Roadmap for Ethical Artificial Intelligence for Latin America and the Caribbean 2024-2025

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Due to the acceleration of the global conversation on Artificial Intelligence (AI) through different global forums, it is relevant for Latin American and Caribbean (LAC) countries to continue, coordinate and consolidate processes that are underway enabling joint initiatives and moving forward towards regional positions in the field of AI ethics. The first Ministerial and High-Level Authorities Summit on the Ethics of Artificial Intelligence in Latin America and the Caribbean in Santiago, Chile, in October 2023 marked the beginning of a regional dialogue that resulted in the creation of a Working Group on the subject. This second Summit recognizes the need to establish a roadmap to channel and prioritize efforts.

The roadmap is an instrument created within the framework of the Working Group to strengthen technical and political dialogues related to governance and capacities for the development, use, adoption and harnessing of AI in LAC, as well as to guide and prioritize the technical support and contribution of UNESCO and CAF, aligned with other efforts in our region. It will be articulated and updated, whenever necessary, by the high authorities on the occasion of the annual Summits. It proposes the first actions prioritized by the focal points of the countries participating in the group, with an implementation horizon of 12 months.

This instrument will seek to promote the regional cooperation in AI that contributes to the economic and social development of the countries of the region with an ethical approach.

Lines of action

The areas and actions prioritized in this roadmap are considered key to the development and effective implementation of public policies in relation to AI, and seek to create a favorable environment for ethical, inclusive, sustainable and responsible technological innovation in the region.

1. Governance and Regulation

The rapid evolution of AI technologies, including generative AI, offers opportunities and poses significant challenges. In this sense, governance and regulation are essential to prevent harm, optimize benefits and mitigate risks. The challenges posed by generative AI require a multidisciplinary, adaptable and constantly evolving approach, capable of responding in an agile and flexible manner to the new technological and ethical issues that arise in today's world, as well as stimulating competition in the digital economy. In addition, it is key to create safeguards for democracy, rule of law, fundamental freedoms, human rights, privacy, digital security, intellectual property and disinformation, as well as to establish clear responsibilities among the different actors in the ecosystem with a perspective that is sensitive to the multiple and intersecting inequalities in our society, taking into account communities in a vulnerable situation.

The regulation of AI must be fully compatible with international human rights law and consistent with the principles set out in the rules and regulatory frameworks of LAC countries. The strategic, ethical, safe and responsible use of AI, in accordance with the different national contexts, should be encouraged through the development of different governance strategies and regulatory frameworks.

The efforts made in different spheres, such as the resolutions approved at the United Nations General Assembly[1], the United Nations Human Rights Council, Resolution 214 of the Plenipotentiary Conference of the International Telecommunication Union as well as the multiple national legislative initiatives underway in LAC or in other jurisdictions, serve as input to feed the dialogues and construction of regional consensus.

[1] A/78/L.49 and A/78/L.86

1.1. Governance models and evolution of regulations in LAC.

Mapping and characterizing current AI-related regulations and their evolution in the region, along with their governance mechanisms. The findings of the analysis will serve as input to address regional dialogues and the next actions in the subsequent roadmaps.

1.2. Methodology for the design of regulatory proposals for AI

Developing a methodology for the design of regulatory proposals for AI and the supervision of their compliance, oriented to the context and challenges faced by LAC governments. UNESCO and CAF will support countries that so require in the application of this methodology.

Generating annual reports on progress in the region related to the implementation of different tools, including those provided for in the UNESCO Recommendation on the Ethics of AI: Readiness Assessment Methodology (RAM) and the Ethical Impact Assessment methodology.

1.3 Coordination mechanism to address the impact of AI on disinformation in the region

Convene a working subgroup with the national institutions involved, to exchange good practices and measures implemented at the regional level and develop common initiatives to address and combat disinformation amplified by AI, with special focus on electoral contexts, the preservation of democratic institutions and values, encouraging exchange and collaboration of multiple stakeholders.

2. Skills and the future of work

The development of skills in the general population and the preparation of the workforce are critical in the face of the growing adoption of AI in multiple sectors and aspects of economic and social activity, both to take advantage of the opportunities that this technology generates in the labor market and because of the risk of automation that it represents in certain occupations. According to an OECD study, more than 25% of jobs in LAC are at risk of being replaced by automation, one of the highest rates in the world, significantly exceeding the organization's average (14%) (OECD et al., 2020), without taking into account the jobs that will be created through the adoption of AI (Shine, 2023). Added to this is the fact that in LAC, not all social groups are equally informed about recent trends in AI, nor are they involved in the development, use and deployment of such technology.

In view of the foregoing, it is important to address the challenges presented by the digital transformation, promote media and digital literacy, including in AI, critical thinking and the development of both basic and advanced skills, in order to take advantage of the benefits of this technology for economic and social development. It is also important to promote investment in programs and plans that strengthen skills and education, taking into account local contexts, including the creation of AI skills frameworks, continuous training and workforce training.

2.1. Framework for AI literacy and harnessing

Developing or adapting a framework of reference on skills and competencies, oriented to the literacy and safe and responsible use of AI, in coordination with the technical teams of the interested countries, taking account of the diversity at the level of digital literacy and the differences in digital development within the region, steered at creating an input to incorporate in national digital literacy and/or citizenship strategies.

2.2 Cycle of workshops: AI for leaders and decision makers

Designing, agreeing upon and implementing a training plan through a cycle of workshops aimed at leaders and decision makers of LAC governments to provide an approach to the issue of AI, and address the main dimensions to be taken into account in the different public policies they are in charge of, so that they can understand, decide and incorporate this technology when appropriate.

3. Protection of vulnerable groups

The region faces a wide gender gap and high vulnerability among specific population groups. AI can perpetuate or exacerbate these conditions if biases in the systems that incorporate this technology are not appropriately addressed. In this context, it is necessary to promote the participation of people who are vulnerable to the technological revolution, so that they can more effectively harness the opportunities offered by AI, ensuring that vulnerable groups actively participate in the development and use of AI, in multiple roles and stages of the life cycle of these systems. At the same time, the protection of children and youth in the digital environment, as well as the elderly and disadvantaged, must be ensured.

3.1. Women in AI: Exchange of experiences and Guidelines for gender mainstreaming

Developing a space for dialogue and work at the regional level to exchange experiences and research on gender and Artificial Intelligence; accompanying this effort with the development of a practical guide to orient decision makers and digital public policymakers on the importance of gender mainstreaming in the life cycle of public policy.

3.2. Regional study on racism and discrimination in the field of public security

Carrying out a regional study on racism and discrimination in the context of AI development, focusing on biases and the use of AI applications in the field of public safety, considering the intersection of multiple vulnerability factors, such as gender, ethnicity and socioeconomic status.

4. Environment, Sustainability and Climate Change

AI can play a crucial role in adaptation and resilience in the face of climate change, which is having a significant impact on the region, and has important potential to contribute to the promotion of sustainable development. In light of this reality, it is a priority to focus work on recognizing the region's wealth of natural resources and biodiversity. Efforts should include the surveillance, protection and regeneration of ecosystems, the sustainable use of natural resources, and the promotion of energy efficiency. Similarly, it is important to consider that AI, in its life cycle, has negative implications for the environment, an example being the large amount of electrical energy used for the use and training of advanced AI models and systems, such as large language models (LLMs). It is essential to adapt these solutions to the LAC context, taking into account the energy and technological particularities of the region, and it is necessary to carry out a thorough analysis of the environmental impact throughout the life cycle of the AI models, from their manufacture to their final disposal.

4.1. Best practices and recommendations for disaster risks, surveillance, preservation and protection of the environment

Developing a practical guide for the governments of the region identifying best practices, lessons learned, recommendations and use cases on how AI may help in disaster risk resilience, surveillance, preservation and protection of the environment, ecosystem restoration, sustainable use of natural resources and energy challenges.

4.2. Study on environmental risks due to the use and development of AI in LAC

Carrying out a study aimed at identifying the environmental risks inherent in the use of water resources, electric power capacity and increased greenhouse gas emissions due to the use and development of AI, with a focus on the LAC context. This study should include an analysis that addresses how countries can mitigate the environmental impact of AI by adopting energy-efficient technologies and developing more efficient models.

5. Infrastructure

Although LAC countries have made significant progress in terms of connectivity, particularly in relation to Internet access and download speeds, there are significant gaps regarding computing capacity and the use of data to create social, economic and public value. According to the *Latin American Artificial Intelligence Index*, the region shows a cross-cutting poor performance in terms of investment and use of cloud as a computing element, and there is a scarce presence of computing centers (CENIA, 2023, p. 15). Taking into account the recent technological evolution of AI and the mass use of advanced systems such as generative AI, including LLMs, it is of vital importance for LAC countries to develop high-performance computing capabilities that enable the processing, analysis and exchange of large volumes of data. This is aimed at strengthening the region's research and development capabilities, as well as the development and deployment of technological solutions that meet the region's needs and priorities.

5.1. Regional study on the demand for high-performance computing infrastructure

Carrying out a regional study on the current and potential demand for high-performance computing infrastructure in LAC, identifying current regional initiatives, enablers for the shared use of an infrastructure of high-performance computing centers for AI and financing and joint harnessing alternatives for the region.

5.2. Recommendations for data governance for algorithm training

Identifying guidelines to guide the development of data governance policies in LAC countries, in accordance with applicable legal frameworks, in order to contribute to the training of algorithms in the region, with strict respect for human rights, privacy and intellectual property and copyright.[2]

[2] The scope established in this product will require a longer period of time than the 12 months defined for the general implementation of the Roadmap.

Implementation, follow-up and reviews of the Roadmap

- **Leadership and coordination**: The Roadmap implementation process will be led by the governments of the region and the Working Group, with technical assistance and financial support from UNESCO and CAF, ensuring convergence and articulation with other relevant international organizations and regional initiatives, such as the Digital Agenda for Latin America and the Caribbean (eLAC) and the Latin American and Caribbean e-Government Network (Red Gealc). Once established, the Working Group will have the task of defining the terms of reference for its operation.

- **Prioritized lines of action and products**: The prioritized lines of action and products will be approved by the Ministers and High-Level Authorities representatives on the occasion of the Ministerial and High-Level Authorities Summit on the Ethics of Artificial Intelligence in Latin America and the Caribbean. These are selected through a consultative process by the member countries of the group, a process of exchange and prioritization, analysis of implementation feasibility, availability of technical assistance and timeliness for implementation.

- **Implementation of initiatives**: Working subgroups will be proposed to advance in the different lines of action, to foster the exchange of best practices and knowledge and ensure adequate articulation and involvement of interested countries in the region. A timeline will be agreed upon to establish the scope of the products, intermediate milestones and the map of the parties involved, which should be adjusted to a maximum period of 12 months, unless otherwise agreed.

- **Follow-up and accountability:** The Working Group will conduct a biannual follow-up of the state of progress of the agreed products, as well as the review of the Roadmap, which will be presented for support and endorsement at future Ministerial and High-Level Authorities Summits on the Ethics of Artificial Intelligence in Latin America and the Caribbean.

- **Visibility and dialogue:** Visibility and promotion of all initiatives and actions related to the Roadmap will be sought, as well as the participation and representativeness of all actors representing multiple stakeholders in the region during implementation, in accordance with their respective roles and responsibilities and under the leadership of national governments. Within this framework, the policies, programs and projects developed by LAC countries in relation to AI will be published in UNESCO's Global AI Ethics and Governance Observatory. Besides, the visibility and coordination of actions within the framework of this Roadmap along with other

initiatives on AI in the region, such as eLAC and the GEALC Network, will be fostered, thus contributing to regional cohesion in this area.

Summary of Roadmap

Please find below a summary table of the Roadmap.

Line of action	Products to be developed
1. Governance and Regulation	1.1. Governance models and evolution of regulations in LAC. 1.2. Methodology for the design of regulatory proposals for AI 1.3 Coordination mechanism to address the impact of AI on disinformation in the region
2. Skills and the future of work	2.1. Framework for AI literacy and harnessing 2.2. Cycle of workshops: AI for leaders and decision makers
3. Protection of vulnerable groups	3.1. Women in AI: Exchange of experiences and Guidelines for gender mainstreaming 3.2. Regional study on racism and discrimination in the field of public security
4. Environment, Sustainability and Climate change	4.1. Best practices and recommendations for disaster risks, surveillance, preservation and protection of the environment 4.2. Study on environmental risks due to the use and development of AI in LAC
5. Infrastructure	5.1. Regional study on the demand for high-performance computing infrastructure 5.2. Recommendations for data governance for algorithm training

**This roadmap and its declaration were approved at the closed session of the Second Ministerial and High-Level Authorities Summit on the Ethics of Artificial Intelligence in Latin America and the Caribbean held on October 4, 2024, in Montevideo, Uruguay, with the presence of representatives from the following countries: Brazil, Chile, Colombia, Cuba, Curacao, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Dominican Republic and Uruguay.*