused on trust and solidarity as it relates to

people, media, digital platforms, governments, private sector, and non-governmental organizations. The programme highlighted some of the promising actions in connection with media and information literacy during the year and how media and information literacy helps with nurturing trust and countering mistrust.

The 4th edition of the Media and Information Literacy Week Youth hackathon brought together teams from 30 countries around the world to design innovative solutions to social challenges.

The need for societies and economies to prepare for the future of work by considering the influence of technology on gender equality was highlighted in the joint report on the effects of AI on the working lives of women. The report published in English, Spanish and French, draws attention on the need to increase digital knowledge available to women.

UNESCO will continue providing support to stakeholders to adapt and adopt Model Media and Information Literacy Curriculum for Educators and Learners[12] and will continue to support youth organizations to integrate media and information literacy into their policies and strategies. The expansion and development of the "Media and Information Literacy and Intercultural Dialogue University Network" and Media and Information Literacy Alliance are also among the priorities for the year to come.

E-learning (C7)

UNESCO's actions, as demonstrated during the Transforming Education Summit (TES) process, focus on facilitating knowledge sharing, enabling policy dialogue and capacity building, as well as the implementation of recognized frameworks for teacher education, such as the ICT Competency Framework for Teachers. Furthermore, UNESCO is supporting Member States in the implementation of the 2019 Recommendation on Open Educational Resources with a view to promoting the mainstreaming of OER practices into policies and strategies.

Indeed, the UNESCO OER Recommendation was the starting point for a common commitment and declared political will of Member States towards knowledge sharing through OER. In this light, to strengthen international cooperation around OER, immediately following the adoption of the OER Recommendation in March 2020, UNESCO launched the OER Dynamic Coalition, a multi-stakeholder initiative to support knowledge-sharing and collaboration around the implementation of the five action areas of the OER Recommendation. The Coalition is composed of experts from Member States, with a particular focus on UNESCO National Commissions, IGOs, UNESCO category 2 centers, specialized agencies, civil society and the private sector. The vision of the Dynamic Coalition for OER is to expand and consolidate commitments for action in the field of OER, and to promote and strengthen international cooperation among all relevant stakeholders in the 4 areas of action of this UN standard setting instrument: capacity building, policy support, inclusive and quality OER, sustainability and international cooperation.

With regards to the development of knowledge tools, the draft of new Policy and Capacity Building Guidelines is being launched to support Member States in the implementation of the Recommendation, in line with Global Priority Africa, and through the regional capacity-building and policy support initiative[13]. The 'UNESCO Guidelines for the Inclusion of Learners with Disabilities in Open and Distance Learning (ODL)' are being revised to include emergency response actions

---

[12] "Media and Information Literate Citizens: Think critically, Click Wisely", Second Edition
[13]   https://www.unesco.org/en/articles/commitment-action-implementation-oer-recommendation-eastern-and-southern-africa

(comprising now Covid-19 pandemic-like situations), recent technological developments and the Guidelines for Emergency Movement to ODL, with a substantive section on OER.

A global online survey has been circulated among Member States for competent authorities to report on activities conducted since 2019 for implementing all action areas of the OER Recommendation. A series of regional workshops were held in 2022 in all UNESCO regions to raise awareness on the implementation of the OER Recommendation and provide an overview of the draft Capacity Building and Policy Guidelines to support its implementation.

Digital transformation for education is a reality and to support inclusive knowledge societies, an open collaboration among all stakeholders is necessary to also mainstream open educational content and platforms. The need to ensure safety and critical thinking when navigating digital ecosystems and partnerships for the development of quality digital resources and platforms worldwide are essential conditions to achieve digital transformation.

In this vein, at the Transforming Education Summit, UNESCO and UNICEF launched a multi-partner initiative to create and strengthen inclusive digital learning platforms. Called Gateways to Public Digital Learning, this initiative will:

- map, describe and analyze existing public platforms and content
- help countries create and strengthen national platforms; identify and share best practices; and
- establish international norms and standards to guide the development of platforms in ways that advance national and international goals for education.

The Gateways Initiative has the guiding objective to establish and technically support an international movement for every learner, teacher, and family to easily access, find, and use high-quality and curriculum-aligned digital education content to advance their learning.

In most contexts, content should be accessible via a national platform that is overseen, sustained, and improved with public resources. These platforms should be free for all users and complement and support teaching and learning that happens in school. They should also open avenues for self-driven education and lifelong learning.

The time has come for countries as well as the international community to treat digital technology and virtual environments as core to the educational enterprise. They demand the same rigor, care, and attention that are paid to the physical infrastructure of learning.

The Gateways Initiative will help ensure that public education remains, to the extent possible, public and free when moved to digital environments. The initiative will further help countries recognize and act on national, regional, and global possibilities to advance education through digital cooperation and solidarity.

The upcoming 2023 Global Education Monitoring Report is concentrating on the theme of education and technology, building on a year of research to identify evidence-based examples of laws and policies that can feed into education technology policies and financing. Drawing from national experiences, the Report, will examine issues of access, equity and inclusion in education, looking at ways through which technology can help reach disadvantaged learners but also ensure more knowledge reaches more learners in more engaging and cheaper formats. It will focus on how quality can be improved, both in terms of teaching and learning basic skills, engaging and motivating learners, and in terms of relevance, ensuring the development of the digital skills needed in daily life. It will address the challenge of technology development, noting the role of technical, vocational and higher education institutions in national strategies for technological development, employment and economic

growth. Finally, it will recognize the role of technology in system management with special reference to assessment and other education management data that can be widely used for planning.

The report will also explore three system-wide conditions that need to be met for any technology in education to reach its full potential:

- Ensure that all learners have access to technology resources.
- Protect learners from technology risks through appropriate governance and regulation.
- Support all teachers to teach, use and deal with technology effectively.

Ensuring the development of digital capacities for judicial operators is the core of UNESCO's Global Initiative on AI and the Rule of Law, through a new global MOOC on AI and the Rule of Law. This training (available in seven languages – the six official UN languages and Portuguese) is a global, multistakeholder endeavor to exchange knowledge across justice systems on how AI can be used in administrative work to strengthen access to justice and improve internal processes and how the issues of bias, discrimination in the use of AI and the legal challenges they pose can be addressed. The MOOC was developed in cooperation with The Future Society (TFS), CETIC.br, NIC.br and the National Judicial Council (NJC), with 20 experts from different regions sharing their knowledge. So far, over 4,500 judicial operators from over 140 countries have attended this MOOC.

Other capacity-building interventions included six national, regional and global-scale trainings and dialogues, for judicial operators based in Africa, Asia and the Pacific. This includes the Open for Good Webinar on AI and Justice (8 June 2022), Specialization Training Seminar on Artificial Intelligence, Criminal Justice and Human Rights for Judicial Operators in Siracusa (Italy), Siracusa International Institute with first edition (July 2022) and second edition (September 2022), Inter-regional training for judicial operators (August 2022), conducted jointly with SADA, Training of Judiciary Actors on Freedom of Expression and Safety of Journalists (Sep 2022) in Tanzania, and RegHorizon's AI Policy Summit (Oct 2022).

Additionally, UNESCO supports the strengthening of digital capacities, readiness and governance in the civil service.

UNESCO and Nokia jointly published a report on AI and Digital Transformation Competencies for Civil Servants within the framework of the UN Broadband Commission for Sustainable Development's Working Group on AI Capacity Building. The framework which unpacked three core competency domains and nine key recommendations for AI and digital transformation in the civil service aims to provide digital capacity-building guidance for civil servants, international organisations, academia, private sector and regional and national actors. This project has leveraged a multi-stakeholder leadership model to directly assess and respond to the critical capacity needs for public sector digital transformation globally, including from a developing country perspective. It was based on two global consultations – one at the WSIS 2022 and another at the United Nations Conference on Trade and Development (UNCTAD) eCommerce Week 2022 – as well as four regional expert consultations in Asia, Africa and Latin America and the Caribbean.

The report was presented to policymakers, regulators, technical advisors, civil servants, academic and private sector experts at the 15th edition of the International Conference on the Theory and Practice of Electronic Government and Digital Capacity Building (ICEGOV) (October 2022) and at the second edition launch of the AI4GOV Master's Programme (October 2022).

In September 2022, UNESCO published a report on Multistakeholder AI Development: 10 Building Blocks for Inclusive Policy Design. This report distils ten lessons on using multistakeholder engagement for policymaking for stakeholders who oversee AI policy development and national AI strategies and policies. The 10 building blocks developed are themselves a result of a consultative

spirit – five participatory workshops, 20 case studies and a year-long participatory process. The report was first showcased at the [Southern Africa sub-Regional Forum on Artificial Intelligence (SAFRAI) (September 2022), and](#) contributed towards the [Windhoek Statement on AI in Southern Africa](#).

In support of the Global Initiative on AI and the Rule of Law, UNESCO hosted in December 2022 the [4th edition of the Athens Roundtable](#) and a [workshop at the 17th edition of the Internet Governance Forum,](#) aiming at advancing and widening the global dialogue on trustworthy adoption of AI in conformity with human rights and democratic values, effectively enforcing and complying with AI laws and regulations, and implementing AI international normative agreements as well as coordinating efforts for AI measurement and evaluation.

Additionally, in the near future, UNESCO will launch a Global Training Toolkit for judicial actors on AI and the Rule of Law and a Working Group on Judicial and Legal Capacity-Building in AI. To this end, UNESCO set up a Working Group on Judicial and Legal Capacity Building in AI within the framework of [The Athens Roundtable on AI and the Rule of Law](#). It aims at improving understanding of AI opportunities and risks within justice contexts, promoting the enforcement of legal (and normative) frameworks related to AI as well as helping protect and uphold fundamental values related to human rights, democratic foundations and the rule of law in the age of AI.

E-science (C7)

In line with its standard-setting role, UNESCO has developed a global [Recommendation on Open Science](#), unanimously adopted at the 41st General Conference in November 2021. The Recommendation provides an international framework for open science policy and practice that recognizes disciplinary and regional differences in open science perspectives. It takes into account academic freedom, gender-transformative approaches and the specific challenges of scientists in different development contexts.

UNESCO's work in e-Science leverages the related Strategy that was adopted by Member States in 2011 (36 C/62). The Organization has continued its work in the areas of advocacy, bridging scientific gaps, capacity building and dissemination of Open Access tools, processes and contents – explained in terms of journal articles, scientific data, open government data, open educational resources and open content - by building partnerships and facilitating cooperation with all relevant stakeholders.

For this UNESCO is working to advance south-south collaboration, continued deployment and development of the [global open access portal](#) (GOAP), supporting monitoring of open access and open data development and partnerships in 166 countries.

As regards priority Africa, UNESCO supported Angola to develop a comprehensive framework for Open Solutions. UNESCO is currently working with the University of Ibadan (Nigeria) to draw an Africa-wide assessment of the "Changing Landscape of Access to Knowledge".

Within the framework of the SDGs [Technology Facilitation Mechanism](#) (TFM) to support the application of science, technology and innovation (STI), UNESCO and the TFM UN-Interagency Task Team (IATT) designed some online training courses which, between 2020-2022, were conducted for more than 500 participants from over 90 countries. Courses will continue until end of year.

UNESCO developed a Global Observatory of Science, Technology and Innovation Policy Instruments: the GO-SPIN online platform (https://gospin.unesco.org/) is a methodological tool to map national science, technology and innovation (STI) landscapes and analyse STI policies and their implementation. The platform is a global source of STI policy information covering developing countries. With information on policies, instruments and legal frameworks in over 80 countries, it provides resources for capacity-building and benchmarking, as well as tools for analysis and monitoring of policy implementation. The platform also supports Member States in their monitoring and implementation of the global normative instruments.

The International Research Centre in Artificial Intelligence (IRCAI) under the auspices of UNESCO has launched a call for sustainable solutions in 2022 and will be creating a list and index of Top 100 projects solving problems related to the UN Sustainable Development Goals with the application of Artificial Intelligence, from all five geographical regions. Through this call, IRCAI will create the world's largest sustainable solutions platform and magnify the impact and effectiveness of the selected solutions.

In view to support the Openness of Data, UNESCO is about to publish a set of guidelines to apprise Member States of the value of openness of data for AI for tracking and achieving the SDGs. The guidelines also seek to empower Member States through a set of steps for action. The Set was developed based on the vision that outlines context of findable, accessible, interoperable and reusable (FAIR) data for SDGS and an approach to leveraging data for AI applications, with twelve concrete steps to make data available in FAIR format.

UNESCO is also supporting the SIDS to understand the potentiality of new technologies, for which a survey has been launched, the results of which are expected to pave the way for both openness of data but also provide entry points to leverage the power of AI for scientific advancement.

Cultural diversity and identity, linguistic diversity and local content (C8)

Launching the International Decade of Indigenous Languages in December 2022, UNESCO gathered high-level government representatives, Indigenous leaders and youth, UN representatives, non-governmental organizations, researchers, educators, artists and representatives from the public and private sector. The event provided an open space for discussions, sharing of good practices, and the presentation of relevant projects drawing attention to the critical situation of many Indigenous languages and working to mobilize stakeholders and resources for their preservation, revitalization, and promotion, which will contribute to the advancement of global and local linguistic diversity.

In this regard, the WSIS Forum 2022 contributed to highlight the fundamental principle that the Internet must be inclusive and accessible to all and that linguistic rights must be recognized as fundamental human rights as Indigenous Peoples still face numerous challenges in the digital space, triggering digital exclusion and barriers to access information online. In this respect, UNESCO also fostered links between UNESCO's Associated Schools Network and the International Decade of Indigenous languages through online meetings

Several programmes and projects were started in 2022 in line with the Open Roadmap for the implementation of the 2005 Convention in the Digital Environment. Within the framework of a European Union/UNESCO programme, "Supporting new regulatory frameworks to strengthen the cultural and creative industries and promote South-South cooperation", UNESCO supported several Member States[14] to strengthen local content production, distribution and dissemination through revision of copyright legislation and local content programming and professionalization of the creative sector. The project "Digital Creativity Lab", with funding from the Republic of Korea, addresses the digital skills' gap in the cultural and creative industries to strengthen policy frameworks. With funding from France, UNESCO is launching a pilot project in Georgia, Uganda, and Zimbabwe, to undertake a series of actions for resilient cultural and creative sectors in the digital environment.

The International Fund for Cultural Diversity (IFCD) supports operational projects in developing countries that aim at strengthening their cultural and creative industries including through linguistic

---

[14] In particular, the programme supports the film and audio-visual national contents development and diffusion in Namibia, Ethiopia, Uganda, and Palestine. Within the same framework, UNESCO has supported Mexico in elaborating recommendations to incorporate indigenous content in commercial and public media.

and cultural diversity, and the UNESCO-Aschberg Programme is supporting 12 countries in improving the status of artists and promoting artistic freedom and local content development, in particular in the digital environment.

As part of its emergency response since the start of the war in Ukraine on 24 February 2022, UNESCO has been documenting damage to cultural property on a daily basis, including religious sites, museums, historic buildings, buildings dedicated to cultural activities, monuments and libraries. In this context, an online Cultural Heritage Monitoring Platform was developed by UNESCO in partnership with UNITAR/UNOSAT, which includes information on the damaged sites recorded, as well as up-to-date information on the day-to-day monitoring through satellite images of cultural properties. This initiative aims at raising public awareness about the impact of the war on culture and preparing the grounds for recovery.

The innovative programmes of the UNESCO Creative Cities Network have been collected in a second UNESCO publication: *UNESCO Creative Cities' response to COVID-19 – from immediate action to long-term recovery*.

The Ugandan Ministry of Gender, Labor and Social Development, in partnership with UNESCO and the European Union, launched a project to support local development and professionalization of the film sector in Uganda, helping film-makers to reorganize and achieve a digital film distribution platform. Four regional workshops outlined challenges such as the limited access to financing, the insufficient capacities and training, the inaccessibility of modern equipment and the limited market and film distribution networks.

A ground-breaking Netflix and UNESCO competition to identify and support up and coming filmmakers in Sub-Saharan Africa, entitled 'African Folktales, Reimagined', resulted in six winners, each receiving a production budget and guidance to create short films through a local production company. The initiative aims to showcase Africa's rich cultural heritage and enable new voices from underrepresented communities to bring their perspectives to a global audience.

UNESCO's regional office for West Africa (Sahel) project *Strengthening National Capacities for the Safeguarding of Intangible Cultural Heritage (ICH) in Senegal* has enabled the first ever pilot community inventory of intangible cultural heritage elements in the region through the elaboration of a digital catalogue. Additionally, the *Senegal Talents Campus* initiative has created the first technical and professional training center in the arts and culture sector in Senegal, aiming to provide future professionals in the sector, especially women, with the digital skills necessary to fully contribute to new models of creative production.

Building capacities in the use of digital technologies for underwater archaeology, UNESCO[15] conducted in 2022, a unique international mission to explore and document their shared underwater cultural heritage using ROVs (Remotely Operated Underwater Vehicles) raising awareness on the need and the means to protect underwater cultural heritage. UNESCO Regional and Cluster Offices in Latin America and the Caribbean (LAC) jointly organized the first totally virtual training course on the protection of underwater cultural heritage in the region. The training attracted students from 28 countries for 3 months, focusing on the use of digital technologies to address the specific vulnerabilities of many Small Island Developing States.

---

[15] In connection to the 2001 Convention for the Protection of the Underwater Cultural Heritage

The programme *Transcultura: Integrating Cuba, the Caribbean and the European Union through Culture and Creativity*, continues to use ICTs to foster cooperation between different linguistic areas and to strengthen the rich cultural diversity of the region.

The UNESCO Office in Peru strengthened the capacities of 410 cultural agents in the use of virtual commerce platforms and created 18 new virtual stores through the *Heritage Cities with a Gender Approach* program. Likewise, the socioeconomic integration of the Venezuelan migrant population in Arequipa, Peru was promoted, including through projects to implement virtual spaces of artistic and cultural content for the population.

The UNESCO Bangkok Office is reviewing national regulations on Copyright Royalties for songs and music in Southeast Asia as they control only conventional musical activities without mentioning digital content services such as Spotify and YouTube.

The UNESCO Regional Bureau for Science and Culture in Europe has been implementing the *UNESCO Thematic Indicators for Culture* in Bosnia and Herzegovina, Croatia, Montenegro, North Macedonia, Serbia, collecting data concerning activities that promote digital creativity and competencies of artists working with new technologies, and on digital transformation of cultural industries and institutions.

UNESCO, the British Council and the Italian Agency for Development Cooperation (AICS) launched and jointly manage *"Culture and Creativity for the Western Balkans"*, a project funded by the European Union to foster dialogue, including through a digital platform for cultural and artistic venues and events and a digital portal to facilitate cooperation with and between Cultural and Creative Industries' professionals in the region.

Media (C9)

2022 saw the consolidation and launch of several new initiatives, training, online courses and capacity building events on the themes of rule of law and human rights, countering disinformation and hate speech. Past year initiatives, the pandemic and the general debate around disinformation and hate speech drew attention to the necessity of creating different frameworks and guidelines for social media platforms to secure information as a public good, guarantee freedom of expression and other human rights.

The flagship 2021/2022 World Trends in Freedom of Expression and Media Development: Global Report outlined the continuation of attacks against journalists around the world, the criminalization of speech online, the risk on media viability and the impact of disinformation on journalism trust. In this regard, UNESCO commemorates annually the World Press Freedom Day (3 May) and the International Day to End impunity for Crimes against Journalists (2 November) as flagship UN events providing high levels of participation and international visibility.

The World Press Freedom Day (WPFD) Global Conference 2022, took place in Punta del Este, Uruguay, on 2-4 May, opened by the UNESCO Director-General and the President of Uruguay, with over a thousand in presence and 3,400 online participants. WPFD was also celebrated around the world through over 50 national and local events where media freedom advocates rallied partners to raise the voice on press freedom. This Global Conference addressed the digital era's impact on freedom of expression, safety of journalists, access to information and privacy and developed concrete recommendations to address these challenges.

To counter Hate Speech, in cooperation with the UN Office of the Special Adviser on the Prevention of Genocide, UNESCO contributed to the first commemoration of the International Day of Countering Hate Speech through the launch of a UN-wide website on hate speech. UNESCO also contributes to the implementation of the Strategy and Plan of Action on Hate Speech applying a holistic and right-

based approach, promoting the empowerment on the demand side (e.g., with Media and Information Literacy), and the application of international standards (e,g., the Rabat Plan of Action on the Prohibition of Incitement to Hatred) by duty-bearers and social media platforms.

To address hate speech in social media, UNESCO, with the support of the EU, is working on the project "Social Media 4 Peace" with the overall objective to strengthen the resilience of societies to potentially harmful content spread online, in particular hate speech and incitement to violence, while protecting freedom of expression and enhancing the promotion of peace through digital technologies, notably social media.

UNESCO works to strengthen respect for the rule of law and fundamental freedoms by raising the knowledge and capacities of judicial actors on international and regional standards on freedom of expression, access to information, and the safety of journalists, including in the digital sphere. Since 2013, the UNESCO Judges Initiative trained over 24,000 judicial actors in 150 countries on these issues, including on tackling hate speech to ensure an environment conducive to press freedom, good governance and transparency. UNESCO also developed a training module to improve judges' capacity and knowledge on Internet Shutdowns as a disproportionate measure against freedom of expression according to international standards.

UNESCO is organizing in February 2023 the Global Conference "Regulating digital platforms for information as a public good", with the main goal to lead and have follow-up processes to develop, through multistakeholder consultations, a model regulatory framework for digital platforms to secure information as a public good while protecting freedom of expression and other human rights. The Global Conference follows-up on the endorsement with unanimity by the UNESCO General Conference in November 2021 of the Windhoek+30 Declaration on Information as a Public Good which also calls for transparency of social media companies.

Moreover, to improve accountability and human rights' guarantees from technology companies, UNESCO is creating a series of human rights' assessment guidelines for technology companies to be implemented in different contexts: for the safety of journalists and elections. It is worth to recall that UNESCO developed, through consultations, a set of indicators and guidelines to follow-up on 26 high level principles to enhance the transparency of internet platform companies.

Ethical dimensions of the Information Society (C10)

Strong partnerships are being formed with Member States, development partners and private sector companies to advance the implementation of the Recommendation on the Ethics of AI.

- At the global level, over 70 Member States of UNESCO launched the Group of Friends of the Implementation of the Recommendation on the Ethics of Artificial Intelligence on 3 February 2022 as an informal and open-ended network of Member States. The Group of Friends meets regularly to support UNESCO's work on the implementation and to create a space to share experiences and good practices.

- At the regional level, a regional council on the Implementation of the Recommendation is being established in LAC region, with the support of the Corporacion Andina de Fomento (CAF). The first ministerial meeting of the regional council will be organized in spring 2023. The UNESCO-Southern Africa Sub-Regional Forum on AI was held in Namibia in September 2022. It showcased the prototypes of the Ethical Impact Assessment and Readiness Assessment Methodologies and launched the platform in the UNESCO Southern Africa sub-region for the implementation of the Recommendation, with the support of the Japanese Development Cooperation.

- At the national level, several countries, particularly in Latin America and the Caribbean (Colombia, Ecuador and Mexico) as well as in the Arab Region (Morocco), have initiated a process to establish institutional infrastructures, such as national steering committees on the ethics of AI, to oversee the piloting of the capacity-building tools under development.

- Future actions or initiatives to be taken, regionally and/or internationally, and by all stakeholders, to improve the facilitation and ensure full implementation in each of the action lines and themes, especially about overcoming those obstacles identified in Part Two above. Countries are encouraged to indicate any commitments made to further implement the outcomes.

In accordance with the mandate given by the Recommendation to UNESCO, in consultation and with the support of Member States and partners, UNESCO has initiated a comprehensive programme to support the implementation of the Recommendation on the Ethics of Artificial Intelligence. Key elements as well as future actions are listed below.

- **Elaboration of capacity-building tools and methodologies**: The Recommendation asks UNESCO to develop specific tools for the implementation of the Recommendation: **Ethical Impact Assessment (EIA)** and **Readiness Assessment Methodology (RAM)**. These tools have been developed by the Secretariat in consultation with a multidisciplinary and multicultural advisory group of experts. The tools were launched at the inaugural Global Forum on the Ethics of AI last year and will be piloted in 2023 in various Member States, who are invited to contact the Secretariat to participate in this implementation.

- **Global Forum on the Ethics of Artificial Intelligence:** A need was identified to organize an annual high-level flagship event to advance the state-of-the-art knowledge of the challenges raised by these technologies and to take stock of the progress in implementing the Recommendation. The first edition of the Global Forum on the Ethics of AI was hosted by the Czech Republic within the framework of the Czech presidency of the Council of EU in December 2022 and was attended by over 500 in-person and online participants. It is envisaged that the Forum will be hosted by different countries every year, with several countries having already expressed interest in hosting future iterations

- **Establishment of the Global Observatory of AI Ethics** is needed to gather state-of-the-art analysis from around the world on the ethical development and use of AI and the specific ways in which AI actors address ethical challenges. It will also gather relevant information generated through the implementation of the Recommendation. The Global Observatory will be put into operation in the first half of 2023.

- Assisting Member States in building strong national institutions for promoting AI ethics, including the establishment and re-enforcement of national commissions for the ethics of AI.

- The establishment, facilitation and management of expert networks, including the AI Ethics Experts Without Borders (AIEB), Global Network of Knowledge Centres on Ethics of AI and a Women for Ethical AI Network (W4ethicalAI).

Beyond the Recommendation on the Ethics of AI, UNESCO continues leveraging its unique mandate in leading the global ethical reflection through its International Bioethics Committee (IBC) and World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) around topics such as the lessons learned from COVID, the principle of solidarity and cooperation, science and society and on climate engineering.

Following up on the work of its bioethics committees, UNESCO is working on the **ethics of neurotechnology and the Internet of Things**, among other data-driven technologies, with the aim of updating the application of human rights frameworks and preventing harms in the digital or technology spaces. Building on the ground-breaking report of IBC on the Ethical Issues of Neurotechnologies (2021), UNESCO is co-leading an UN Inter-agency workstream towards a global governance framework for neurotechnology. UNESCO is exploring the elaboration of a policy-oriented governance model for such frontier technologies. Closely coordinating with EOSG, OHCHR and other relevant UN Agencies, UNESCO participated and co-chaired two expert consultation roundtables in 2021 and 2022. A High-Level Conference will be organized in 2023 to sensitize Member States on the related ethical challenges and opportunities.