



Preparing National Research Ecosystems for AI: Strategies and progress in 2024

Global policy perspectives on AI for science

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PREPARING NATIONAL RESEARCH ECOSYSTEMS FOR AI

Working paper includes

- Literature review of 317 academic publications
- List of critical issues for the uptake of AI in science and research
- Country case studies: Australia, Benin, Brazil, Cambodia, Chile, China, India, Malaysia, Mexico, Oman, Uruguay, Uzbekistan
- V2 to be published in November with additional case studies

Methodology

- Closed full day workshops under Chatham House rule
- One-on-one consultations for developing the case study
- Versioning of paper expands case studies/group of experts and allows updates on case studies



Preparing National Research Ecosystems for AI

STRATEGIES & PROGRESS IN 2024

CASE STUDY EXAMPLES AND HIGHLIGHTS

Australia

- National strategy required for addressing computing needs in the country and future needs of science sector.
- Comprehensive digital literacy programs encouraged; investment in job-ready AI specialists.
- Human-AI collaboration and human-centric AI; eg for science: CINTEL.
- Diversity in AI workforce to uplift AI capability.
- Safe and responsible AI discussions following principles published in 2019.

China

- National plan - initiative to support adoption of AI tools in basic sciences (2022-2025).
- Computing power infrastructure and opening of data resources (Open Platform of AI4S).
- National Science and Tech. Ethics Committee: list of high-risk AI research and development areas
- First regulatory policy for China's AI generated content: '*...the Management of Generative Artificial Intelligence Services*'.
- Datasets, foundational models and specialized tools for AI for science developed in the country.

India

- Global South hub for software tools (eg: Bhanisi platform for local languages).
- Seven national AI expert groups; 2023 report on establishing Centres of Research Excellence.
- AI skills development initiatives boosted through programs (universities and industry).
- National AI strategy identifies 5 priority sectors; setting up of Ethics councils within CoEs.
- Roles of CoEs in positioning India at forefront of AI; collaboration between sectors

KEY MESSAGES FROM CASE STUDIES AND REGIONAL DISCUSSIONS

- Countries are at different levels of implementation (from observation to being to being at the forefront of developments)
- Some countries identifying a leader role in AI development
- Awareness and recognition of the importance to work to integrate AI in national research ecosystems especially in LAC region
- Very compatible assessments of the opportunities, as well as of the efforts and resources required for AI to work for science, particularly in LAC region

GAPS IDENTIFIED

- Roadmaps for the uptake of AI in science are driven by the national strategies
- Limited knowledge on transnational and regional initiatives and approaches that could be benefited from
- Sustainability issues are barely mentioned at all

ACTIONS FROM THIS WORK


- Creating linkages between countries/regions and or institutions that did not previously exist
- Versioning of the paper to keep an updated case study and an active network
- Identifying issues to be further clarified through technical papers with the network


THANK YOU


We look forward to the next steps.

For any questions, email me at

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