**MAPPING OF SUSTAINABLE AI GOVERNANCE FRAMEWORKS/FORUMS & COLLABORATIVE SUSTAINABLE AI INITIATIVES**

**(september 2025)**

**Coordination Team**

# International and Collaborative Initiatives on Sustainable AI

## What is it and What is it not

- **What it is:**
  - an overview of all the major international and collaborative initiatives advancing sustainable AI (both as AI for the planet and the environmental footprint of AI) to have a better understanding of what exist and of who is doing what, with a special focus on international organizations
  - a work in progress

- **What it is not:**
  - a comprehensive list of all initiatives
  - a list of national initiatives (unless the initiative is carried as a pilot to be replicated in other countries or regions).

- **How to contribute:** Join the Coalition and https://www.sustainableaicoalition.org/contact-us/

# International and Collaborative Initiatives on Sustainable AI

**Methodology:**

- **Direct Interviews with International Organizations**: IEA, UNDP, UNEP, ITU, GGGI, UNESCO, UNFCCC, World Bank

- **Consultation sent to Members of the Coalition**:

    o Carried between April and July 2025 – still on going to ensure regular update of the mapping
    o +80 answers received

- **Internet Research**

- **Review by Main International Organizations**: On July 17th, a review of an initial version of the mapping was presented to International Organizations that are both supporters and non-supporters of the Sustainable AI Coalition

# International and Collaborative Initiatives on Sustainable AI

## Key Takeaways (1/2):

- **Working on sustainable AI did not start with LLM.**

- **Accelerating Momentum:** All main international organizations have expanded their Sustainable AI initiatives since 2022, with major frameworks, coalitions, and publications launched primarily in 2024-2025.

- **Dual-Track Approach:** Following a start focusing on the use of AI, now, most organizations consistently address both dimensions of sustainable AI – the environmental footprint of AI, and leveraging AI for environmental solutions.

- **Complementary Specializations:** Organizations leverage their core mandates to tackle sustainable AI, and AI more broadly

- **More activities on AI for Green versus Green AI:**
  - When looking at the number of AI related programs within an organizations, AI for Green programs tend to out weight Green AI initiatives, although the dual approach is adopted.
  - The case for greener AI is well aligned with sustainable development goals that are at the core mandate of many International organizations as it notably allows for an easier deployment and use of AI in poorer and resources-constraint areas and population.

**Key Takeaways (2/2):**

- **Coordination at the Global Level:** Frameworks supported by International Organizations are expanding their green digitalization initiatives to include sustainable AI. Main AI coordination alliance launched by the private sector does not have the same level of focus on green AI, although it is identified as a challenge.

- **The Special Case of Standardization :** The construction of environmental impact guidelines is identified as a priority, with the need to produce comparable metrics to assess the full covering of training, inference and hardware cycle.

- **The Special Case of Data Centers:** Powering data centers with a clean electricity mix has been consistently pursued by technology companies with the creation of several multilateral and private multi-stakeholders initiatives. The deployment of green digital infrastructure is also a decades-long action of several OI. The pursuit of these goals is going to be tested by the deployment of AI, while also possibly being a physical constraint that could fuel innovation for energy and resource-efficient foundational AI models.

# International and Collaborative Initiatives on Sustainable AI

## Discovering the mapping on the Sustainable AI Coalition:

- **PART I - Governance/Forum - where sustainable AI topics are discussed/supported**
  - **International level**
  - **Regional level**

- **PART II - Green AI**
  - Key International Initiatives on Transparency & data sharing
  - Key International Initiatives on Standards & Guidance
  - Key International Initiatives on Data Centers
  - Key International Initiatives on Capacity Building - Public Policies

- **PART III - AI for Green**
  - Key International Initiatives - Platforms /Networks
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  - Reports
  - Challenges & Hackathons

# COALITION FOR SUSTAINABLE AI

# International and Collaborative Initiatives on Sustainable AI

## (Sustainable) AI Global Forum (International Level)

### Global Digital Compact
**_Independent International Scientific Panel on AI and Global Dialogue on AI_**

_Consultation process ongoing to set up the panel - co-facilitated by Costa Rica and Spain._

Lead: UN / ODET

### Global Partnership on AI

An international initiative established to guide the responsible development and use of artificial intelligence (AI) in a manner that respects human rights and the shared democratic values of its members.

Lead: OECD

### Coalition for Digital Environmental Sustainability - CODES

CODES provides resources and opportunities to set priorities, take concerted action, and develop capacities for an inclusive, sustainability-driven digital transformation.

Lead: UNEP-ITU-UNDP-GER-KE...

### Green Digital Action

By fostering international partnerships and coordination, Green Digital Action aims to position the entire information and communication technology (ICT) sector as a leader in climate action and an enabler for other sectors to engage in climate efforts.

Lead: ITU

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Lead: ITU

# International and Collaborative Initiatives on Sustainable AI

**COALITION FOR SUSTAINABLE AI**

## (Sustainable) AI Global Forum (International Level)

### WEF AI Governance Alliance

Collaborative effort, uniting industry leaders, governments, academic institutions and civil society organizations, to provide guidance on for the responsible development, adoption and overall governance of generative AI.

Lead: WEF

### Partnership on AI

Non-profit organization that brings together a diverse community to address important questions about our future with AI

Lead: private sector

## (Sustainable) AI Global Forum (Regional Level)

### (Africa) Green Compute Coalition

Access green compute across diverse developing country contexts, and ensuring that the growth of AI capabilities align with global climate goals, with first launch being Africa Green Compute Coalition.

Lead: UNDP

### European Green Digital Coalition

With a scope larger than AI is an initiative of companies, supported by the European Commission and the European Parliament, based on the request of the EU Council, which aims to harness the enabling emission-reducing potential of energy- and ressource-efficient digital solutions to all other sectors, .

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# International and Collaborative Initiatives on Sustainable AI

## Green AI : Key International Initiatives on Transparency & data sharing

### Energy and AI Observatory

Provides up-to-date data and analysis on the growing links between the energy sector and artificial intelligence.
Provides use cases on AI for Energy.

**Transparency Use Cases**

Lead: IEA

### Observatory on AI's environmental impact

With the support of Capgemini, the AI and Society Institute, the Ecole normale supérieure (ENS-PLS) and the ENS Foundation have launched an Observatory dedicated to analyzing and mitigating the environmental impacts of Artificial Intelligence (AI) at all stages of its lifecycle (training, adjustment, inference and end-of-life). The new Observatory aims to establish a solid, shared methodology to encourage sustainable AI usage.

**Transparency**

### AI Expert Group on AI Computing and Climate

Gathered at the request of the OECD to provide expertise to assess & understand AI compute capacity internationally.

**Transparency**

Lead: OECD

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# International and Collaborative Initiatives on Sustainable AI

**Green AI : Key International Initiatives on Standards & Guidance**

**Standards & Guidance**

**IEEE P7100 Environmental Impacts of Artificial Intelligence Working Group**

Measurement framework for reporting on environmental indicators for training models and deriving inference on Artificial Intelligence (AI) systems

Lead: IEEE

**Standards & Guidance**

**Study group 5 from ITU (standardization)**

Studies on methodologies for evaluating ICT effects on climate change and publishing guidelines for using ICTs in an eco-friendly way, including guidelines for Assessing the Environmental Impact of Artificial Intelligence systems.

Lead: ITU

**Standards & Guidance**

**CEN Guidelines and metrics for the environmental impact of artificial intelligence Working Group**

Principles and framework for environmental impact measurement of artificial intelligence systems and services

Lead: European Committee of Standardization (+ ISO ?)

# International and Collaborative Initiatives on Sustainable AI

**COALITION FOR SUSTAINABLE AI**

## Green AI : Key International Initiatives on Data Centers

### Sustainable Data Centers and ICT
A global platform to share best practices of energy efficient solutions in data centres, provide policy recommendations to policy makers and foster transformational collaboration among various public and private stakeholders in the global data centre industry.

Lead: UNEP Copenhaguen Center on Energy Efficiency

**Best practices & Research**

### Sustainable Procurement Guidelines for Data Centers and Servers

Promotion of the guidelines and capacity building supported by U4E Data Centers Working Group.

Lead: U4E (UNEP)

**Best Practices & Capacity Building**

### Energy Efficiency of Data Centres

Workstream of EDNA producing guidelines, modelisation & research papers

- DC1a. Total energy model 4.0
- *DC1b. Comparison of data centre models
- DC1c. Long term modelling
- *DC1d. Energy efficiency of servers
- DC2a. Policy observatory update
- DC2b. Public data on data centre energy use. Report.
- DC4. Data centre energy efficiency labels. Report.
- *DC3. Metrics and standardisation

Lead: IEA-EDNA

**Public Policies, Transparency, Best Practices & Research**

### 24/7 Carbon-Free Energy Compact

A global community that works to accelerate the decarbonization of electricity systems by connecting companies, organizations, NGOs, governments and other stakeholders

**Decarbonized Energy**

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**Green AI : Key International Initiatives on Capacity Building (1/2):**

**Readiness Assessment Methodology (RAM)**

A tool designed to help countries understand how prepared they are to apply AI ethically and responsibly for all their citizens. It includes a dedicated chapter on environmental and sustainable policies.

A V2 of the RAM is currently underway with a stronger emphasis on the environmental impact of AI.

Lead: UNESCO

**Public Policies Governance**

**Ethical Impact Assessment (EIA) methodology**

A tool for evaluating the benefits and risks of an AI system in relation to the values and principles of the UNESCO Recommendation on the Ethics of AI. It includes environmental considerations.

Lead: UNESCO

**Public Policies Governance**

## Green AI : Key International Initiatives on Capacity Building (2/2):

**UNESCO AI Implementation Toolkit for Countries (upcoming)**

A toolkit to implement an AI policy with a focus on concrete solutions, tools ready to be used and best practices implemented in other countries. One policy to focus on Sustainable AI. 2 pilots in 2 countries.

Lead: UNESCO

**Public Policies Measuring Tools**

**Public Procurement Guides in the ICT sector**

Several guides and standards already published such as Circular and sustainable public procurement – ICT equipment guide or Green data centers: towards a sustainable digital transformation - A practitioner's guide .

Lead: ITU

**Best Practices, Standards & Capacity Building**

**Sustainable AI Toolkit (upcoming)**

A toolkit to orient the WB investment. Based on 3 layers :
1. Policy review – what is the current status quo?
2. Footprint - what is the environmental footprint of AI?
3. Use cases  - exemples of policy/actions to reduce the environmental footprint of AI

Lead: World Bank

**Public Policies**

**ITU Academy online training on green data centers**

The aim of this e-learning is to inspire and inform practitioners on how to green data storage investments and create an enabling environment conducive to green data infrastructure.

Lead: ITU

**Capacity Building**

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# International and Collaborative Initiatives on Sustainable AI

**COALITION FOR SUSTAINABLE AI**

## AI for Green : Key International Initiatives - platforms /networks

### Case studies collection of AI deployment across energy sector

Creation of a library of AI use cases in the field of energy as part of the "energy and AI" report (April 2025).

**Clean Energy**

Lead: IEA

### Environment GPT

LLM tool to provide reliable, robust information about the environment to support policy-making

Lead: UNEP

**Climate information**

### Accelerator Labs Network

Using AI to analyze earth observation data (satellite data and drone data) for crop disease detection, waste monitoring, land use mapping.

**Agriculture and Food**

Lead: UNDP

### IRCAI: International Research Centre on Artificial Intelligence

A coordination point, funding route and exploitation accelerator for approaches to the UN SDGs that make use of AI, including Spotlighting 100 AI innovations advancing the UN SDGs

Lead: UNESCO

**SDG**

### Global Initiative on Resilience to Natural Hazards through AI Solutions

The initiative aims to explore how AI can be effectively used in disaster management

Lead: ITU, UNEP, UNFCCC, WMO, UPU

**Disaster management**

### Agrifood Systems Technology and Innovation Outlook (ATIO) (launch october 2025)

ATIO has two key components:
- a biennial publication starting in 2025, compiling the latest developments in science and technology relevant to agrifood systems.
- an open-source database dedicated to technologies and innovations for agrifood.

Lead: FAO

**Agriculture and Food**

# COALITION FOR SUSTAINABLE AI

# International and Collaborative Initiatives on Sustainable AI

## AI for Green : Key International Initiatives - pilot projects :

### AI in Early warning systems

GGGI is working with the National Meteorological Agency of Ecuador (INAMHI) to pilot a deep learning based extreme weather nowcasting system.

Lead: GGGI

**Climate change**

### UN's Early Warnings for All (EW4All) Initiative

Supported by ITU (pillar 3), EW4All seeks to establish comprehensive global protection through early warning systems by 2027.

Lead: UN

**Climate change**

### United for Smart Sustainable Cities

U4SSC serves as an international platform for exchanging knowledge and fostering partnerships to empower cities and communities in achieving the UN Sustainable Development Goals. It has a thematic group on AI in Cities:

Lead: ITU, UNEP, UNECE supported by 19 UN agencies

**Sustainable cities and communities**

### AI in Blue Carbon monitoring

In the context of Indonesia' Ministry of Marine Affairs and Fisheries' (MMAF) mandate to implement a robust carbon pricing mechanism that includes blue carbon ecosystems, GGGI is working to pilot a remote sensing-based seagrass mapping tool for costal seagrass monitoring.

Lead: GGGI

**Oceans**

### AI in Crop Yield Forecasting

Working with a private plantation company in Sri Lanka, GGGI aims to enhance sustainable agricultural practices and increase economic resilience for local communities by utilizing machine learning models for predicting tea yield prediction.

Lead: GGGI

**Agriculture and Food**

### Global Initiative on Resilience to Natural Hazards through AI Solutions

The initiative aims to explore how AI can be effectively used in disaster management, providing expert guidance and support for research, innovation, and the development of standards.

Lead: ITU, UNFCCC, UNEP, WMO, UPU

**Climate change**

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# International and Collaborative Initiatives on Sustainable AI

## Cross-Sectorial Initiatives :

**Green AI & AI for Green**

**REPORTS**
**AI & Energy** (IEA - April 2025)

**AI for Climate action: advancing mitigation and adaptation in developing countries** (TEC-UNFCCC - July 2025)

**Measuring What Matters: How to Assess AI's Environmental Impact** (ITU - July 2025)

**Smarter, smaller, stronger: resource-efficient generative AI & the future of digital transformation** (UNESCO - July 2025)

**Data Centre Energy Use: Critical Review of Models and Results** (I4-IEA - March 2025)

**Public Procurement Guides in the ICT sector** (ITU)

**Green AI & AI for Green**

## CHALLENGES & HACKATHONS

**AI Innovation Grand Challenge**
(2024, 2025) hackathon focusing on Climate IA solutions for LDCs and SIDs
Lead: UNCC

**UNDP Intelligence for Climate & Nature Prize**
Challenge in partnership with UNDP's supported Climate Collective's AI for Climate Accelerator program.
Lead: UNDP

**AI for Climate Innovation Factory 2025**
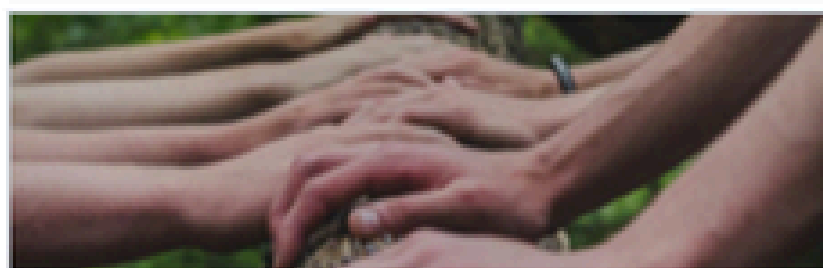Innovation pitching competition at AI for Good.
Lead: ITU

**Hack for the Environment**
Challenge for a data-driven solution that integrates an aspect of the triple planetary crisis
Lead : UNEP

**AI for Climate Action Award 2025**
Pitch competition for solutions that use the power of AI for effective adaptation and mitigation action
Lead: UNFCCC TEC

# COALITION FOR SUSTAINABLE AI

# International and Collaborative Initiatives on Sustainable AI

**https://www.sustainableaicoalition.org/initiatives-hub/**
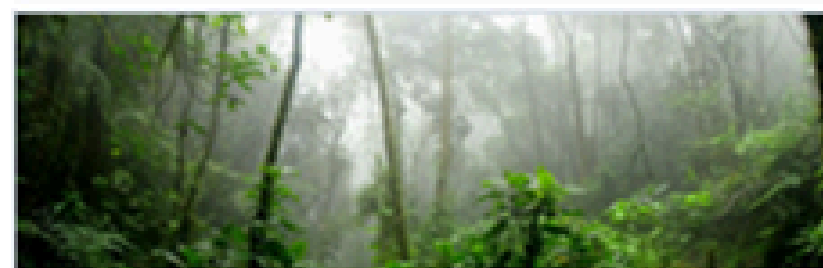


### 1. Green AI Initiatives

There is currently a need to understand the environmental costs of AI to ensure deployment at scale for all countries and to build an AI ecosystem respectful of our planetary boundaries. The goal of the Coalition is to ensure that AI becomes an essential lever...
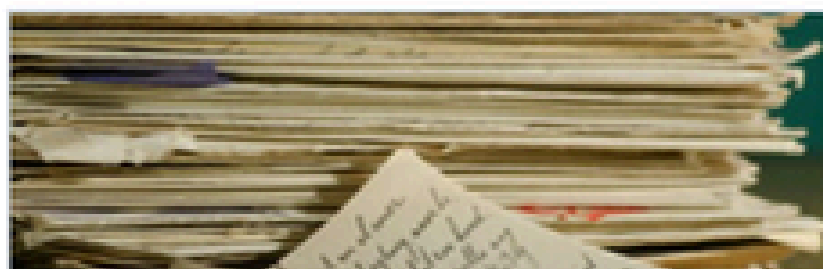
Read more



### 2. AI for Green Initiatives

AI has a huge potential in helping to reach climate commitments and have great impact on sustainability of societies. In combination with the mitigation of the negative impacts of AI, this might enable enormous progress in working towards the ecological and digital transition.

Read more



### 5. Sustainable AI Hackathons and Challenges

These events not only foster creativity and technical excellence but also drive meaningful impact by promoting solutions that align with sustainability goals. Participants and enthusiasts alike are increasingly recognizing the potential of AI to build a more resilient and eco-friendly future.

Read more



### 6. AI & Environmental Knowledge & Information

AI & Environmental Information Discover initiatives that explore the complex relationship between AI and environmental information and knowledge. AI and Access to Environmental Knowledge AI & Access to Environmental Knowledge" Workshop Access to Environmental Knowledge A first exploratory workshop on "Access to environmental knowledge through...

Read more



### 3. Inventory of Reports on Sustainable AI

Discover a selection of reports on sustainable AI published by our members. This page brings together publications essential to understanding advances, challenges and best practices in the design, use and environmental impact of artificial intelligence.
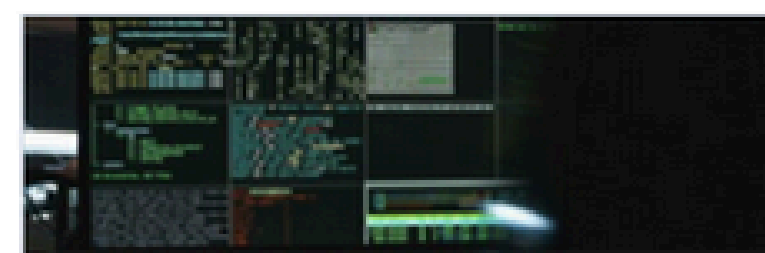
Read more



### 4. Capacity-Building Contents

Online courses and webinars are essential tools to ensure that a community of stakeholders can commonly grow in skills to foster the use of Artificial Intelligence for our environmental goals.
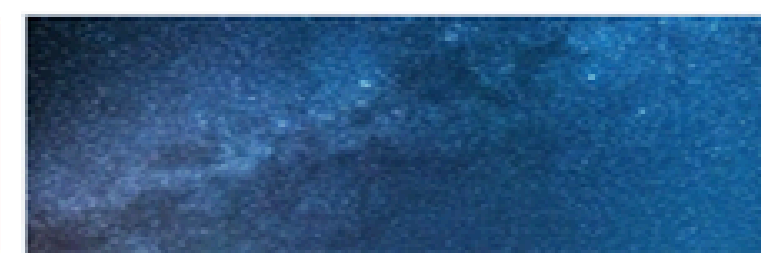
Read more



### 7. International Organizations & AI

International Organizations & AI: Who iS Doing What? An overview of the main initiatives undertaken and reports published by a selection of International Organizations on the topic of sustainable AI. Browse the table and expand the cells to learn more about the sustainable AI initiatives...

Read more