

International Seminar: “Artificial Intelligence and Climate Change”

Technology in favor of sustainable development and just transition

Serzedello Corrêa Institute, Brasília, January 28th 2025

Context

The world is in a context of climate urgency. According to the latest report of the Intergovernmental Panel on Climate Change (IPCC), AR6, global warming "is a threat to human well-being and planetary health", and "there is a rapidly closing window of opportunity to secure a liveable and sustainable future for all".

In this critical situation, countries have recognized the growing need for the mobilization of resources and technologies to address this challenge, while humanity also strives to eradicate poverty and hunger. Through the first Global Stocktake (GST-1), adopted during COP28 in Dubai, countries agreed that "achieving the long-term goals of the Paris Agreement requires the rapid and scaled-up deployment and adoption of existing clean technologies and accelerated innovation, digital transformation and development, demonstration and dissemination of new and emerging technologies, as well as increased access to those technologies, supported by appropriate enabling frameworks and international cooperation".

Artificial Intelligence (AI) has been advancing rapidly, with the promise of transforming various sectors of society and the economy. Among its most urgent and impactful applications is tackling climate change. AI has the potential to improve climate modeling, enhance early warning systems, optimize energy use, and accelerate the transition to renewable sources.

Technology, however, also introduces significant challenges, such as high energy and water consumption, electronic waste generation, and the deepening of economic and social inequalities. In addition to these problems, there is the pronounced disparity between technology providers and users, further widening the gap between developed and developing countries, including with respect to international data flows. It is therefore essential to discuss how developing countries can become active participants and leaders in the development and deployment of this new technology.

Brazil is advancing in this direction through its recently announced "AI for the Good of All" plan. This is a national platform aimed at leveraging AI for the transition to a low-carbon economy and climate-resilient development. With the necessary infrastructure, talent, and regulatory measures, the country is bound to play a prominent role in developing AI solutions that prioritize social equity and environmental sustainability. COP30, to be held in Belém in November 2025, will be an important

moment for the country to showcase its credentials in the field and give a decisive boost to the use of digital technologies in combating climate change.

Objective

The international seminar "Artificial Intelligence and Climate Change: Technology in favor of sustainable development and a just transition" aims to discuss solutions, policies, opportunities, and challenges related to the use of Artificial Intelligence in addressing global warming. The seminar will also focus on the inequality in the international flow of data for tackling climate change and the role of developing countries as developers of AI applications, considering the opportunities and barriers involved. The event, to be held in a hybrid format with an in-person segment in Serzedello Corrêa Institute, in Brasília, will bring together entrepreneurs, academics, and policymakers from Brazil and around the world to explore how AI can be harnessed to address the climate crisis in an equitable manner.

Agenda (All times in BRT)

Opening (9:00 to 9:30)

- Ambassador Mauro Vieira, Minister of Foreign Affairs of Brazil
- Ms. Luciana Santos, Minister of Science, Technology, and Innovation of Brazil
- Ms. Marina Silva, Minister of Environment and Climate Change of Brazil
- Ms. Renata Mielli, Coordenadora do Comitê Gestor da Internet no Brasil
- Sr. Simon Stiell, Secretário Executivo, Convenção Quadro das Nações Unidas sobre Mudança do Clima (online)

Presentation - The Dimension of Sustainability in the Brazilian Artificial Intelligence Plan "AI for the Good of All" (9:30 to 9:45)

- Ms. Eliana Cardoso Emediato Azambuja, Director of Digital Science, Technology, and Innovation, Ministry of Science, Technology, and Innovation
- Dr. Caetano Penna, Director, Center for Management and Strategic Studies (CGEE)

Panel – Fostering AI Solutions for Mission 1.5 (9:45 to 10:45)

- Moderator: Ms. Sara Ballan, Senior Digital Development Specialist, World Bank
- Dr. Maria João Sousa, Executive Director, Climate Change AI
- Mr. Tomas Lamanauskas, Deputy Secretary-General, International Telecommunication Union (ITU)
- Dr. Erick Giovani Sperandio Nascimento, Associate Professor of Artificial Intelligence (AI) for Clean Air Systems and Programme Lead of AI and Sustainability, University of Surrey, UK

Coffee Break (from 10h45 to 11h15)

Presentation - AI Solutions for Combating Climate Change – Part 1 (11:15 to 11:45)

- Mr. Daniel Penz, Business Leader and Developer at Instituto CERTI Amazônia
- Ms. Yana Dumaresq Sobral, Regional Director of Public Policy, Meta
- Mr. Gabriel Savio, CEO and Head of Strategy, Sipremo

Panel – Artificial Intelligence and Digital Public Infrastructure in Addressing Climate Change (11:45 to 12:45)

- Moderator: Ms. Michela Rossane Cavilha Scupino, Director of Technological Operations, Lactec
- Dr. Francisco Gaetani, Extraordinary Secretary for State Transformation, Ministry of Management and Innovation in Public Services, Brazil
- Mr. Christer Andersen, Senior Adviser, Norwegian Agency for Development Cooperation (Norad)
- Dr. Paulo Nobre, Researcher, National Institute for Space Research (INPE)

Lunch (from 12h45 to 14h00)

Panel – Reducing the Footprint of Artificial Intelligence – Climate Commitments for 2030 (14:00 to 15:00)

- Moderator: Dr. Gustavo Macedo, Professor of Business, Insper – Instituto de Ensino e Pesquisa
- Mr. Thomas Spencer, Electricity Sector Analyst, International Energy Agency (online)
- Mr. Marcos Peigo, CEO, Scala Data Centers
- Ms. Antonia Gawel, Global Director of Sustainability, Google (online)
- Mr. Márcio Gonçalves, Director of Government Affairs, Microsoft Brazil
- Mr. Wei Liu, Head of ESG Strategy, Alibaba Group (TBC)

Presentation of Solutions to Reduce the Environmental Liabilities of AI – Energy, Water Consumption, and Electronic Waste (15:00 to 15:30)

- Dr. Gabriel Perez, Co-Founder, MeteolA
- Dr. Carlos Souza Junior, Researcher, Amazon Institute of People and the Environment (Imazon)
- Mr. Lennon Medeiros, Founder and Scientist, Visão Coop

Coffee Break (from 15:30 to 16:00)

Panel – Aligning Data Flow with Mission 1.5 and the Role of Developing Countries in the Sustainable AI Value Chain (16:15 to 17:15)

- Dr. Matias Spektor, Professor, Fundação Getúlio Vargas (FGV)
- Dr. Dora Kaufman, Professor, Intelligence Technologies and Digital Design Program, PUC-SP
- Dr. Anderson Soares, Vice President of Technology, Center of Excellence in Artificial Intelligence, Federal University of Goiás (CEIA/UFG)

- Ms. Shamika Sirimanne, Director, Division on Technology and Logistics, UNCTAD (online)
- Dr. Álvaro L. G. A. Coutinho, Professor at COPPE/Federal University of Rio de Janeiro, Director of the Advanced High-Performance Computing Center and Center of Excellence in AI for Renewable Energy

Closing (17:15 to 17:30)

- Ambassador André Aranha Corrêa do Lago, Vice-Minister for Climate, Energy and Environment, Ministry of Foreign Affairs of Brazil
- Ambassador Laudemar Gonçalves de Aguiar Neto, Vice-Minister for Trade Promotion, Science, Technology, Innovation and Culture, Ministry of Foreign Affairs of Brazil