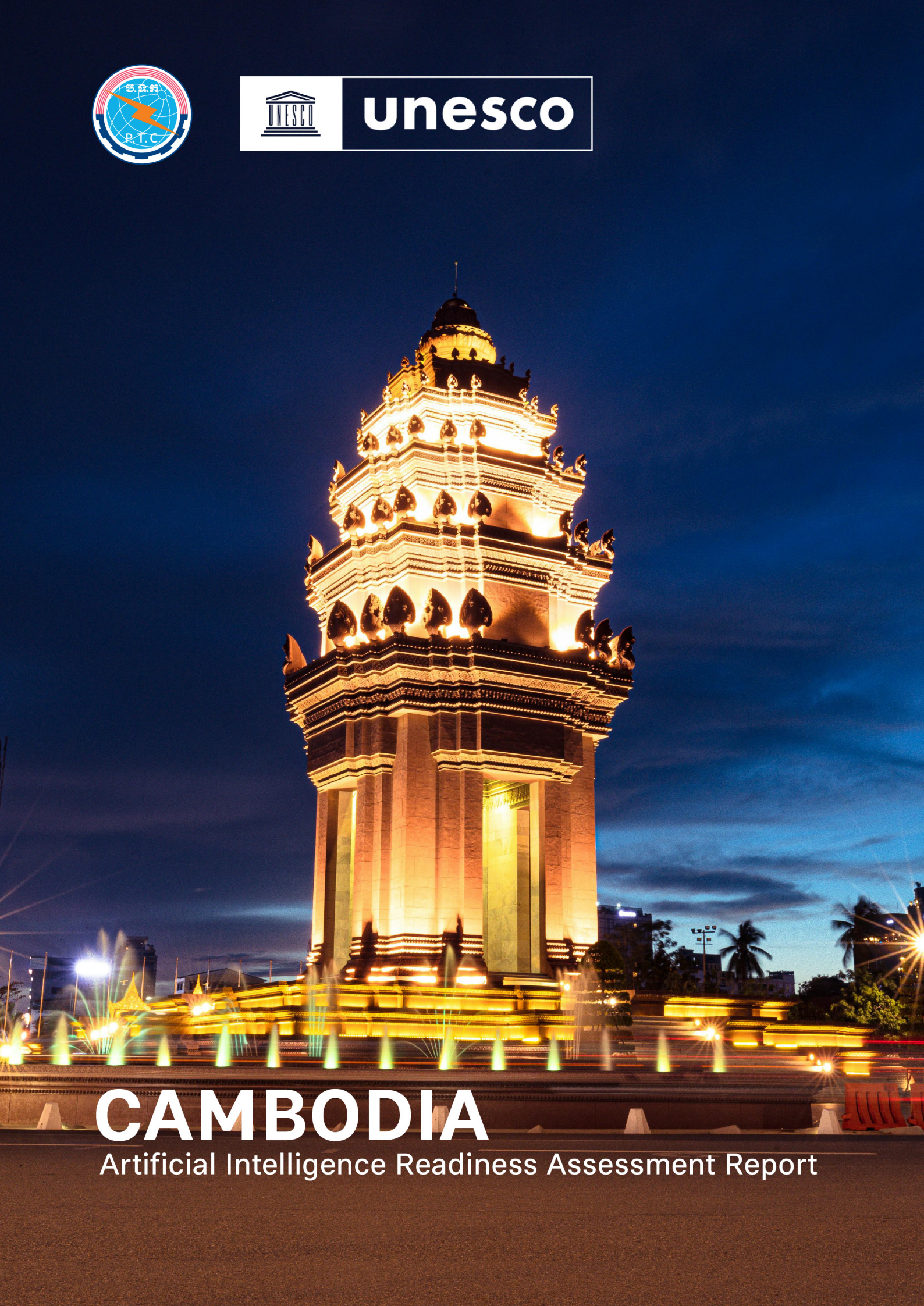

# CAMBODIA

## Artificial Intelligence Readiness Assessment Report

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# Cambodia

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ADGMIN | ASEAN Digital Ministers' Meeting |
| ADGSOM | ASEAN Digital Senior Officials' Meeting |
| AI | Artificial Intelligence |
| AIEB | AI Ethics Experts without Borders |
| ASEAN | Association of Southeast Asian Nations |
| BSc | Bachelor of Science |
| CADT | Cambodia Academy of Digital Technology |
| CamDX | Cambodia Data Exchange |
| CENIA | Chilean National AI Centre |
| CIO | Chief Information Officer |
| COP | Child Online Protection |
| CRC | Convention on the Rights of the Child |
| CSAM | Child Sexual Abuse Material |
| CSIC | Cambodia Standard Industrial Classification |
| EGDI | E-Government Development Index |
| e-KYC | electronic Know-Your-Customer |
| EPI | E-Participation Index |
| ETO | Emerging Technologies Observatory |
| FAccT | ACM Conference on Fairness, Accountability, and Transparency |
| GBARD | Government budget allocations for R&D |
| GDP | Gross domestic product |
| GDPR | General Data Protection Regulation |
| GERD | Gross Expenditure on Research and Development |
| ICT | Information and Communication Technologies |
| IDB | Inter-American Development Bank |
| IEEE | Institute of Electrical and Electronics Engineers |
| IODC | International Open Data Charter |
| IP | Intellectual Property |
| ISO | International Organization for Standardization |
| ISOC | Internet Society |
| ITU | International Telecommunication Union |
| LTE/WiMAX | Long-Term Evolution / Worldwide Interoperability for Microwave Access |
| MEF | Ministry of Economy and Finance |
| MISTI | Ministry of Industry, Science, Technology, and Innovation |
| MLVT | Ministry of Labour and Vocational Training |
| MOH | Ministry of Health |
| MoEYS | Ministry of Education, Youth, and Sport |

| | |
|---|---|
| MPTC | Ministry of Post and Telecommunications |
| MSc | Master of Science |
| NDC | Nationally Determined Contribution |
| NGO | Non-Governmental Organisation |
| NIS | National Institute of Statistics |
| OCSAE | Online Child Sexual Abuse and Exploitation |
| ODIN | Open Data Inventory |
| OECD | Organisation for Economic Cooperation and Development |
| OGP | Open Government Alliance |
| PPP | Purchasing power parity |
| R&D | Research and Development |
| R&I | Research and Innovation |
| RAM | Readiness Assessment Methodology |
| REIA | Recommendation on the Ethics of Artificial Intelligence |
| SDF | Skill Development Fund |
| SDG | Sustainable Development Goals |
| SDMX | Statistical Data and Metadata Exchange |
| SMEs | Small and Medium Enterprises |
| SPI | Statistical Performance Index |
| STEM | Science, Technology, Engineering and Mathematics |
| STEMEOC | STEM Education Organisation for Cambodia |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| UN-ESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| WG-AI | ASEAN Working Group on AI Governance |
| WHO | World Health Organisation |

# FOREWORD

We have officially entered the Age of Artificial Intelligence. The world is now set to change at a pace not seen in decades, even centuries. AI-based tools and applications make our lives easier, smoother, and richer. They help us move efficiently, get informed, get credit, get a job, and get our taxes done.

But in its current form, AI reproduces and amplifies many social challenges we face. It is not acceptable that around a third of the world's population still lacks adequate internet access. Upstream, the AI industry is highly concentrated, with just two countries – the United States and China – and a dozen companies accounting for a major share of the sector. This can lead only to greater inequality of outcomes, including gender disparities, downstream. Non-diverse AI teams, unrepresentative datasets, and opaque and biased algorithms can cause harm, particularly to those who are already vulnerable, whether companies or individuals, children and young people, women, or entire democracies.

That is why UNESCO drafted the Recommendation on the Ethics of Artificial Intelligence, which was adopted in 2021 by 193 countries to ensure AI delivers fair, sustainable, and inclusive outcomes. The Recommendation is based on the protection and promotion of human rights, human dignity, and environmental sustainability, and these values are then translated into principles such as accountability, transparency, and privacy. The Recommendation also sets out concrete policy actions that governments can draw on to steer technological developments in a responsible direction, premised on the belief that light-touch regulation, which has until now remained the norm, is insufficient. We need capable governments that are well equipped, in terms of competencies, institutions and laws, to frame responsible AI development and protect the rule of law online, and public and private developers who are accountable for putting human rights and fundamental freedoms, not profits or geopolitical considerations, first.

The Readiness Assessment Methodology (RAM) is a diagnostic tool intended to assist Member States in upholding their commitment to the Recommendation by helping them understand how prepared they are to implement AI ethically and responsibly for all their citizens. By highlighting any institutional, regulatory, or data gaps and obstacles, it enables UNESCO to tailor support for governments to fill those gaps to ensure an ethical AI ecosystem aligned with the Recommendation.

Cambodia was selected to implement the RAM to support their efforts in the creation and implementation of a national AI strategy, an initiative that we applaud, as it seeks to put AI ethics and governance at the forefront, and we thank them for inviting UNESCO to assist in this effort.

The report presented here reveals a panorama of challenges along with Cambodia's strong commitment to harnessing the benefits of AI while protecting its people. One of the key recommendations of this report is to implement the AI Strategy and develop an institutional framework that considers multiple stakeholders. Likewise, it is recommended that existing laws be updated and evaluated to strengthen the governance ecosystem.

The report reveals a dynamic landscape marked by significant progress and opportunities for growth as Cambodia embraces the potential of AI. In the legal dimension, Cambodia is demonstrating active participation in ASEAN AI governance discussions and is taking crucial steps by drafting foundational legislation for Personal Data Protection and Cybersecurity. While a finalised national AI strategy and specific laws for AI procurement and access to information represent the next stage of development, the proactive introduction of Child Online Protection Guidelines underscores a commitment to safety.

Socially and culturally, many encouraging developments are occurring. The gender gap in internet usage is narrowing, and numerous initiatives are actively promoting digital skills and opportunities for women and girls. Significant work is also being done to develop essential Khmer language datasets crucial for inclusive AI. Expanding connectivity, particularly in rural areas, and enhancing e-government services remain important goals, representing clear opportunities for impactful investment and improvement, building on existing platforms like Camdx. Cambodia is also thoughtfully considering the role of AI as it formulates future strategies for Digital Health and the preservation of Cultural Heritage.

The scientific and educational sphere shows exciting potential. Cambodia has witnessed promising growth in AI research publications, with a noteworthy emphasis on ethics, and innovative postgraduate programs are integrating ethical considerations from the outset. Collaborations, particularly those with UNESCO, further enrich the educational landscape. While current R&D investment levels and school infrastructure offer opportunities for future enhancement, a strategic focus in these areas, along with curriculum updates that emphasise critical and computational thinking, can unlock considerable talent.

Economically, while comprehensive data is still developing, pilot projects showcase local innovation, and analysis indicates AI's potential to significantly enhance GDP. Understanding AI's impact on the labour market is a crucial next step to ensure that technological adoption fosters inclusive growth.

Technically, Cambodia has established a solid foundation with nearly universal electricity access and improved mobile connectivity. Enhancing internet access and speed, expanding data centre capacity, engaging with international standardisation bodies, and strengthening statistical performance are the next frontiers that will further empower Cambodia's burgeoning AI ecosystem.

Overall, this report presents a fundamentally optimistic vision that we share at UNESCO: that ethical governance and responsible regulation of AI are fully consistent with innovation and economic growth and are essential to ensure a technological ecosystem that benefits the public good. With the RAM data and this report, Cambodia has a clear roadmap on how to get there.

It was a pleasure working with the Government of Cambodia to conduct this exercise. We are grateful for their engagement with the RAM, and I am sure that by following the path laid out in this report, Cambodia will be able to reap the benefits of AI while making sure that AI technologies deliver fair, sustainable, and inclusive outcomes.

Chea Vandeth

Minister of Post and Telecommunications of the Kingdom of Cambodia

# FOREWORD

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Lidia Brito

Assistant Director-General for Social and Human Sciences, UNESCO

# EXECUTIVE SUMMARY

In November 2021, 193 UNESCO Member States adopted the Recommendation on the Ethics of Artificial Intelligence. This global standard aims to harness AI's positive impact while addressing its inherent risks. Countries worldwide are implementing the Recommendation, and UNESCO supports them through various capacity-building initiatives. In particular, Cambodia initiated the study of its AI ecosystem through the Readiness Assessment Methodology (RAM).

Cambodia is taking exciting steps in the policy and legal dimension by actively participating in ASEAN discussions on AI governance and working on important legislation such as Personal Data Protection, Cybersecurity, and AI Ethics Guidelines. However, there's still work to be done, as the country does not yet have a finalised national AI strategy, experiences some fragmentation in institutional roles, and has room to grow in cybersecurity maturity and open data performance. Additionally, there is a need for specific laws surrounding AI procurement and access to information. On the brighter side, it's encouraging to note that child online protection guidelines have been introduced, and substantial strides have been made in enhancing digital skills training for the public and private sectors. The key recommendations going forward include finalising the National AI Strategy, building upon existing frameworks, creating clear Multistakeholder Governance structures, refining regulations (including enacting new laws and reviewing procurement processes), deploying flexible regulation frameworks, developing comprehensive AI Guidelines, and ensuring alignment with International Standards.

The social and cultural aspects show encouraging progress in bridging the gender gap in internet usage, along with good PISA results for girls in science and reading. Many initiatives are working hard to close the STEM gender gap, and CADT is making strides by developing Khmer language datasets. Despite these positive steps, Cambodia still faces several challenges, including connectivity issues, a persistent gender gap in STEM fields within higher education and the workforce, low performance in e-government services, and the need to integrate AI ethics into its developing strategies for Digital Health and Cultural Heritage. To address these issues, the key recommendations include fostering a safe digital environment through public awareness campaigns, strengthening child protection measures, and implementing targeted policies to close the gender gap. Additionally, the report recommends that Cambodia develop targeted policies for sectors such as health, environment, education, and culture, building upon the existing strategies and initiatives.

The scientific and educational landscape reveals a promising growth in AI publications, emphasising the importance of ethics. Excitingly, new AI and Data Science Master's programs are starting to incorporate ethics into their curricula, and there is a flourishing collaboration with UNESCO to enhance AI education. However, Cambodia still faces several challenges: R&D spending remains on the lower side, many schools lack adequate digital and AI infrastructure, and there is an urgent need to refresh curricula to better equip students with digital skills. Additionally, the demand for advanced AI talent is critical. To address these issues, the key recommendations are to bolster AI awareness and skills through public literacy initiatives, to integrate digital and computational thinking into the curriculum, to invest in teacher training, and to foster the development of advanced AI skills.

Cambodia faces a challenge in having limited data to assess AI's economic aspects thoroughly. However, the assessment identified some promising examples, such as pilot AI projects in the public sector, like Sarika and Khmer Braille, as well as studies on the economic potential of AI to increase GDP by 2030. While AI adoption is still in its early

stages, there is a risk of job displacement, so data on AI's impact on the labour market and investments is needed. The key recommendations include gathering essential ecosystem data, including labour market insights and R&D, and prioritising sectors such as agriculture, finance, SMEs, and tourism for strategic development.

The technical and infrastructure dimension highlights potential improvements in mobile connectivity and near-universal access to electricity. Cambodia has established statistical standards and is developing draft policies for Cloud First and Data Governance. Nonetheless, there is a pressing need to enhance internet access and speed, as modern data centre capacity is currently limited. Additionally, Cambodia is not represented in AI standardisation bodies, and the statistical infrastructure requires further strengthening. The key recommendations include enhancing connectivity, improving ecosystem data frameworks, establishing an AI Resource Centre to improve access to computing infrastructure, and engaging with international standards.

This initiative is part of UNESCO's effort to contribute to a more ethical and promising future for AI systems globally. UNESCO is committed to respecting, protecting, and promoting human rights, fundamental freedoms, human dignity, and environmental and ecosystem well-being, ensuring diversity and inclusion, and fostering peaceful, just, and equitable societies. Interconnected. When appropriately managed, the emergence of new technologies, such as AI, can be harnessed for the collective benefit of humanity. In this context, RAM ensures that all nations can achieve a better future, leaving no one behind.

# DIAGNOSIS OF THE NATIONAL SITUATION REGARDING ARTIFICIAL INTELLIGENCE

Cambodia has formally endorsed the UNESCO Recommendation on the Ethics of Artificial Intelligence (AI) and is gradually positioning itself to shape its national AI governance framework. This is a significant step, as one of the key policy actions in the Recommendation is to develop frameworks for identifying and assessing the benefits, concerns, and risks of AI systems concerning human rights, fundamental freedoms, labour rights, the environment, and ethical and social implications, through AI governance mechanisms that are inclusive, transparent, multidisciplinary, multilateral, and involve multiple stakeholders. The Ministry of Post and Telecommunications (MPTC) has spearheaded the deployment of the RAM in collaboration with UNESCO, which will inform the development of a National AI Strategy.

The MPTC is the leading authority overseeing the post, telecommunications, and information and communication technology (ICT) sectors, including spectrum management, as defined in Sub-decree No. 64, issued on May 10, 2019. Moreover, in AI policy and governance, the MPTC received the following mandate from Samdech Thipadei Hun Manet, Prime Minister of Cambodia, on the development of policies, laws, regulation and guideline related to artificial intelligence: "*MPTC shall continue to expedite the preparation of draft policies, laws, regulations, and relevant guidelines in the sectors of post, telecommunications, and digital technology, especially cutting-edge technologies including Artificial Intelligence technology, automation machines, big data, cloud technology, blockchain technology, and Internet of Things technologies*." Recently, the Royal Government of Cambodia (RGC) issued a notification regarding the government's decision to determine the mandate of ministries and agencies related to AI[1]. Based on the decision, the MPTC is mandated to lead the development of AI governance and backbone infrastructure, and to coordinate the formulation of a policy framework and strategy for AI governance. While the Ministry of Industry, Science, Technology & Innovation (MISTI), focuses on developing policies, strategies, roadmaps, and action plans for science, technology, and innovation as outlined in Sub-decree No. 48, issued on April 6, 2020[2], is mandated to lead the AI research and development (R&D) policies and coordinate in the formulation of the Roadmap for AI R&D. Alongside this decision, the RGC also tasked the Ministry of Education, Youth and Sport (MoEYS) to lead and coordinate in the AI education, while tasks other relevant line ministries to promote the research, development and the use of AI in their respective sectors.

MPTC is working to develop a National AI Strategy (NAIS) in collaboration with all relevant stakeholders, including UNESCO and UN-ESCAP[3]. To date, the NAIS is in its second draft version, which has been consulted with technical experts within the UN-ESCAP network, and a deep dive has been undertaken among experts. Further steps are outlined before the review and decision of the National Digital Economy and Society Council, including training technical working groups, consultation with line ministries, a national consultative workshop, and reviews by the Digital Government Committee. Moreover, efforts have already been made to prepare the National Artificial Intelligence Governance Framework, which aims to introduce a systematic framework for balancing regulation and innovation

[1] Letter no. 660 dated 21 April 2025 of the Council of Ministers of the Royal Government of Cambodia.
[2] https://data.opendevelopmentcambodia.net/laws_record/sub-decree-no-48-on-the-organization-and-functioning-of-the-ministry-of-industry-science-technology#:~:text=This%20sub%2Ddecree%20determines%20the,the%20handicraft%20and%20clean%20water
[3] https://mptc.gov.kh/en/2025/04/press-release-on-process-of-artificial-intelligence-governance/

concerning AI in Cambodia. At the ministerial level, MPTC is also formulating the MPTC AI Promotion Strategy to promote the adoption of AI within the ministry and its sectors of competence.

In addition to the above-mentioned national efforts AI development and governance, MPTC, as the national representative of Cambodia to the ASEAN Digital Sectoral Body, ASEAN Digital Ministers' Meeting (ADGMIN), has participated in the preparation and harmonisation of the AI governance and ethics in ASEAN; namely, the ASEAN Guide on AI Governance and Ethics (adopted on 2 February 2024), the Expanded ASEAN Guide on AI Governance and Ethics for Generative AI (adopted on 17 January 2025), and the ASEAN Responsible Artificial Intelligence Roadmap (adopted on 17 January 2025).

To this point, UNESCO's Recommendation emphasises the importance of developing policy actions in areas such as the environment and ecosystem, culture, healthcare, and education. Moreover, several existing National AI strategies focus on and prioritise sectors considering the country's comparative advantages4.

Efforts to integrate AI into public service remain limited. The government has only deployed a few pilot projects utilising AI systems that impact service users. Given the low level of development, citizens are not required to be notified when AI is used. However, in the last few years, the government has shown an increasing interest and commitment to responsible AI. Examples are CADT's support to young researchers and innovators, collaboration with UNESCO in incorporating the ethical dimension of AI in master's programs, and the government's cooperation with UNESCO to incorporate AI in education5.

While implementing the RAM, different stakeholders highlighted many challenges to developing AI regulations and policies. First, a significant issue is the low AI literacy and a shortage of skilled professionals across ministries, which hampers effective policy development and regulation. Second, infrastructural constraints—such as insufficient technological capacity, limited high-quality datasets, and inadequate investment in AI research—further impede progress. Third, fragmented governance in this domain complicates the development of a cohesive regulatory framework. Addressing these issues requires enhancing inter-ministerial coordination, fostering capacity building, and integrating ethical considerations into AI frameworks.

The following sections examine Cambodia's ecosystem from various perspectives, including legal, social, cultural, scientific, educational, economic, technical, and infrastructural. Whenever the RAM required unavailable data, we clarified this gap to illustrate the necessity of collecting it in the future.

[4] https://www.sciencedirect.com/science/article/pii/S0313592620304021

[5] https://www.khmertimeskh.com/501653664/unesco-committed-to-using-ai-in-cambodian-education/

# LEGAL AND REGULATORY

The regulatory framework in which AI governance is developed is crucial for ensuring AI systems' ethical development and deployment. The legal and regulatory framework must include effective mechanisms to safeguard and defend citizens' rights and monitor, mitigate, and compensate for any unforeseen adverse outcomes from deploying AI systems. The legal framework encompasses rules related to AI, data protection and privacy, data sharing and information access, procurement, due process and accountability, online security and content integrity, and public sector capacities

## AI POLICY AND REGULATION

Cambodia has not yet established a national AI strategy; however, it has been conducting various processes that will ultimately lead to the development of such a policy. Moreover, several key policy frameworks and regulations were established to lay the foundation for AI development and deployment. The Cambodia Digital Economy and Society Policy Framework 2021–2035[6] and the Cambodia Digital Government Policy 2022–2035[7] outline AI-related initiatives, with the Digital Government Committee designated as the lead coordinator for AI infrastructure and adoption in public services. The Digital Government Policy tasks the MPTC with formulating policies to promote advanced digital technologies, including AI, and leading international cooperation. Moreover, MPTC represents the royal government at the global and regional levels concerning AI. MPTC actively engages in regional mechanisms to discuss and harmonise governance and ethics in the ADGMIN and ASEAN Digital Senior Officials' Meeting (ADGSOM), including the ASEAN Working Group on AI Governance (WG-AI), contributing to three key documents: the ASEAN Guide on AI Governance and Ethics[8], the Expanded ASEAN Guide on AI Governance and Ethics - Generative AI[9], and the ASEAN Responsible AI Roadmap 2025-2030[10].

Although there are no AI-specific laws, relevant regulations are either in place or being drafted. For example, the Telecommunications Law (2015)[11] has some provisions related to data privacy, and Sub-Decree 110 of 2017[12] regulates ICT industry players, impacting the AI value chain. Cambodia is also developing new legislation, including the Law on Personal Data Protection, which defines the responsibilities of data controllers, processors, and subjects and the Law on Cybersecurity, currently under inter-ministerial review, to strengthen national cybersecurity. These efforts demonstrate Cambodia's growing recognition of AI's importance and commitment to establishing a governance framework despite lacking a dedicated AI strategy.

No specific policies or procedures exist for using AI in the public sector, including an AI Ethical Impact assessment or specific monitoring and evaluation mechanisms. Citizens are not necessarily informed when an AI system is used in a process that influences them. However, the MPTC is drafting an AI Ethics Guideline that is aligned with UNESCO's

[6] https://asset.cambodia.gov.kh/mptc/media/EN-Policy-Framework-of-Digital-Economy-and-Society.pdf
[7] https://asset.cambodia.gov.kh/mptc/media/Cambodia_Digital_Government_Policy_2022_2035_English.pdf
[8] https://asean.org/wp-content/uploads/2024/02/ASEAN-Guide-on-AI-Governance-and-Ethics_beautified_201223_v2.pdf
[9] https://asean.org/wp-content/uploads/2025/01/Expanded-ASEAN-Guide-on-AI-Governance-and-Ethics-Generative-AI.pdf
[10] https://asean.org/wp-content/uploads/2025/02/ASEAN-Responsible-AI-Roadmap-Final.docx.pdf
[11] https://trc.gov.kh/wp-content/uploads/law/law-on-telecommunications.pdf
[12] https://asset.cambodia.gov.kh/mptc/2022/02/Sub-decree-no-110-English.pdf

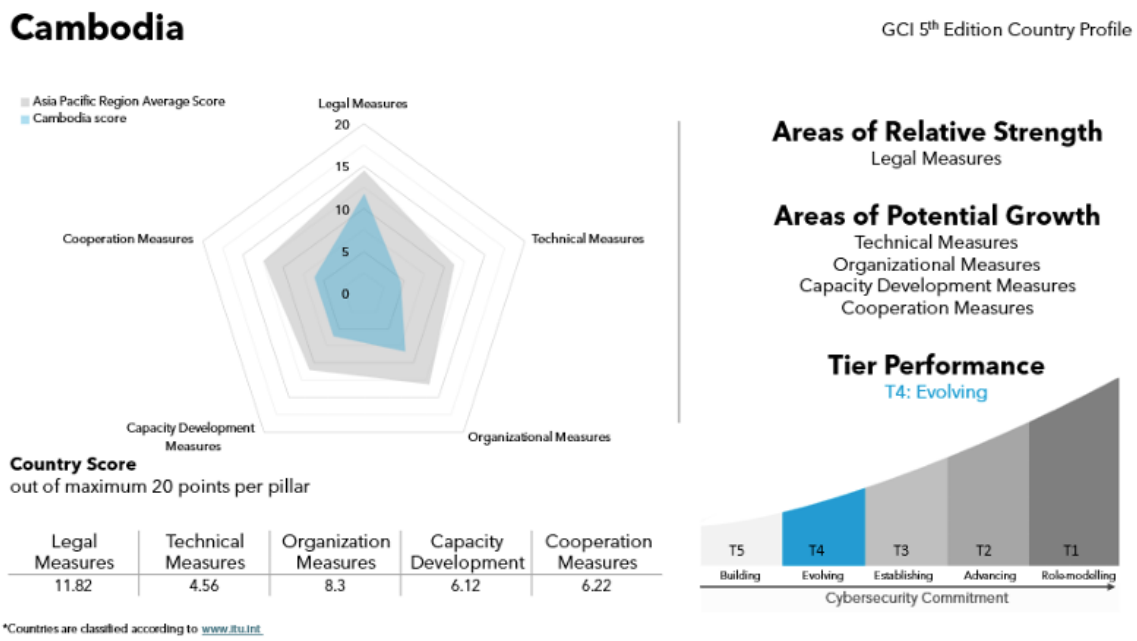
Recommendation and the ASEAN Guide on AI Governance and Ethics. This guideline is intended to be horizontally applicable across all AI systems, emphasising ethical principles throughout the AI system's life cycle.

## DATA PROTECTION AND PRIVACY LAWS

The right to privacy, data protection and safety and security are two key principles of UNESCO's Recommendation. In this sense, assessing the country's capabilities and institutions related to privacy and cybersecurity is crucial for developing a comprehensive AI governance framework.

Cambodia is still lagging in cybersecurity. The country scored 19.12 in the Global Cybersecurity Index[13], ranking 132nd out of 194 countries globally and 26th out of 38 in the Asia-Pacific region. By 2024, Cambodia was classified as Tier 4 (Evolving) on the index, with Tier 1 representing the highest cybersecurity maturity level and Tier 5 the lowest.

Figure 1. Cambodia's ranking in the Global Cybersecurity Index in 2024




Privacy protection in the age of AI is a key principle of the Recommendation. Privacy and respect for private and family life are protected under:

- The Constitution of the Kingdom of Cambodia, Article 40 ("*The rights to privacy of residence, and to the secrecy of correspondence by mail, telegram, fax, telex and telephone shall be guaranteed*");
- The Criminal Code[14], in Articles 301 (Intercepting or recording private conversation), 302 (Violation of privacy (recording of a person's image)), 314 (Breaches of professional secrecy), 317 (breaches of correspondence), and 318 (Breaches of privacy of telephone conversations) of the ;
- The Civil Code[15], in Article 10 ("*Personal rights include the rights to life, personal safety, health, freedom, identity, dignity, privacy, and other personal benefits or interests.* ");

[13] https://www.itu.int/dms_pub/itu-d/opb/hdb/d-hdb-gci.01-2024-pdf-e.pdf
[14] https://www.ajne.org/sites/default/files/resource/laws/7195/criminal-code-cambodia-en-kh.pdf
[15] https://faolex.fao.org/docs/pdf/cam204996.pdf

- The Law on E-Commerce[16], in Article 32 ( "*Any person that holds personal information in electronic form shall use all means to ensure that the information is protected by such security safeguards as it is reasonable in every circumstances to avoid the loss, access, use, modification, leak or disclosure of those information, except with the permission of the owner of the information or any other party authorized by law. Any person shall not interfere with the electronic system, access, retrieve, copy, extract, leak, delete or modify data, which is under the retention of any other person in bad faith or without permission*.").

The MPTC is developing Cambodia's Draft Law on Personal Data Protection. This regulation is being drafted following the EU General Data Protection Regulation (GDPR) but adapted to suit Cambodia's unique context. The law grants data subjects a comprehensive suite of rights—including access, rectification, erasure, restriction, data portability, objection, and remedy—and establishes a robust notice and consent framework that positions consent as the primary lawful basis for data processing while allowing for other legal bases. It also enforces transparency measures, requiring that individuals be informed about the basis and purpose of any data processing.

Furthermore, the Draft Law on Personal Data Protection mandates data minimisation, stipulating that data must only be collected for specific purposes and not processed beyond those limits without additional consent or another lawful basis. It requires a data protection impact assessment when processing activities pose high risks to individuals' rights, with controllers obligated to submit assessment reports to the data protection authority under defined guidelines. Special provisions are made for sensitive data, such as health and biometric information, which requires written consent for processing and use. The law outlines enforcement mechanisms, including the qualification of data protection officers, inspection protocols, dispute resolution frameworks, and the imposition of administrative and criminal penalties. Moreover, the current draft envisions a data protection regulator; however, this may change since the function is entirely within the competence of the MPTC.

Notably, the current draft does not include a compensation scheme for data breaches, and its application is limited to private entities processing the data. UNESCO's Recommendation emphasises that privacy should be protected and promoted throughout the life cycle of AI systems, both in the public and private sectors, following international standards.

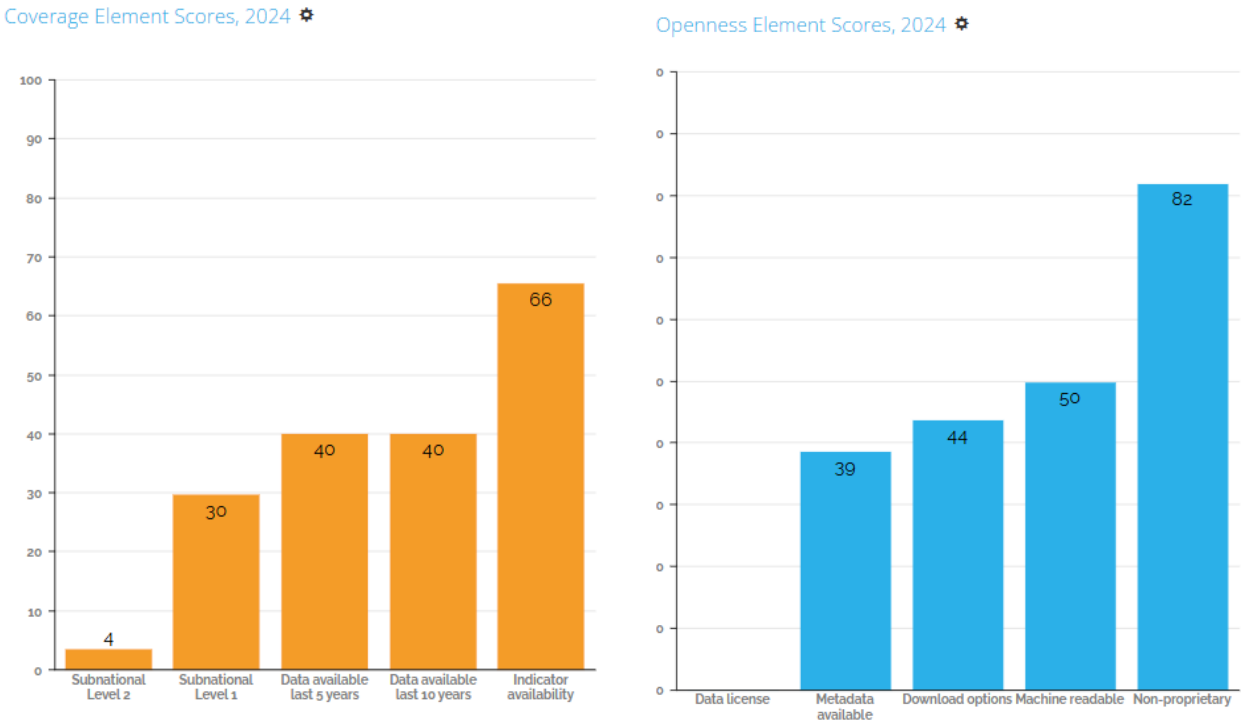
### Data Sharing and Accessibility

In Policy Area 3 of the Recommendation, Data Policy, the importance of promoting open data and access to information about AI systems is emphasised, as this fosters a safe, fair, legal, and ethical sharing of data and information.

Cambodia should develop open data and accessibility policies to create a more enabling and secure environment for developing and deploying AI systems. The country has not signed the International Open Data Charter[17], nor is it a member of the Open Government Partnership[18], and its performance is still low in the Open Data Inventory (ODIN) 2024[19], in which Cambodia scored 42 out of 100, ranking 152nd out of 198 countries. The score reflects a coverage of 40/100 and an openness of 43/100, indicating room for improvement in both the availability and accessibility of open data.

[16] https://commerce-cambodia.com/wp-content/uploads/2021/06/eCommerceLawEN.pdf
[17] https://opendatacharter.org/
[18] https://www.opengovpartnership.org/
[19] https://odin.opendatawatch.com/Report/countryProfileUpdated/KHM?year=2022

Figure 2: Cambodia's indicators in Coverage and Openness in the Open Data Inventory, 2024.




While no formal open data strategy has been published or international charters signed, Cambodia recognises the importance of data governance and open data in enhancing transparency, accountability, and public trust in government. This commitment is reflected in the Cambodia Digital Government Policy 2022–2035[20], specifically in Strategic Goal 2, which prioritises building digital governance and creating digital public services. The policy emphasises the development of data governance and open data policies, which are currently drafted by MPTC, including principles, standards, licenses, and mechanisms for managing, opening, storing, sharing, and protecting government data.

Regarding data sharing, Cambodia has adopted the Cambodia Data Exchange (CamDX)[21] as its national data-sharing platform, governed by Sub-Decree No. 164, issued on August 24, 2021[22]. CamDX facilitates secure and efficient data sharing across various government institutions and the private sector in a standardised and secure way over the Internet or other digital networks. As of December 31st, 2024, approximately 69,896,720 transactions were processed via CamDX, averaging around 1,273,628 monthly transactions, with 41,506,028 transactions completed in 2024 alone. CamDX has 60 members, of which 35 are private sector participants, and supports e-KYC (electronic Know-Your-Customer), with over 21.7 million transactions processed by the end of 2024. In addition to CamDX, other sectoral efforts, such as Data EF (Data for Economy and Finance)[23], under MEF, are another data-sharing platform with an IT Architecture Framework that addresses data-sharing principles. The platform hosts 336 datasets from 28 sources, with 4,322 downloads recorded. By the end of 2024, it had registered 129,000 API calls, demonstrating growing usage.

[20] https://asset.cambodia.gov.kh/mptc/media/Cambodia_Digital_Government_Policy_2022_2035_English.pdf
[21] https://camdx.gov.kh/
[22] https://data.opendevelopmentcambodia.net/laws_record/sub-decree-no-164-on-cambodia-data-exchange-through-camdx/resource/5f0cdde5-07db-44ec-986a-213a74e72996
[23] https://data.mef.gov.kh/

## PROCUREMENT LAWS AND POLICIES

Procurement processes are central to several key principles in the Recommendation, as they dictate requirements for elements such as transparency, explainability, data protection, and cybersecurity. Adapting the existing procurement process to incorporate AI is a way to manage the risks associated with AI systems and ensure ethical and legal compliance.

Cambodia does not have specialised laws or policies explicitly addressing procuring AI systems or AI-enabled products and services. Existing procurement processes are governed by general procurement laws[24] that do not specifically address AI technologies. Thus, no unique approval processes exist for purchasing AI systems, nor is a list of certified vendors with AI-related provisions available.

## FREEDOM OF INFORMATION ACTS AND ACCESS TO KNOWLEDGE ACTS

Freedom of information and access to knowledge are key to developing and deploying AI systems that are accountable, transparent, and explainable. This is particularly relevant when AI systems are being deployed in the public sector, since individuals have the right to be informed and request information about the AI systems they interact with.

In Cambodia, no laws exist on freedom of information or access to knowledge. A Law on Access to Information is currently being drafted and finalised[25]. Still, individuals do not have a specific law to request information about how AI systems are used in the public sector. Moreover, the draft of the Privacy Laws contemplates obligations for parties using and/or sharing data to inform those whose data they are using and/or sharing. Still, it only applies to the private sector

## PROCEDURAL GUARANTEES AND ACCOUNTABILITY

The Recommendation emphasises that countries should ensure that AI governance mechanisms include adequate protection, impact monitoring, enforcement, and redress. Harms caused by AI systems should be investigated and redressed by enacting enforcement mechanisms and remedial actions to ensure respect for human rights and the rule of law in both the digital and physical worlds. Moreover, countries need to develop regulatory frameworks to achieve accountability and responsibility for the content and outcomes of AI systems at different phases of their life cycle.

The primary law protecting due rights in Cambodia is the Criminal Procedure Code[26]. However, there are no specific provisions regarding AI systems. Thus, regulators or courts do not have a specialised way of requesting information about AI systems and their inner workings, nor are there specific liability regimes for AI harms

## ONLINE SAFETY, INTEGRITY OF SPEECH, AND CYBERSECURITY

The Recommendation emphasises the need to mitigate misinformation, disinformation, and hate speech. The development of AI technologies necessitates a corresponding increase in data, media, and information literacy, as well

[24] https://data.opendevelopmentcambodia.net/laws_record/public-procurement
[25] https://uprmeetings.ohchr.org/Sessions/46/Cambodia/Documents/Cambodia%20-%20full%20draft%20report%20for%20circulation%20-%20ad%20referendum.docx
[26] https://www.ajne.org/sites/default/files/resource/laws/7195/criminal-code-cambodia-en-kh.pdf

as adequate regulatory frameworks to mitigate the risks of misinformation, disinformation, hate speech, and harm caused by data misuse. Moreover, trustworthiness and integrity of the life cycle of AI systems and data are essential to ensure they work for the good of humanity, including the integrity of the content generated or processed by AI system.

Although Cambodia does not have a specific framework or notice-and-takedown policies for addressing content violations, such as online hate speech, misinformation, and disinformation, some relevant laws are in effect for specific areas, which serve as a good starting point.

First, there is a law relating to Child Sexual Abuse Materials, which is the Law on Suppression of Human Trafficking and Sexual Exploitation (2008)[27]. This law prescribes punishments for producing and distributing pornography and child pornography. Article 40 of the law defines child pornography as "*visible materials such as a photograph or videotape, including material in electronic form, depicting a minor's naked figure which excites or stimulates sexual desire.*" Moreover, in 2023, the Cambodian Child Online Protection (COP) Guidelines for the Digital Technology Industry (2023)[28] were released. The COP is framed under Article 27(j) of Sub-decree No. 110[29] on the ICT Licensing Regime, which requires ICT operators and ICT-related individuals to comply with additional duties established by the MPTC. The COP guidelines provide clear instructions and practical steps to proactively address the safety and well-being of children online from a child-rights perspective, including the prevention of Online Child Sexual Abuse and Exploitation (OCSAE) and other forms of technology-facilitated violence. The guidelines align with national and international standards, particularly emphasising strict adherence to children's rights and business ethics.

Second, a tri-ministry Prakas[30] [31] outlines measures the government can take to address disinformation and illicit content. Prakas 170 aims to regulate news and content publication on websites and social media, preventing information that could disrupt national security, public order, or cultural values. It involves the Ministry of Information, the Ministry of Interior, and the MPTC, each responsible for monitoring and enforcing regulations within its respective domain. Specialised units are established within these ministries to oversee digital content, identify illegal activities, and take legal action, including shutting down websites or social media accounts that violate regulations. The Ministry of Information oversees online media, takes action against unauthorised publications, and collaborates with other ministries to regulate online businesses. The MPTC oversees ISPs, enforces content filtering, and assists in blocking unlawful content, while the Ministry of Interior investigates and shuts down illegal online activities.

## PUBLIC SECTOR CAPACITY

Cambodia has made significant progress in advancing digital skills development across various sectors through national policies, frameworks, and institutional initiatives. The Cambodia Digital Economy and Society Policy Framework 2021–2035[32] prioritises human resource development in digital skills, with measures to establish monitoring frameworks and support mechanisms for leaders and officials. Similarly, the Cambodia Digital Government Policy 2022–2035[33] promotes digital literacy and essential training for civil servants, ministry staff, and local administrators. The Cambodia Academy of Digital Technology (CADT)[34], established by Royal Decree as an expansion of the former National Institute

[27] https://data.opendevelopmentcambodia.net/laws_record/law-on-suppression-of-human-trafficking-and-sexual-exploitation/resource/53298584-55e0-4e6e-83fa-7a5cf92e2e48
[28] https://www.unicef.org/cambodia/media/7751/file/Cambodian%20Child%20Online%20Protection%20Guidelines.pdf
[29] https://asset.cambodia.gov.kh/mptc/2022/02/Sub-decree-no-110-English.pdf
[30] A Prakas is an official proclamation in which a ministerial or inter-ministerial decision is signed and officialised.
[31] https://asean.org/wp-content/uploads/2025/01/Expanded-ASEAN-Guide-on-AI-Governance-and-Ethics-Generative-AI.pdf
[32] https://asset.cambodia.gov.kh/mptc/media/EN-Policy-Framework-of-Digital-Economy-and-Society.pdf
[33] https://asset.cambodia.gov.kh/mptc/media/Cambodia_Digital_Government_Policy_2022_2035_English.pdf
[34] https://cadt.edu.kh/

of Posts, Telecoms, and ICT (NIPTICT), plays a key role in training public sector employees by offering basic digital skill (digital skill essential); professional courses in IT skills, data management, cybersecurity, and digital collaboration; and digital transformation and leadership[35]. Meanwhile, the Skill Development Fund (SDF)[36], managed by the Ministry of Economy and Finance, is a co-financing initiative to reskill and upskill workers, particularly in priority fields like digital skills.

The Ministry of Posts and Telecommunications leads a structured Digital Skill Development Roadmap 2024–2035[37] to enhance advanced digital skills and digital literacy among new and existing workforce entrants. Nationwide digital literacy campaigns further support this effort by raising awareness of the importance of digital technologies in public services and ensuring accessibility across all societal levels. IT, human resource management, and digital governance training programs are delivered through institutions such as CADT and the Royal School of Administration[38]. Some of the initiatives led by MPTC are the Digital Skill Development Program (DSDP), the Techo Digital Talent Scholarship, the Community Tech Centre (CTC), Digital Talents, and Go Digital Cambodia.

CADT, through its specialised institute, the Institute of Digital Governance (IDG), offers structured training programs tailored to the public sector, including Digital Skills Essentials [39], Professional Skills, the Chief Information Officer (CIO) Program, and Leading Digital Government Transformation. To date, CADT has trained approximately 13,000 civil servants from 31 ministries and agencies at both the national and sub-national levels. Additionally, CADT partners with the Royal School of Administration to incorporate digital skills training into the onboarding process for new civil servants. In 2024, CADT pioneered the integration of a module on the Ethical and Social Impacts of AI into its Computer Science Master's Programme, with the support of UNESCO. The Skill Development Fund (SDF) has approved 169 training projects, totalling $14.28 million in funding, which will benefit 32,826 trainees, including 34% female participants. The program has shown strong outcomes, including an 88% employment rate, 85% employer satisfaction, and an average salary of $246 for participants, with a notably low dropout rate of 4%.

The Royal School of Administration and CADT facilitates digital skills development in the public sector, providing integrated training to support broader workforce development programs. While participation in digital skills training is encouraged but not mandatory for new government employees, plans are underway to introduce compulsory digital literacy requirements for government roles. This aligns with the broader objective of equipping public sector employees with essential digital competencies for Cambodia's digital transformation. As part of this initiative, the Digital Skills Programme has been made mandatory for new public employees, particularly those in administrative roles, to ensure they are proficient in using government software and maintain cybersecurity awareness. These collective efforts reflect Cambodia’s commitment to fostering a digitally skilled workforce capable of meeting the demands of its rapidly evolving digital economy.

[35] https://idg.edu.kh/training/
[36] https://sdfcambodia.org/
[37] https://asset.cambodia.gov.kh/mptc/2024/03/Cambodia-Digital-Skill-Development-Roadmap-2024-2035.pdf (in Khmer)
[38] http://era.gov.kh/
[39] https://cadt.edu.kh/academic/digital-skills-essential/

# SOCIAL AND CULTURAL

Social and cultural dimensions are crucial in evaluating the ethical components of AI system deployment, including mechanisms to mitigate bias throughout the system's life cycle and the creation of a fair and inclusive AI ecosystem. In this sense, this section addresses topics such as the inclusion of women in the science, technology, engineering, and mathematics (STEM) development environment, as well as the incorporation of social and cultural diversity to ensure the ethical application of AI. In addition, it encompasses the level of acceptance and attitudes of the general public towards AI and the consideration of environmental and sustainable criteria, health, social well-being, and cultural aspects when developing AI solutions.

## DIVERSITY, INCLUSION AND EQUALITY

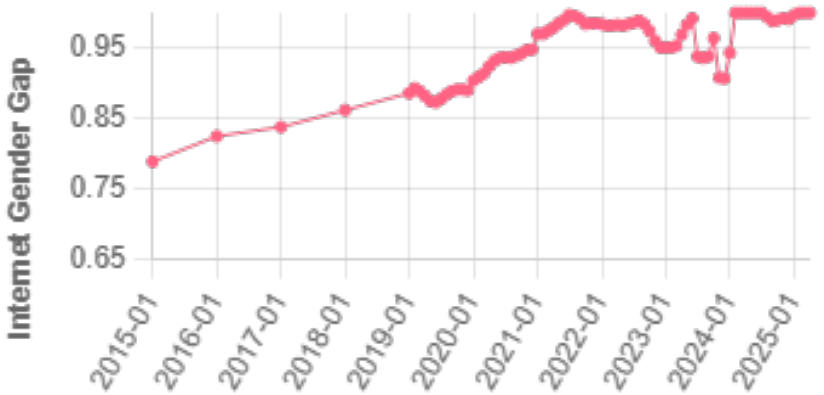
A key principle in the Recommendation is Fairness and non-discrimination, which requires AI actors to promote social justice without discrimination. Promoting equitable access, diverse and inclusive teams involved in the AI lifecycle, and supporting underrepresented groups in their interactions with the AI ecosystem are central to fostering an ethical and responsible development and adoption of AI.

Cambodia faces essential connectivity challenges. According to the ITU, only 60.7% of the population used the Internet in 2023. Geographically, 40% of people in urban areas and 30% in rural areas use the Internet. However, this data is from 2017, so it is likely to have improved since then. Lack of access to the internet leaves many people without the potential benefits of AI, which may contribute to widening the digital divide. Moreover, if only some people could interact with an AI system and generate data that would then be used to train it, the system might be biased towards the underrepresented and vulnerable population.

Addressing the gender gap is crucial to ensure fair and non-discriminatory AI systems. In this sense, Cambodia needs to address a significant gender gap in STEM; however, there is a foundation for a less pronounced gap in internet usage and performance between boys and girls. Data from 2019 shows that 51.7% of women and 53% of men use the internet, indicating a relatively narrow gender gap. This is consistent with the Digital Gender Gaps index[40], which shows 0.875 in the middle of the table regarding equity. Cambodia has improved over the last five years, but it remains the least equal country in the ASEAN region

[40] https://www.digitalgendergaps.org/

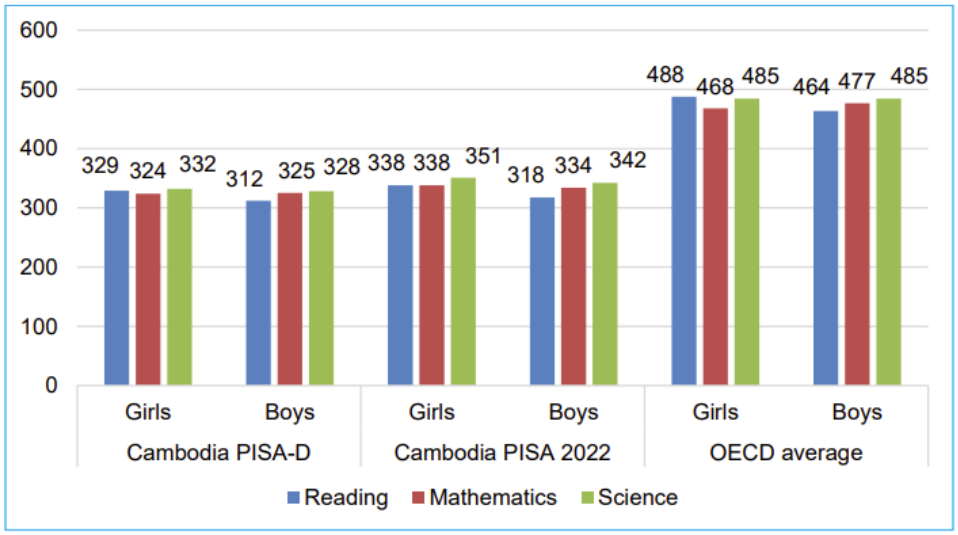
Figure 3. Internet gender gap over time in Cambodia




Source: Digital Gender Gaps, University of Oxford.

There is a mismatch in how girls outperform boys in many science and technology disciplines, but are underrepresented in tertiary education and ICT. Enrollment favours women in primary and secondary education (88.68% female vs. 85.67% male and 63.01% female vs. 53.1% male), but this changes in tertiary education (15.95% male vs. 14.06% female). In STEM and ICT higher education, this gap widens: according to the World Economic Forum[41], 83.32% of men and only 16.68% of women graduate from STEM, and regarding ICT, 91.56% of the graduates are men while only 8.44% are women. However, when analysing performance gaps, girls outperformed boys in both reading (+20) and science (+9), and had a similar performance in mathematics (+4).

Figure 4. The performance gap between girls and boys in Cambodia.

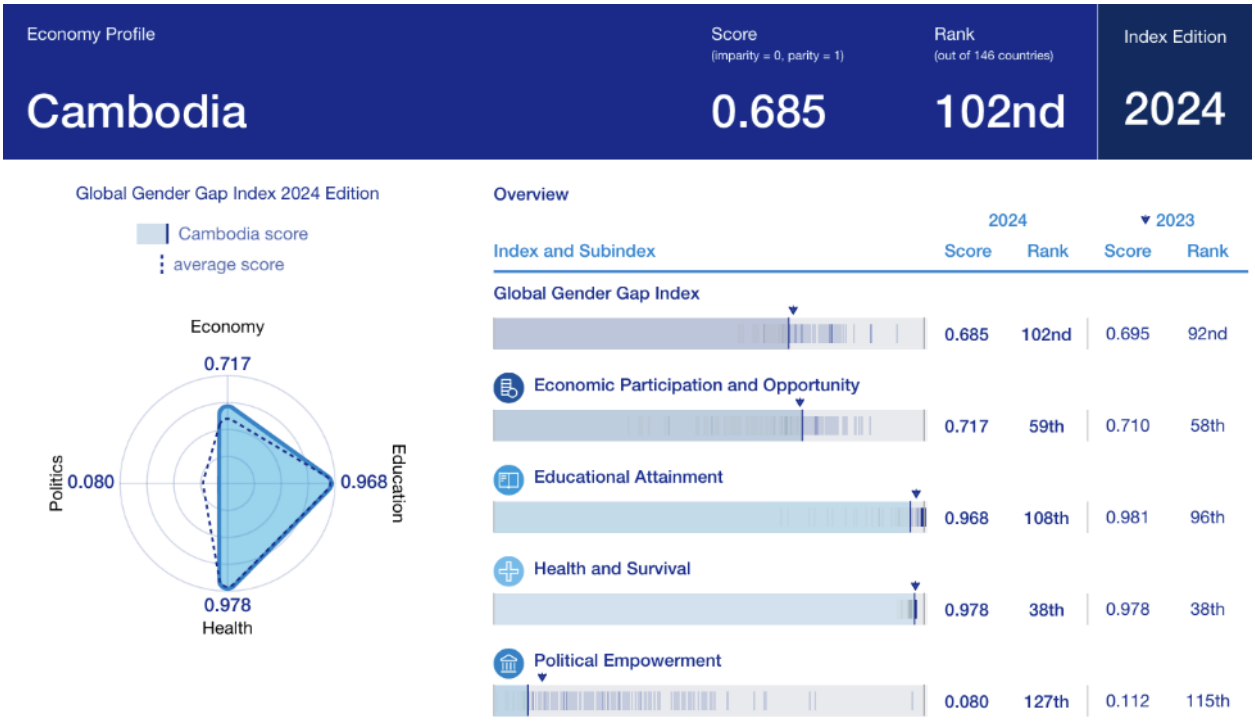



Source: Ministry of Education, Youth, and Sport[42].

[41] https://www3.weforum.org/docs/WEF_GGGR_2024.pdf
[42] https://api.weteka.org/public/orgs/63fc7c5751508ff62e6ce857/pdf/d380d8ab-06be-48fb-971d-cb8dc117b004.pdf

The gender gap in Cambodia extends to STEM and across various sectors, making it a multidimensional challenge to address. Cambodia ranks 102/146 in 2024 in the Global Gender Gap Index 2024[43], with educational attainment and political empowerment indicators hurting the most

Figure 5. Global Gender Gap Index 2024 - Cambodia.




Source: Global Gender Gap Index 2024 - Cambodia[44].

Although no overarching policies aim to reduce the digital gender gap, many initiatives address this issue.

- Women Empowerment in Technology:
  - The Technovation Program[45] encourages girls to develop app-based solutions to real-world problems.
  - The Sisters of Code[46], Cambodia's first female coding club, has provided free coding education since 2019. It recently expanded to include AI and machine learning fundamentals and workshops on ethical AI adoption.

- AI training and capacity building:
  - The Game Changers Coalition Program, in partnership with UNICEF, involves both genders in creating problem-solving games
  - The Fundamentals of Coding and Mobile App Development program introduces secondary students to app development through a visual programming platform, fostering creativity and engineering skills.

- Advancing SEM access for marginalised communities:
  - STEM4Women[47] (KAPE) that supports young women from disadvantaged backgrounds with access to STEM education, career counselling, and workforce entry assistance.

[43] https://www3.weforum.org/docs/WEF_GGGR_2024.pdf
[44] https://www3.weforum.org/docs/WEF_GGGR_2024.pdf
[45] https://technovationchallenge.org/ and https://dai-global-digital.com/sustainability-in-action-technovation-cambodia-10-years-on.html#:~:text=In%202014%2C%20DI%20introduced%20Technovation,women%2C%20ages%208%20to%2018
[46] https://www.sistersofcode.org/
[47] https://www.kapekh.org/en/what-we-do/16/?pro_id=22

- The World Bank[48] has provided funding to improve STEM education quality and accessibility, focusing on female students and students with disabilities by updating curricula, training lecturers, and digitising education.
- The STEM Education Organisation for Cambodia (STEMEOC)[49] fosters a dynamic STEM community through events like the Cambodian STEM Festival and the Cambodia Robotics Olympiad, as well as sustainability-focused programs like Eco-Heroes.
- The Samaritan's Purse STEM Program provides rural students access to STEM education resources, including labs, libraries, and science clubs. It aims to inspire more young people, especially girls, to pursue STEM careers.

While these programs help bridge the digital and STEM gender gap, they remain at the initiative level, and a comprehensive national strategy for digital gender inclusion is yet to be fully developed.

Despite the MLVT's emphasis on workforce diversity as part of a broader gender equality and inclusion policy, there are currently no overarching policies to enhance diversity in the AI workforce. In this sense, companies and universities are not required to report diversity statistics, and no affirmative action standards are applied to improve diversity throughout the AI lifecycle. This is relevant, as if not addressed, principles such as Fairness and non-discrimination, or Proportionality and do no harm, may be complex to comply with.

Finally, in terms of language inclusion, although the initiative is still in its infancy, CADT has collected numerous small datasets for Khmer NLP applications, including Khmer sign language recognition, Khmer ASR, and text-to-speech. At CADT, they are working on collecting Khmer text. So far, CADT has collected around 500M tokens of textual data, 600K PDF files, and 4K hours of audio files. Building on these resources and to help bridge the language gap between Khmer and English, the Ministry of Post and Telecommunications (MPTC) has developed TranslateKH. This machine translation application enables two-way translation between English and Khmer, supporting cross-language communication and digital inclusion.

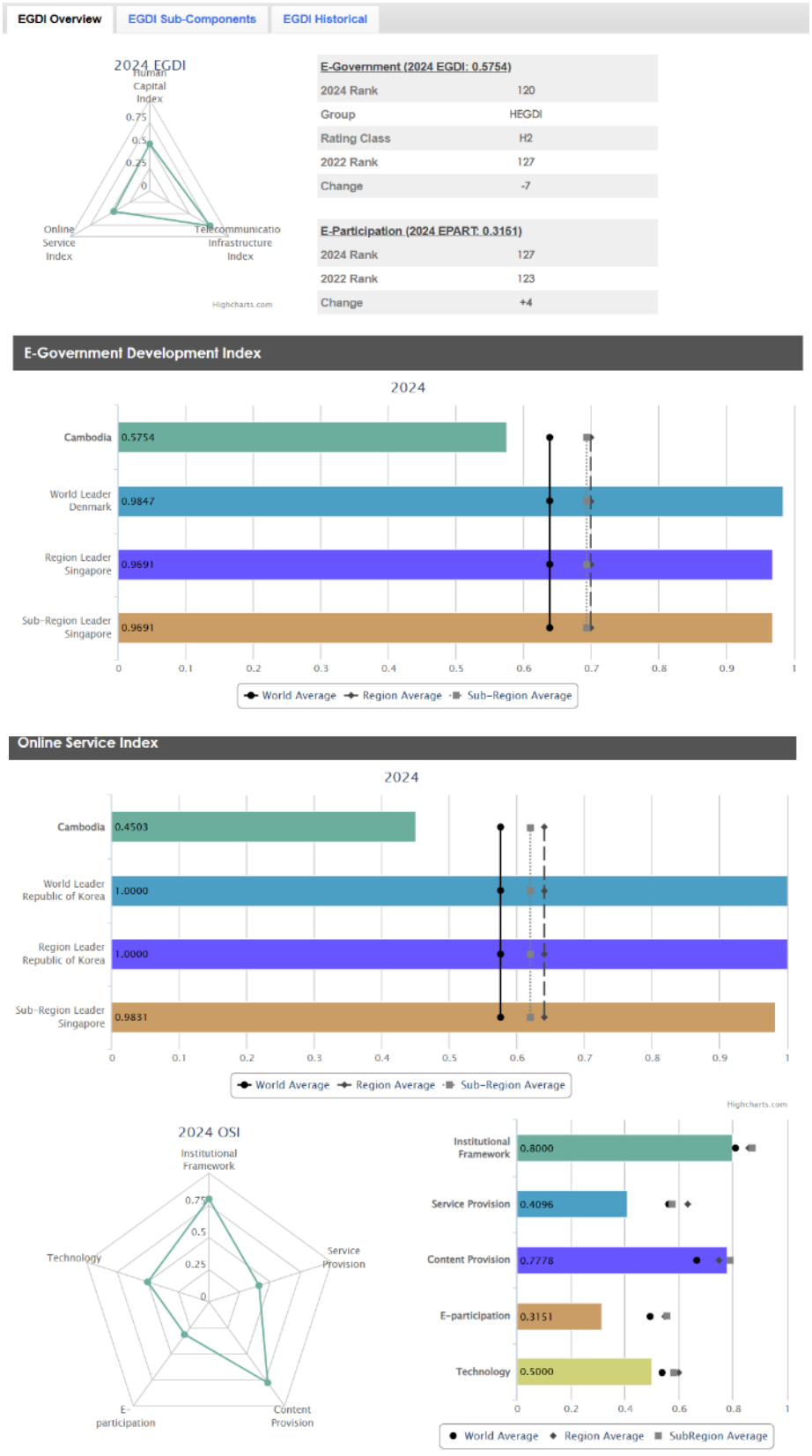
## PUBLIC PARTICIPATION AND TRUST

The Recommendation enshrines the principle of Multi-stakeholder and Adaptive Governance and Collaboration of AI systems. Advancing towards this implies enabling citizens to be active actors in government decisions through robust and trustworthy digital channels.

Cambodia must address the gap in the performance of its public online services. In the E-Government Development Index (EGDI)[50], Cambodia ranks 120 out of 193 (0.5754 points), which is below the world average (0.6382) and the subregion average (Southeast Asia with 0.6928). In the specific component of Online Services, Cambodia scores 0.4503, which is lower than the world average (0.5754) and the subregion average (0.6193).

[48] https://www.worldbank.org/en/news/press-release/2024/09/24/new-world-bank-supported-project-will-improve-the-quality-of-thousands-of-students-in-cambodia
[49] https://stemcambodia.ngo/
[50] https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/29-Cambodia

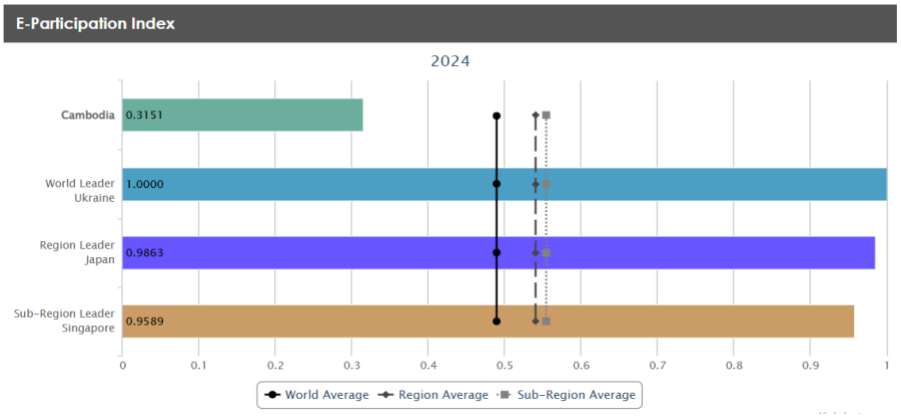
Figure 6. E-Government Development Index and Online Services Index.




Source: UN E-Government Knowledgebase

Regarding E-Participation, Cambodia ranks 127/193 with a score of 0.3151, below the world average (0.4893) and the sub-region average (0.5404).

Figure 7. E-Participation Index 2024 for Cambodia




Source: UN E-Government Knowledgebase. E-Participation Index (EPI).

The performance of public online services is intertwined with trust in government services. According to the Inclusive Internet Index 2022,[51] Cambodia ranked 95th out of 100 countries in terms of trust and safety. Within this category, the country ranked 65th for trust in government websites and apps. However, it is relevant to mention that Cambodia's ranking in trust in government websites and apps is higher than in trust in non-government websites and apps (76th). It is also notable that the most trustworthy source of information is social media (36th). This, therefore, raises an important ethical question about the existence or non-existence of moderation and regulation of social media platforms

Figure 8. E-Participation Index 2024 for Cambodia


Source: Inclusive Internet Index, Economist Impact, 2022[52].

[51] https://impact.economist.com/projects/inclusive-internet-index/
[52] https://impact.economist.com/projects/inclusive-internet-index/2022/country/Cambodia

## ENVIRONMENTAL AND SUSTAINABILITY POLICIES

A key principle in the Recommendation is Sustainability, which connects with Policy Area 5 about the environment and ecosystems. Here, AI should be analysed from a perspective of mitigating its potential impacts on the environment and how it can benefit the environment and ecosystems.

Cambodia currently lacks policies that address AI's environmental impact or its role in sustainability. For example, AI's impact on land and water is not specifically considered, an environmental impact assessment is not mandatory for using AI, and there is no environmental impact assessment of AI's energy demand and related carbon footprint.
Recent Cambodian policy documents and initiatives recognise the importance of integrating AI into sustainable development efforts. For example, Cambodia is working on Harnessing AI and geospatial data for climate disaster risk assessment[53], the Circular Strategy on Environment 2023–2028[54], and Cambodia's Updated Nationally Determined Contribution (NDC)[55] document published in 2020 highlighted AI's potential to improve climate adaptation, particularly in animal breeding, contributing to Sustainable Development Goals (SDGs) 2, 5, and 13.

## HEALTH AND SOCIAL WELLBEING

The Recommendation encourages countries to employ effective AI systems to improve human health and social well-being and address potential risks that AI can pose to physical and mental health. Developing policies should consider how AI systems will minimise and mitigate biases, protect personal data, and ensure proper human oversight over the systems and the decisions.

Although there is no specific law on digital health, the MOH is working on a Digital Health Strategy 2024-2035. This strategy aligns with the broader Cambodia Digital Government Policy 2022–2035 and with the WHO-ITU National eHealth Strategy Toolkit (2012)[56], ensuring the modernisation of public services extends to the health sector. It supports the nation's goal of achieving universal health coverage. The strategy identifies seven key priority areas critical for its successful implementation: Leadership and Governance, Strategy and Investment, Health Workforce and Education, Legislation, Policy and Compliance, Standards and Interoperability, Information Communication Technology and Infrastructure, and Services and Applications.
Some expected outcomes are:

- Every Cambodian will have a single, permanent digital identity and health record, granting seamless access to all health services and personal health information anytime, anywhere.
- Healthcare providers will have access to comprehensive patient data, enabling improved clinical decisions and more targeted care.
- Public health managers will benefit from real-time, multidimensional data, empowering them to implement precise and impactful interventions.
- Health policymakers will oversee and manage a dynamic digital health ecosystem, ensuring its adaptability to current and future challenges.

[53] https://docs.wfp.org/api/documents/WFP-0000163247/download/?_ga=2.151423417.160611929.1740174226-1612616684.1740174226
[54] https://www.moe.gov.kh/wp-content/uploads/2023/11/Circular-Stratesy%E2%80%8B-for-Environment-2023-2028-1.pdf
[55] https://unfccc.int/sites/default/files/NDC/2022-06/20201231_NDC_Update_Cambodia.pdf
[56] https://iris.who.int/handle/10665/75211

In light of the Recommendation, the policy should address relevant issues if it intends to promote the deployment of AI systems in the healthcare domain. For instance, developing a digital identity and health record requires ensuring robust cybersecurity systems and regulations that protect private data in both the public and private sectors. Moreover, potential biases in data and AI systems, especially if entities outside the country develop it, must be assessed and mitigated to align with the principles of fairness and non-discrimination.

## CULTURE

The Recommendation encourages policy actions to examine the role of AI in preserving and promoting cultural heritage. Adequate policy actions should be in place to promote AI in this domain and mitigate the risks of cultural homogenisation due to biases in AI systems, especially in foundational models.

Cambodia does not have policies on using AI to preserve cultural heritage. However, it is exploring the use of digital technologies for it. Some initiatives include digitising historical documents, creating virtual tours of archaeological sites, and utilising 3D modelling to document and preserve fragile artefacts. Moreover, while not explicitly mentioning AI, these efforts lay the groundwork for future integration of AI-powered tools for analysis, restoration, and preservation. For instance, Cambodia has participated in the ASEAN Cultural Heritage Digital Archive[57] project, while UNESCO, in collaboration with the Ministry of Culture and Fine Arts and Tuol Sleng Genocide Museum, is carrying out Phase II[58]of the TSGM Archives Preservation and Digitization Project -- an initiative dedicated to preserving and digitising the Museum's archives, highlighting Cambodia's commitment to leverage digital technologies for historical preservation.

In terms of protection, Cambodia's Law on the Protection of Cultural Heritage (1996) provides the legal framework for cultural heritage preservation in the country. While it might not explicitly mention AI, its broad provisions for protecting cultural heritage can be interpreted to include the use of advanced technologies like AI.

[57] https://www.khmertimeskh.com/50848657/cambodia-to-have-cultural-heritage-listed-in-asean-digital-archives/
[58] https://www.unesco.org/en/articles/preserving-peace-and-memory-launch-tsgm-archives-preservation-and-digitization-project-phase-ii

# SCIENTIFIC AND EDUCATIONAL

Since scientific and educational components contribute significantly to the advancement of AI, assessing them becomes a relevant method to determine a country's readiness for AI development and deployment. The country's performance in research and innovation (R&I) measures the scientific aspect, including research and development (R&D) spending, research production, ethical AI research, and AI innovation production. On the other hand, the educational aspect is evaluated through the country's performance in educational elements such as educational strategy, educational infrastructure, curriculum content, educational achievements, and public access to AI education.

## RESEARCH AND INNOVATION

Cambodia has a low R&D expenditure, but there is little data to analyse the ICT sector, particularly AI. According to Statista data (2024), Cambodia had R&D spending of 0.09% of GDP in 2022[59], but there was no granularity in natural sciences, engineering, or ICTs. This is low, considering that the ASEAN average is around 0.84%[60] and the OECD average is 2.95%[61]. Moreover, there was no data on public expenditure on AI.

The number of publications per capita on AI and related topics depends on the source and the methodology used to narrow down the topic. Although both sources correspond to OpenAlex data, they differ in terms of labelling criteria and types of publications. The ETO[62] reports 406 publications over the past decade, 82% of which were conducted with international collaboration and 4,024 citations. The Chilean National AI Centre (CENIA) reported 313 articles in 2014-2023.

When analysing publications about AI ethics, CENIA reports 77 publications in 2013-2023, constituting 24.6% of the total publications. This share of the total publications highlights that ethics represent an important portion of the country's research. However, no publications with Cambodian authors were detected in the ACM Conference on Fairness, Accountability, and Transparency (FAccT), a relevant conference in the area. Cambodia has yet to host conferences on AI and ethics, so there is still room for further development.

Although the total remains low compared to ASEAN, where the average is 11,596 articles in the last decade, Cambodia ranks as the fourth fastest-growing country in the region for article production, with a 185.71% increase from 2014 to 2024. Meanwhile, CENIA's data, as illustrated in Figure 9, highlights a steady rise in publications, showing an average annual growth rate of 54.13%.

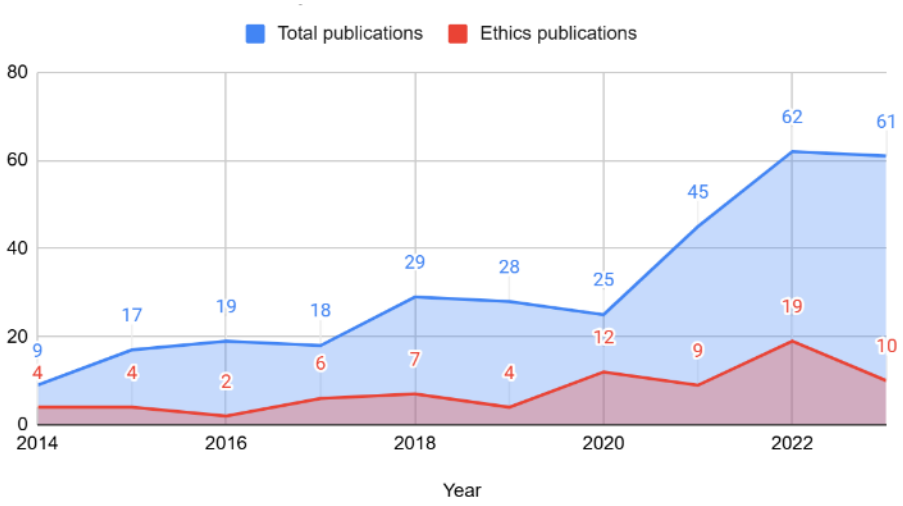
[59] https://www.statista.com/statistics/1346196/apac-gross-expenditure-on-research-development-by-country/

[60] https://ifgprogress.id/asean-must-nurture-growth-at-epicenter/#:~:text=The%20ASEAN%20Secretariat's%20report%20accentuates%20the%20positive,in%20foreign%20investment%2C%20countering%20the%20COVID%2Dinduced%20downturn.&text=This%20observation%20resonates%20with%20the%20World%20Bank's,gross%20domestic%20product%20(GDP)%20up%20to%202018.

[61] https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=OE

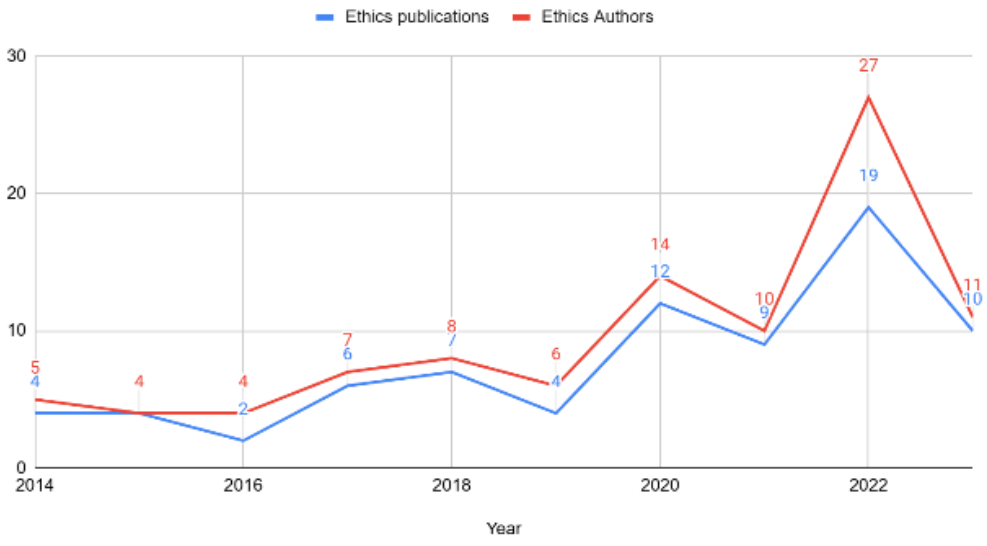
[62] https://cat.eto.tech/?countries=Cambodia&countryGroups=&expanded=Summary-metrics

Figure 9. AI and AI ethics publications in Cambodia 2014-2023



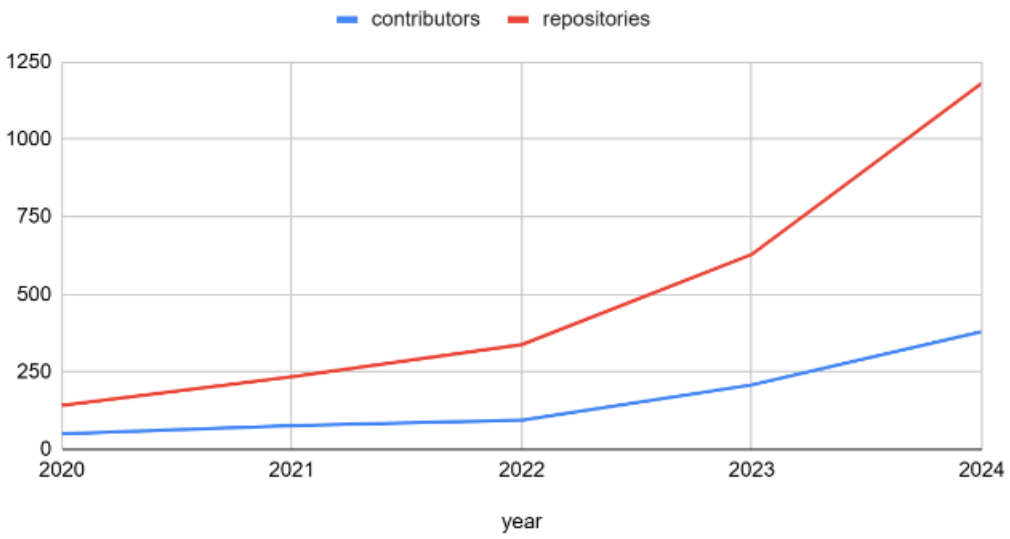

In institutional terms, no research centres or departments are dedicated to AI ethics, but CADT incorporates AI ethics as one of its lines of research and teaching programmes. In terms of people, according to CENIA data, there are, on average, 9.6 active researchers per year in AI Ethics in Cambodia. There are no grandmasters on Kaggle.

Figure 10. AI ethics publications and AI ethics authors over the years.




There are no patents on AI in Cambodia, but there is increasing participation in open-source work. According to GitHub data, between 2020 and 2024, there have been 161.8 contributors per year and 15,265 pushes in Cambodia. Moreover, 2,524 repositories are owned by users located in Cambodia, and they have 4,423 stars. This yields an average of 1.75 stars per repository and 3.11 repositories per user.

Figure 11. GitHub contributors and Repositories in Cambodia 2020-2024.




## EDUCATION

There are no policies or laws governing the use of AI in the education system or the training of teachers and educators on the subject. However, UNESCO and Cambodia announced their collaboration in addressing this topic, focusing on training teachers in digital skills and ethical use of AI[63]. Moreover, there are other ongoing initiatives, such as:

- Day of AI in Education 2025[64]: This event, organised by IT Academy STEP Cambodia and Sisters of Code, focused on driving ethical AI adoption in Cambodia. It included workshops and discussions on AI ethics for educators, highlighting the growing awareness of this issue.
- UNESCO and MoEYS EdTech Summit[65]: This summit emphasised the importance of AI ethics in education and highlighted the need for teacher training in this area.

Educational infrastructure faces significant gaps[66]. In 2022, only 4.6% of primary school students accessed the Internet for pedagogical reasons, while this figure rose to 15% for lower secondary school students and 28.31% for secondary school students. Similarly, computer access remained limited, with 5.34% of primary students, 14.53% of lower secondary students, and 25.39% of secondary students having access.

MOEYS reports that ICTs are integrated into primary and secondary curricula but does not specify which aspects of AI are covered. Also, no details have been reported on how schools cover digital resilience, computational and critical thinking, and Digital, Media, and Information Literacy elements.

Vocational schools and technical training institutes progressively incorporate basic AI-related concepts into IT and STEM curricula in tertiary education. For example, one of the six priority policy programs of the Royal Government, the vocational and technical training program, has been incorporated into the Pentagon Strategy since 2023 to assist 1.5 million young people from low-income and vulnerable families. This training program includes ten essential sectors,

[63] https://www.khmertimeskh.com/501653664/unesco-committed-to-using-ai-in-cambodian-education/
[64] https://cambodia.itstep.org/blog/day-of-ai-in-education-two-thousand-and-twenty-five-driving-ethical-ai-adoption-in-cambodia
[65] https://www.unesco.org/en/articles/unesco-and-moeys-advocate-ethical-ai-education-cambodias-first-edtech-summit?hub=701
[66] http://sdg4-data.uis.unesco.org/

including business and ICTs. Similarly, CADT has recently (2024) launched a Master of Computer Science in AI and data science[67], including a module in AI ethics designed with UNESCO.

CADT surveyed the use of generative AI in education in Cambodia, involving 476 lecturers and 921 students from 20 universities nationwide. For lecturers, the survey finds that 74.5% of the lecturers have used generative AI to assist them in teaching. In comparison, 25.4% have never used the tool due to limited knowledge, language barriers, privacy concerns, and lack of confidence in accuracy. It also finds that most lecturers recognise the potential of generative AI to enhance teaching and learning and express interest in learning how to integrate generative AI into their courses. While the student survey finds that 85.3% of participating students have used generative AI for their studies, the other 14.7% have never used the tool due to reasons similar to the lecturer survey: the lack of knowledge of how to use the tools, language barriers, privacy concerns, and lack of confidence in its accuracy. Most participating students recognise the benefit of using generative AI for their study, including searching for information, doing homework or assignments, assisting with writing and learning new skills. Moreover, most students agreed that generative AI would improve their studying and learning experience.

At the university level, CADT has conducted another survey of 18 public universities on using and adopting digital systems and AI tools. The survey found that only 13 universities, equivalent to 72%, currently use the Learning Management System, and only 11 universities, equivalent to 61%, have an e-learning system. Only 12 of 18 universities have actively encouraged lecturers to use AI tools in their teaching, while the other six universities are reluctant to promote them.

The government reports a growing number of students pursuing tertiary education in ICT-related fields, but significant challenges in human capital persist. During the 2021–2022 academic year, 10% of the 200,000 students enrolled in higher education programs specialised in ICT, resulting in approximately 3,800 graduates. In a broader sense, Cambodia's Education Strategic Plan 2024-2028[68] reports a 31.2% enrolment rate in STEM bachelor's degree programs in 2022-2023, with 44.6% being male and 21% female. Additionally, the WEF Gender Gap Index[69], as referenced in the Diversity and Inclusion chapter, shows that 16.68% of STEM graduates were female compared to 83.32% male, while ICT graduates consisted of 8.44% female and 91.56% male. Furthermore, Cambodia ranks 80th out of 109 countries in the Coursera Global Skills Ranking 2024[70].

Regarding experts, there is no data on PhDs, postdocs, or data science rankings for postgraduate degrees. Broadly, Cambodia's education strategic plan reports that they have increased from 1,181 PhD students in 2013-2014 to 1,330 in 2021-2022. However, there is a considerable gender gap, with only 60 female PhD students in 2013-2014 and 139 in 2021-2022. This is only at a general level, not STEM or ICT.

Finally, there are no open courses about AI or AI Ethics for the general public, but different ministries have organised many initiatives in this area as one-shot events.

[67] https://cadt.edu.kh/news/cadt-offically-open-the-master-program-of-computer-science-in-ai-and-data-science/
[68] https://moeys.gov.kh/storage/uploads/documents/67317b52e104b.pdf&sa=D&source=editors&ust=1738568705117466&usg=AOvVaw3iGTCNi-ibuVWF7ZztfzqV
[69] https://www.weforum.org/publications/global-gender-gap-report-2024/in-full/
[70] https://www.coursera.org/skills-reports/global

# ECONOMIC

The economic dimension considers relevant aspects within the ecosystem in which AI systems are developed and deployed, such as those related to the labour market, intermediate consumption, and AI investment and production. The dynamism and skill level of the labour market and spending on intermediate consumption, investment, and production are crucial for assessing the performance and readiness of the specific ecosystems in which AI is implemented

## GENERAL CONTEXT

Cambodia is a developing country with a GDP of $42.34 billion in 2023[71] and an expected growth of 5.4-6% for 2025. The country's most important sectors are textiles, tourism, and agriculture. Although the GDP per capita in Cambodia is increasing, $7,425.5 in 2023[72] is still low.

When analysing AI's impact, the only estimation available was by Kearney Consulting Firm, which estimates AI will contribute 10% of the GDP for the aggregated economies of Brunei, Cambodia, Laos, and Myanmar by 2030[73]. This is consistent with an ecosystem just starting to develop and adopt AI, with only two firms with HQ in the country under the AI vertical in Pitchbook[74] and only one startup listed in ETO[75].

The Kearney Consulting report also highlights that the five main sectors in the region that would benefit from AI growth are manufacturing, which comprises 22% of the Southeast Asian economy, retail and hospitality, which comprise 16% of the region's economy, agriculture, government, and healthcare. However, it highlights that countries like Cambodia, which are more focused on primary sectors at an early stage of AI adoption, are less likely to see benefits than others, such as Singapore, which has a highly digitised economy. Cambodia recently launched a strategy for developing e-services for businesses[76] in this domain.

No data is available to assess AI use in the public sector. However, at least some projects are being piloted, such as TranslateKH, a translation app for Khmer and English and Sarika[77], a telegram developed by the MPTC, a bot that can turn Khmer text into voice[78], and Khmer Braille, which won several prizes related to AI for good[79].

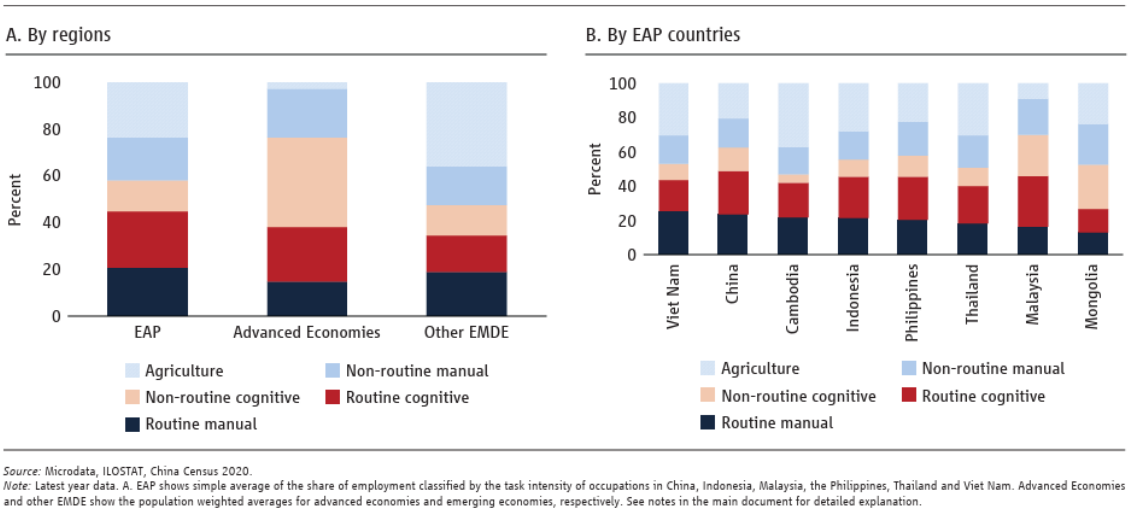
[71] https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=KH
[72] https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?locations=KH
[73] https://www.kearney.com/documents/291362523/291369654/Racing+toward+the+future_artificial+intelligence+in+Southeast+Updated.pdf/679e501c-aae8-0483-e016-d6b780071540?t=1602047682000
[74] https://pitchbook.com/
[75] https://cat.eto.tech/?countries=Cambodia&countryGroups=&dataset=Investment&expanded=Summary-metrics
[76] https://registrationservices.gov.kh/media/2025/04/ENG_Final_ESB_Strategy_MAR2025_2000AM.pdf
[77] https://kiripost.com/stories/mptc-launches-four-platforms-to-advance-digital-public-services
[78] https://www.google.com/url?q=https://kiripost.com/stories/mptc-launches-four-platforms-to-advance-digital-public-services&sa=D&source=docs&ust=1740329766463323&usg=AOvVaw3QmcJzHFulHru376woHw6K
[79] https://aiforgood.itu.int/top-winners-at-the-ai-for-good-innovate-for-impact-shanghai/ and https://cadt.edu.kh/news/cambodia-academy-of-digital-technologys-khmer-braille-machine-translation-wins-gold-at-asean-digital-awards-2025/6467460&usg=AOvVaw1D63I8GrxhSVm28r4qG6tt

## LABOUR MARKETS

There was no available data to fill in the RAM questions of this section. This is a significant gap, including data on the percentage of job openings requiring AI-related skills, the current number of employees with data science expertise, the relative penetration of AI skills, and the concentration of AI talent. This data is crucial for understanding the labour market's readiness for AI implementation and the potential impact of AI on the labour force. The Recommendation emphasises that governments should work with the private sector to ensure a fair transition for at-risk employees, and a first step to do so is to have data and be able to assess the risk.
Moreover, there is a notable concern about the lack of public policies addressing AI's impact on the labour market. The Recommendation emphasises the need to analyse and develop regulations related to taxes, labour rights, and others to counteract the potential consequences of unemployment caused by AI-based automation.

A 2016 report of the International Labour Organisation[80] found that around 56% of all employment in ASEAN-5 (Cambodia, Indonesia, the Philippines, Thailand, and Viet Nam) is at risk of displacement due to technology in the next two decades, with a higher risk for women. A more recent analysis of the World Bank[81], in 2024, highlighted that due to Cambodia's workforce concentrating mainly in routine manual tasks in agriculture and low-wage services, the country faces a high risk of job loss due to AI.

Figure 12. EAP countries' distribution of occupations.




*Source:* Microdata, ILOSTAT, China Census 2020.
*Note:* Latest year data. A. EAP shows simple average of the share of employment classified by the task intensity of occupations in China, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. Advanced Economies and other EMDE show the population weighted averages for advanced economies and emerging economies, respectively. See notes in the main document for detailed explanation.

Source: Jobs and Technology, World Bank, 2024[82]

## INTERMEDIATE CONSUMPTION

In general, no required data on intermediate consumption allows us to know companies' spending on AI services or on producing goods and services.

[80] https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_dialogue/@act_emp/documents/publication/wcms_579554.pdf
[81] https://openknowledge.worldbank.org/entities/publication/034dfb5a-339e-4551-89de-b533062b9a1b
[82] https://openknowledge.worldbank.org/server/api/core/bitstreams/b881d2ff-9912-4eb6-9698-8f151975abb6/content

## INVESTMENTS AND PRODUCTION

Cambodia's high-tech exports as a share of manufactured exports are 6.6% in 2023. In 2022, high-tech exports were valued at 1.23 billion (current US$)[83]. ICT exports in 2022 were 2.5% of the total goods exports[84], which is low compared to 11.9% in the world and 25.7% in the East Asia and Pacific region. However, the absence of data on companies' spending on R&D in programming, consulting, and other computer-related activities is a significant data gap. This data is crucial for understanding the level of investment in AI development

[83] https://data.worldbank.org/indicator/TX.VAL.TECH.CD?locations=KH
[84] https://data.worldbank.org/indicator/TX.VAL.ICTG.ZS.UN

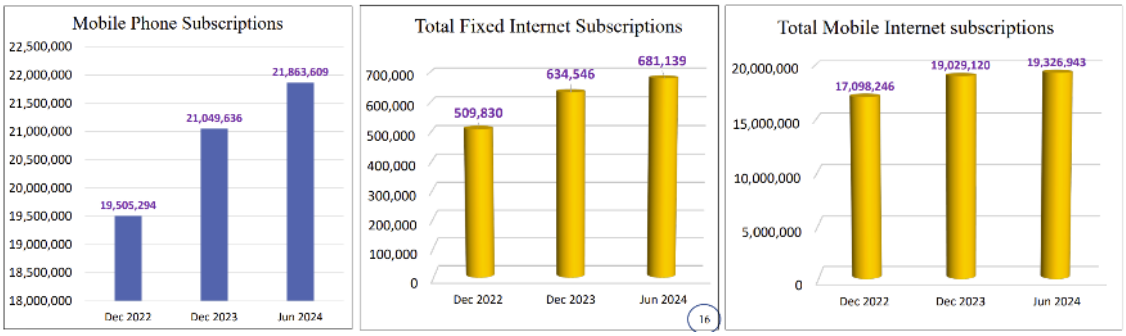
# TECHNICAL AND INFRASTRUCTURAL

The technical and infrastructural dimension refers to country's installed capacity for developing and deploying AI solutions, whether through their computing power, the availability of data centres, connectivity, and internet access, among other things. These elements are relevant enablers for developing AI systems within a country since they determine development capabilities based on the infrastructure available and necessary to support the processed information

## INFRASTRUCTURE AND CONNECTIVITY

Cambodia has been making improvements in its connectivity infrastructure. Cambodia's mobile telephone subscription was 19.5 million subscriptions in 2022 (around 113 per 100 inhabitants), which, according to MPTC, has increased to 117.38 per 100 inhabitants as of October 2024. Cambodia's fixed broadband telephone subscription was 38.3K subscriptions (around 2.2 per 100 inhabitants) in 2023[85], which, according to the MPTC, has increased to 4.13 fixed phone subscriptions per 100 inhabitants as of October 2024. Regarding active mobile broadband subscriptions, there were 17.1 million in 2022 and 19.3 million in 2024.

Figure 13: Growth of Mobile Phone Subscriptions and Total Fixed Internet Subscriptions.




Source: MPTC

However, the country still has to work on providing access to the internet to all populations and improving its speed. Although 93.1% of the population is covered by LTE/WiMAX86, over the world average (90.1%) and below Asia & Pacific (95.6%), only 56.7% of the population reported using the internet in 202287. Moreover, in January 2025, Cambodia's average mobile broadband download speed was 47.06 Mbps, placing it 73rd out of 154 countries. Meanwhile, the fixed broadband download speed averaged 46.89 Mbps, ranking Cambodia 107th out of 15488. Finally, although access to electricity has dramatically improved from 73.2% in 201789 to 92.3% in 202290, the country should aim to reach 100%.

[85] https://datahub.itu.int/data/?e=KHM&i=15
[86] https://datahub.itu.int/data/?e=KHM&c=701&i=100095&s=19306
[87] https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=KH
[88] https://www.speedtest.net/global-index/cambodia
[89] https://datahub.itu.int/data/?e=KHM&i=8989
[90] https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

## APPLIED STANDARDS

Cambodia does not participate as a member or observer in the relevant normalisation committees[91], nor has it been requested to do so. Participating in this discussion and adopting standards is key to aligning with the Recommendation's principle of multi-stakeholder, adaptive governance, and collaboration.

## COMPUTING CAPABILITIES

### Data Centres

Despite having some data centres, their capabilities might not be sufficient to foster the AI ecosystem fully. There are only four commercial data centres, of which only three are modern[92]: Daun Penh Data Centre (operated under the DP CLOUD brand name), ByteDC Data Centre, Chaktomuk Data Centre, and Seatel Data Centre (has not been updated in years). DP CLOUD (Daun Penh Data Centre) currently does not provide colocation services, as DP CLOUD is focused on Cloud services and virtualisation. On the other hand, the other 3 data centres offer colocation services only.

### Cloud Computing

Cambodia does not currently have a policy dedicated explicitly to AI-driven cloud computing. However, the Cambodia Digital Government Policy 2022–2035 includes provisions for digital transformation initiatives, such as cloud computing and e-governance, which are relevant to developing and adopting AI-driven cloud services. Moreover, Cambodia is drafting a Cloud First Policy to promote cloud services.

CADT and AFD have conducted a feasibility study to develop the nation's shared infrastructure for AI and Science. A survey of 100 institutions representing education and research institutions, ministries and agencies, corporates, SMEs, startups, ISPs and telecoms operators as a part of the feasibility study finds that only 42% of the participating institutions have access to CPU servers. Only 11% have on-premises GPU processors, most of which are banks and financial institutions. Moreover, 22% of the survey institutions use Cloud GPU; AWS and Google are the most used cloud GPUs, followed by Azure, Digital Ocean, Herka, Huawei and Colab.

## STATISTICAL PERFORMANCE

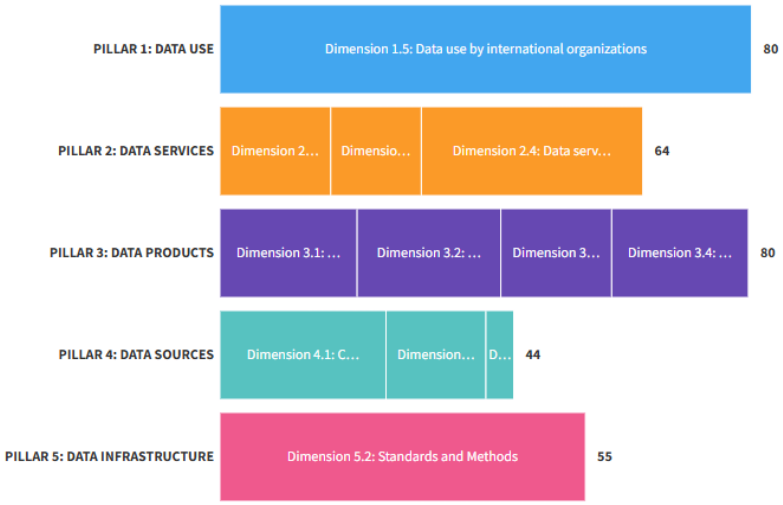
Cambodia manages its data through sector-specific policies like the Statistics Law (2015) and the Tax Law, with the National Institute of Statistics (NIS) tasked with producing official statistics, conducting censuses, and managing economic and social data. While a comprehensive framework is still in development, the country is advancing its data management practices by adopting recognised methodologies and standards such as the System of National Accounts, Government Finance Statistics, Cambodia Standard Industrial Classification (CSIC)[93], and Statistical Data and Metadata Exchange (SDMX)[94, 95] Additionally, blockchain technology is being leveraged through the VERIFY.GOV.KH platform to authenticate government-issued documents via standardised QR codes.

[91] https://www.iso.org/member/1629.html
[92] https://www.knightfrank.com.kh/research/data-centres-the-cambodia-report-december-2024-11773.aspx?utm_campaign=2840915_Data%20Centres%3A%20The%20Cambodia%20Report%20-%20December%202024&utm_medium=email&utm_source=KF%20Cambodia&dm_i=41L7,1OW2B,9P4OMP,6JSNG,1
[93] https://www.nis.gov.kh/index.php/km/29-td/100-cambodia-standard-industrial-classification
[94] https://data.opendevelopmentcambodia.net/library_record/enhancing-data-management-through-the-statistical-data-and-metadata-exchanges-standard
[95] https://verify.gov.kh/

At the same time, Cambodia is working to strengthen its data governance with several draft policies. These include the Cloud First Policy, which promotes cloud services and a data classification framework; the Data Governance and Open Data Policy, aimed at establishing a robust legal and institutional framework; an Interoperability Framework to synchronise systems across sectors; and a forthcoming Personal Data Protection Law, which are set to enhance further data sharing, integrity, and protection nationwide.

Cambodia needs to improve its statistical performance. In 2022, its statistical performance index (SPI) score was 64.35, which placed it in the third quintile. Analysing some pillars, Cambodia scored 81.05 on data products, 42.05 on data sources, and 55 on data infrastructure. This indicates that the central gap lies in data sources and data infrastructure.

Figure 14: Statistical Performance Index, 2022.




Source: Statistical Performance Index, World Bank[96].

[96] https://www.worldbank.org/en/programs/statistical-performance-indicators/explore-data#1

# RAM IMPLEMENTATION AND MULTISTAKEHOLDER CONSULTATION

Cambodia began implementing the RAM on November 12, 2024, with CADT leading efforts in collaboration with UNESCO and the MPTC. The initiative is designed to rigorously assess the nation's digital and AI ecosystem against the ethical principles enshrined in the UNESCO 2021 Recommendation on the Ethics of AI, and develop a robust national AI strategy based on RAM recommendations. Scheduled to run from November 2024 to March 2025, the process saw a dedicated team from CADT and a UNESCO expert from the AI Ethics Experts without Borders (AIEB) network develop a comprehensive questionnaire and secure critical information from various line ministries. The draft was confirmed by a validation stage featuring a multistakeholder workshop and consultation. The entire effort was structured into an initial research and government-level consultation stage as well as a multistakeholder validation stage.

## RESEARCH PHASE AND GOVERNMENT-LEVEL CONSULTATION

During the research phase, CADT conducted initial desk research and provided preliminary responses to the RAM questionnaire. Additionally, CADT identified all the relevant government stakeholders and provided an initial proposal of which questions should be answered by whom. The following table summarises the number of questions assigned to each of the public institutions involved:

| Ministries/Agencies | RAM Questions Assigned |
|---|---|
| Ministry of Post and Telecommunications | 137 |
| Ministry of Education, Youth and Sport | 59 |
| Ministry of Economy and Finance | 43 |
| Ministry of Information | 15 |
| Ministry of Justice | 14 |
| Ministry of Women's Affairs | 14 |
| Ministry of Social Affairs, Veterans and Youth Rehabilitation | 9 |
| Ministry of Labour and Vocational Training | 28 |
| Ministry of Mines and Energy | 8 |
| Ministry of Health | 6 |
| Ministry of Culture and Fine Arts | 7 |
| Ministry of Interior | 7 |

| | |
|---|---|
| Ministry of Industry, Science, Technology & Innovation | 28 |
| Ministry of Commerce | 8 |
| Ministry of Land Management, Urban Planning and Construction | 6 |
| Ministry of Agriculture, Forestry, and Fisheries | 4 |
| Ministry of Planning | 21 |
| Ministry of Environment | 8 |
| Ministry of Civil Service | 4 |
| National Bank of Cambodia | 12 |
| Rector Council of Cambodia | 14 |

Table 1. Number of questions assigned to each institution

After the initial desk research, the local team organised an in-person mission in which UNESCO's consultant and CADT met the institutions with more questions and/or relevant mandates related to AI. The institutions were briefed during the meetings about AI Ethics, UNESCO's Recommendations, and the RAM. Then, a focal point in each institution was nominated, a methodology for working together was established, and the specific request for each institution was explained.

After the mission, an official request was sent to all the ministries listed in Table 1. To support the policymakers answering the RAM, they received a spreadsheet with the whole RAM, a sheet with the filtered set of questions, a slideshow explaining UNESCO's recommendation and the RAM, a document with exemplary responses from another RAM (i.e., Chile), and a set of frequently asked questions.

## MULTISTAKEHOLDER VALIDATION


A first draft of the RAM questionnaire was consolidated based on responses from government stakeholders, extensive desk research, and strategic collaboration with external partners, including GitHub and the Chilean National AI Centre (CENIA). On February 4, 2025, over 120 government, academia, industry, and civil society stakeholders convened in a validation workshop to rigorously review the draft, provide critical feedback, and deliberate on key policy recommendations.

The workshop yielded comprehensive recommendations for advancing Cambodia's AI ecosystem. Participants emphasised the need for an extensive AI strategy implementation plan and rigorous evaluation and assessment processes. They also underscored the importance of drafting online child protection laws and enhancing safeguards for vulnerable groups through targeted auditing and data curation.

Participants also advocated for establishing robust public-private partnerships, including working groups to study AI adoption within organisations, upgrading internal ICT systems, and developing public-private cloud and data centre solutions, particularly within the banking and fintech sectors. Moreover, the workshop highlighted the necessity of streamlining procurement processes, promoting open access to public data, and revising policies to improve transparency and accountability.

Regarding talent, participants recommended capacity-building initiatives such as train-the-trainer programs, STEM outreach initiatives, digital literacy efforts, and the introduction of new tertiary education programs (BSc and MSc) to bridge the digital divide, especially in rural areas. Related to this, participants discussed the creation of an AI resource centre to support startups, the organisation of AI ethics conferences, public awareness campaigns, and the development of comprehensive AI guidelines in education.

Finally, other measures discussed included ensuring data quality and access, enforcing data privacy and protection through regular audits, addressing misinformation, promoting accessibility, and securing sustainable funding for training, research, and innovation initiatives.

After the workshop, the draft of the RAM was shared among participants and was open for comments for two weeks.

Based on the workshop results, the comments received during the consultation, and further desk research, a final version of the RAM was consolidated. The responses were revised and validated with the CADT team and UNESCO.

## LESSONS LEARNED

The RAM implementation in Cambodia showcased several positive elements that drove its success. CADT's decisive leadership and robust connections with institutional stakeholders, in partnership with UNESCO, ensured the engagement of key actors. Empowering institutional stakeholders to lead the response, with experts serving as supporters rather than primary researchers, accelerated institutional learning and strengthened process buy-in. Convening stakeholders from academia, industry, and government for validation produced valuable recommendations. At the same time, MPTC's clear leadership and mandate enabled the completion of a preliminary RAM version in less than two months, even with several holidays, demonstrating unwavering efficiency, political will and commitment.

The initiative also delivered critical lessons for future projects. A clear and strong political will at the highest level to advance the ethics of AI in an early stage of AI adoption is vital. Enhanced coordination among ministries with overlapping mandates is imperative, as political tensions occasionally delay information collection. Clarifying questionnaires and training materials will empower stakeholders to provide detailed and accurate responses. Strengthening local data sources is essential, given that many suggested references lacked relevant Cambodian data, thereby underscoring the crucial role of expert networks. Streamlining bureaucratic processes for information requests and meetings will further boost efficiency and expedite future assessments. These insights will refine RAM implementation both in Cambodia and in other contexts.

# MAIN POLICY RECOMMENDATIONS

Cambodia lags in developing its AI ecosystem and governance. Addressing multiple challenges, such as institutional, infrastructural, capacity, and technological development gaps, while creating a roadmap to promote the ethical and human rights-respectful use of AI, is essential. The recommendations below address these challenges, starting with the strengths and opportunities identified through the RAM exercise. The recommendations are organised into five areas: (1) Institutional Framework for AI Governance, (2) Laws and Regulations, (3) Responsible AI, Inclusion, and Well-being, (4) Infrastructure, Data, and Capacity Building, and (5) Research, Development, and Innovation Ecosystem.

## 1. INSTITUTIONNAL FRAMEWORK FOR AI GOVERNANCE

The first area includes three recommendations designed to create a clear roadmap alongside a robust AI governance structure that will establish the institutional foundations necessary to nurture the Cambodian AI ecosystem.

### 1.1. Finalise and deploy the National AI Strategy

Cambodia should continue its efforts to draft a National AI strategy, finishing it in the short term and starting its implementation. Cambodia can learn from other countries' experiences in developing and deploying AI strategies and utilising the expertise of the UN agencies, including UNESCO, ITU, UN-ESCAP and its network. It can use the results of this assessment to articulate concrete policy actions. A national AI strategy should have at least the following characteristics:

- Clear national priorities and objectives: The strategy should establish national AI development and deployment priorities, aligning them with broader societal and economic goals and international ethical standards. A state-led, high-level sense-making process is essential to align with the specificities of the Cambodian context and the development trajectories of the country's projects. This involves identifying beneficial uses and potential harm of AI for citizens, particularly in sectors like health, education, and public services, as well as priority industrial sectors like agriculture, tourism, and manufacturing. The priorities do not need to be permanent or completely defined beforehand. It should be a living document that includes mechanisms to revise and update the priorities based on the sectors' performance in responsibly adopting and deploying AI.

  Prioritisation is critical in developing countries, given the competing priorities and limited government resources to support AI development and adoption. During the assessment, some sectors that showed promise were finance, agriculture, and tourism, with a focus on small and medium enterprises (SMEs). Digital transformation is often advanced in finance, and AI adoption can be smoother, especially since they have the resources to invest in it. Agriculture and tourism are two of the most critical sectors in Cambodia, but the challenge of digital transformation and AI adoption will be more complex, especially in agriculture. Finally, SMEs, particularly informal businesses, are a very relevant area of the Cambodian economy. However, as international experience shows, SMEs face unique digital transformation and AI challenges that require tailored policies and support.
- Political coordination: One of the key challenges identified by different stakeholders and the assessment is the overlapping functions of different line Ministries that can lead to competition instead of collaboration when

developing policies. To establish appropriate institutions to govern AI and successfully implement an AI strategy, each Line Ministry should have a mandate and keep clear boundaries on what actions they oversee and account for, what actions are collaborative, and what their role is within the governance structure.

- Monitoring and evaluation: One key challenge of AI strategies worldwide has been their implementation and evaluation. Many plans remain only in published documents and do not translate into concrete policy actions. Cambodia should design its AI strategy with clear performance indicators for each goal, policy action, periodic evaluation and update mechanisms. Moreover, the strategy's progress and changes should be transparent and available for stakeholders and the relevant public to check. For example, a dashboard containing the strategy's KPIs and level of implementation could help inform all the stakeholders about the progress, achievements and modifications.
- Diverse and technical implementation team: Besides the more general institutionality for AI governance described in the following recommendation, the strategy should have its own monitoring and implementation team. This team should be multidisciplinary and diverse, across all areas of scientific disciplines that matter, STEM and social and human sciences, to mitigate potential biases and promote an equitable implementation of the different policy actions.

Timeline: 2025-2026
Priority: High
Potential partners: International organisations and fora (e.g., UNESCO, UNESCAP, ASEAN, GPAI), industry associations, AI and digital technologies-related NGOs, and academia

## 1.2. Establish Multistakeholder Governance

A multistakeholder governance approach involving different sectors and communities is highly relevant for AI due to the technology's complex and far-reaching implications across various industries and diverse groups within society. AI systems are not purely technical; they are inherently socio-technical, meaning their development, deployment, and impact are shaped by and influence societal dynamics and human behaviour. AI technologies can transform various aspects of life, from the economy to healthcare, education, arts and culture, and governance. Given this broad reach, governing AI effectively requires understanding and addressing the perspectives of all those who may be affected.

A key component of the AI strategy should be to include a multistakeholder process in the formulation as well as in the implementation stages, to (i) ensure that, on top of decision makers and business actors, expertise from across all scientific disciplines informs the sense-making process from different perspectives; and (ii) determine which industrial sectors to prioritise depending on their capabilities and level of awareness and adoption of digital technologies.

Creating an appropriate multistakeholder governance requires, at least:

- Multi-stakeholder advisory body: Consider formally creating a permanent advisory body composed of representatives from government (various relevant ministries and agencies), industry (including large corporations, SMEs, and startups), academia (AI researchers, ethicists, sociologists, psychologist, lawyers), civil society organisations (focusing on human rights, consumer protection, digital rights, children's rights), technical communities, and potentially end-user groups. This body should be mandated to provide input on developing and implementing the national AI strategy, contribute to ethical guidelines, and advise on regulatory frameworks.
  Moreover, consider creating roles within public institutions, such as AI Ethics Officers, to oversee ethical impact assessments, auditing, and continuous monitoring efforts.
- Diverse expertise and perspectives: Identifying and managing AI's risks and benefits necessitates the involvement of a wide range of actors with diverse experiences, expertise, and backgrounds. This includes

technical experts, policymakers, legal professionals, ethicists, social scientists, psychologists, civil society organisations, industry representatives, users, and the general public. Stakeholders bring unique insights into potential impacts, ethical considerations, and societal values crucial for responsible AI governance.

Moreover, to ensure that AI governance is inclusive, it should actively seek to identify and incorporate marginalised groups and vulnerable populations to address their needs, promote fairness, and prevent AI from exacerbating existing inequalities.

- Bridging information asymmetries: There is often an information asymmetry between regulators and those developing and deploying AI. Collaborative strategies involving various stakeholders, including industry and researchers, can help regulators better understand AI technologies, their functionalities, associated risks, social impacts, and appropriate governance tools and models.
- Implement regular consultations and feedback mechanisms: Establish transparent processes and platforms for regular consultations with various stakeholders beyond the advisory body. This could include public forums, online consultations, workshops, and targeted engagement with specific communities or sectors. The strategy should outline how stakeholder feedback will be collected, considered, prioritised, and integrated into policy decisions and system design. In particular, given the importance of civil society in AI governance, there should be resources and support to enable their meaningful participation.

Timeline: 2025-2026
Priority: High
Potential partners: International organisations and fora (e.g., UNESCO, ASEAN, GPAI), industry associations, AI and digital technologies-related NGOs, and academia

## 1.3. Strengthen International Cooperation and Standards Adoption

AI development and deployment often transcend national borders, with data, expertise, and infrastructure flowing regionally and internationally. Addressing AI's regional and global challenges and opportunities requires international and multi-stakeholder cooperation to avoid fragmentation and ensure a consistent approach to governance. One promising pathway is to engage with the UN Issue-based Coalition on Digital Transformation in Asia-Pacific, co-led by UNESCO, UNESCAP and ITU, to harness the multisectoral expertise availed by more than 15 UN Organisations.

Moreover, international standards are crucial for AI's ethical development and deployment. First, aligning with international AI ethical standards helps create a common baseline for domestic regulatory approaches. This ensures that businesses can demonstrate compliance by adhering to a common standard rather than meeting bespoke requirements in each jurisdiction. Consistent, coherent, and interoperable frameworks and norms are crucial for the widespread adoption of AI technologies domestically and abroad.

Second, international standards provide a basis for international cooperation in addressing AI's global challenges and opportunities. They can foster collective global, cross-sectoral rules, commitments, and information sharing to promote AI safety and trustworthiness. Responsible AI must develop and implement international good practices, principles, norms, and standards.

Third, international standards can describe measurable, testable safety and transparency levels so AI systems can be objectively assessed, and compliance levels determined. By setting baseline standards, they can help manage risks associated with AI.

Finally, international standards help promote innovation and trade. For instance, standards can help prevent foreign governments from imposing protectionist requirements that could stifle innovation. Aligning policy with existing, globally recognised standards, such as ISO 42001[97], can help ensure consistency and predictability across industry. International standards can also facilitate market access for AI developers.

An AI strategy should promote engagement in international dialogues and collaborations on AI ethics, governance, and standards. It should support the participation of diverse national stakeholders in international forums and encourage the adoption and contribution to global best practices and standards. In particular, Cambodia should:

- Continue and increase its active participation in international forums and networks: Cambodia actively engages with different ASEAN bodies and collaborates closely with organisations such as UNESCO, ITU, and UN-ESCAP. Cambodia should continue to strengthen its involvement in such collaborations, contributing to developing international agreements, standards, and guidelines to foster ethical AI development and adoption. Being part of relevant international forums and networks, such as the UNESCO AI Ethics Experts without Borders (AIEB), is core to ensuring representation and voice. As emphasised in the UNESCO Recommendation, specific attention must be paid to low and middle-income countries, like Cambodia, ensuring their representation and their local knowledge, cultural pluralism, and value systems are considered in the AI ethics debate.
- Considering Joining Normalisation Committees: Cambodia does not currently participate in relevant normalisation committees. Cambodia should consider the benefits of participating in these committees, such as having direct input into developing international standards.
- Considering certification mechanisms: As suggested in the UNESCO Recommendation, Cambodia could explore the possibility of developing or adopting certification mechanisms for AI systems that align with international ethical standards, ensuring that they do not hinder innovation or disadvantage the country. Initially, certifications at the ASEAN level could be discussed and developed.

Timeline: 2025-2028
Priority: Medium
Potential partners: International organisations such as UNESCO, ITU, World Bank, ISO, among others

## 2. LAWS AND REGULATIONS

The second area groups two recommendations that focus on suggesting regulatory improvements to create stronger institutions and a safe AI ecosystem through regulations that are up to date with the digital world and AI-related challenges.

### 2.1 Adapt Regulations to Integrate Ethics of AI

Cambodia should create and amend regulations across several key areas to develop and deploy AI responsibly. These regulations should foster innovation while mitigating potential risks and upholding ethical principles and human rights.

- Enact the draft Law on Personal Data Protection, aligning it with international standards. The draft should be analysed to protect people from data use in the public sector and by the government.
- Revise the Procurement law to adapt to acquiring AI systems safely in government.
- Revise and update the Criminal Code to adequately address specific AI harms not covered in the regulatory framework. Mechanisms of liability and readdress specific to AI harms should be developed.

[97] https://www.iso.org/standard/81230.html

- Enact a Freedom and Access to Information law: Revise the current draft to incorporate elements that can grant people access to information regarding the government's use of AI.
- Deliberative process towards AI regulation: Start a regulatory agenda and discussion to assess how to regulate AI, analysing how existing trends (e.g., risk-based approach, sectoral regulation, self-regulation, etc.) fit Cambodia's reality to design a specific framework for the country.

Timeline: 2025-2026
Priority: High
Potential partners: Industry associations, academia, NGOs that work in digital-related areas, and international organisations

## 2.2. Implement AI Regulatory Sandboxes

Different recommendations advocate for a shift towards more flexible, agile, and risk-based approaches to AI regulation. Regulatory sandboxes are highlighted as a potential mechanism to achieve this flexibility by providing controlled environments for experimentation, learning, and adaptation of regulatory frameworks in response to the rapid advancements in AI technologies. Cambodia should adopt a structured and phased approach to develop a regulatory sandbox for AI, considering its current AI ecosystem, legal framework, and strategic objectives.

First, in the sense-making process leading to the formulation of a National AI Strategy, Cambodia should define the specific goals it aims to achieve with an AI regulatory sandbox. This includes identifying the key challenges and opportunities related to AI development and deployment that the sandbox will address. The scope could initially focus on specific sectors or types of AI applications that align with Cambodia's national priorities, such as those previously identified (fintech, agriculture, SMEs, tourism).

### Sandbox definition and typology

Although there is no consensus definition of a regulatory sandbox, it could be broadly defined as a supervised environment in which emerging technologies, business models, policies, and/or regulations can be tested for a fixed period to promote innovation and regulatory learning[98].

Different works have classified various types of regulatory sandboxes. Guridi & Trivell (2005) differentiate three types of regulatory sandboxes from analysing four cases and studying Chile's institutional framework towards its potential implementation:

- Legal Advice or guidance sandboxes: Spaces with no regulatory exemptions, but in which regulators can advise technologists to comply with existing laws.
- Regulatory exemption sandboxes: Spaces in which the regulator can exempt technologists from complying with specific rules for a fixed period of time.
- Policy or regulatory prototyping: Spaces in which new laws or policies are tested alongside emerging technologies before they are enacted, fully developed and deployed.

[98] Guridi & Trivelli (2025). Recomendaciones para la Implementación de Sandboxes Regulatorios de IA. Forthcoming article.

The Datasphere initiative[99] recently released a report on AI regulatory sandboxes collecting many cases and examples, such as CNIL AI Sandbox in France[100], Malaysia AI Sandbox[101], Singapore Generative AI Evaluation Sandbox for Trusted AI[102], among others.

Second, Cambodia should establish an appropriate governance framework for the sandbox, including the roles and responsibilities of relevant authorities. This recommendation is directly linked to the one about multistakeholder governance described before, since those arrangements related to AI governance will be the baseline institutionality for developing regulatory sandboxes. Moreover, identifying potential risks and developing mitigation strategies are crucial. Cambodia should also define clear eligibility criteria and a transparent participant application process. Engaging a diverse range of stakeholders from the government, private sector, academia, and civil society during this planning stage is essential to ensure the sandbox meets the ecosystem's needs.

### Sandbox Examples

CNIL Sandbox for AI and Public Services (France)[103]

The CNIL's third AI Sandbox (2023-24) offered six months of intensive legal and technical coaching to eight AI projects designed to improve French public services—four flagship "winners" plus four additional initiatives judged noteworthy for data-protection challenges. Working hands-on with each team, CNIL experts tackled issues such as building lawful training databases, applying data-minimisation to generative models, defining meaningful human oversight and experimenting with privacy-preserving video capture; the lessons distilled from this collaboration are now published as practical recommendations intended to guide all actors deploying AI in the public sector. The programme, which forms part of CNIL's wider AI Action Plan, demonstrates a "regulation through guidance" approach: by de-risking innovative use cases up-front, it accelerates adoption while ensuring GDPR compliance, and its public results feed directly into the authority's forthcoming sectoral guidance and the next sandbox round focused on the silver economy.

Generative AI Evaluation Sandbox for Trusted AI (Singapore)[104]

Singapore's Infocomm Media Development Authority (IMDA) and the AI Verify Foundation launched the world's first Generative AI Evaluation Sandbox on 31 October 2023 to forge trusted, "baseline" ways of testing large-language-model systems. Centred on a draft *Evaluation Catalogue* that inventories today's technical benchmarks and recommends a core set of tests, the sandbox pairs real-world use-cases with a tri-partite team for each project—upstream model developers (e.g., Google, Microsoft, Anthropic, NVIDIA), downstream application builders (such as OCBC, Singtel, X0PA.AI) and third-party testers (Deloitte, TÜV SÜD, Resaro.AI). The arrangement let all actors, including Singapore's Personal Data Protection Commission, collaboratively probe risks through exercises like red-teaming tailored to the city-state's multilingual setting while refining new domain- and culture-specific benchmarks that fill recognised gaps in global evaluation practice. Feedback on the catalogue is invited as the sandbox iterates, and its lessons will inform IMDA's broader AI Verify governance toolset.

Third, Cambodia should clarify how participation in the sandbox will interact with existing laws and regulations. Consideration should be given to temporarily relaxing specific regulatory requirements within the controlled

[99] https://www.thedatasphere.org/wp-content/uploads/2025/02/Report-Sandboxes-for-AI-2025.pdf
[100] https://www.cnil.fr/en/artificial-intelligence-and-public-services-sandbox-cnil-supports-8-innovative-projects
[101] https://sandbox.gov.my/events/the-launching-of-artificial-intelligence-ai-sandbox-programme-together-with-nvidia
[102] https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2023/generative-ai-evaluation-sandbox
[103] https://www.cnil.fr/en/artificial-intelligence-and-public-services-cnil-publishes-results-its-sandbox
[104] https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2023/generative-ai-evaluation-sandbox

environment of the sandbox to encourage experimentation. However, fundamental ethical and human rights principles should remain paramount, as the UNESCO Recommendation emphasises. The sandbox should have built-in mechanisms to assess and address the ethical implications of the AI systems being tested. This includes evaluating potential biases, impacts on privacy, and the need for transparency and explainability. Integrating ethical impact assessments, as recommended by UNESCO, into the sandbox framework is crucial.

Given Cambodia's current stage of AI development, building the necessary capacity to manage and participate in an AI sandbox is critical. This includes training regulators and potential participants on the sandbox's objectives, processes, and potential outcomes. Raising awareness about the benefits of responsible AI innovation through sandboxes can encourage participation and build trust. Moreover, transparency is key to the success of the sandbox. Cambodia should communicate openly about the sandbox's objectives, processes, and outcomes with all stakeholders and the public. Sharing lessons learned and best practices will foster a collaborative environment.

Once the sandbox is launched, clear guidelines for testing AI technologies, data sharing (if applicable), and interaction between participants and regulators are necessary. Regular monitoring and feedback mechanisms should be in place to facilitate real-time learning and adjustments. At the end of the testing period, a transparent process for closing the sandbox and transitioning successful technologies out should be defined. A comprehensive evaluation of the sandbox's effectiveness in achieving its objectives is essential. This evaluation should inform future iterations of the sandbox and contribute to developing broader AI regulations and policies in Cambodia.

Finally, Cambodia should seek opportunities for cross-border collaboration on AI sandboxes and regulatory approaches. Engaging with international organisations and learning from the experiences of other countries that have implemented AI sandboxes can provide valuable insights and help avoid potential pitfalls.

Timeline: 2026-2017
Priority: High
Potential partners: Industry associations, academia.

## 3. RESPONSIBLE AI, INCLUSION AND WELL-BEING

The third area consolidates four recommendations to ensure an AI ecosystem that fosters ethical and responsible development and use of AI tools, creating an inclusive environment that does not widen the digital divide..

### 3.1. Elaborate and Deploy Sectoral Guidelines for an Ethical Use of AI

Before implementing hard regulation, Cambodia can develop AI development and deployment guidelines for different sectors, especially those identified as priority sectors by the National AI Strategy. These guidelines, if aligned with international principles and standards, can help industry and public institutions manage the risks of AI systems.

The guidelines must embed ethical principles and ensure the respect, protection, and promotion of human rights and fundamental freedoms throughout the AI system's lifecycle. This includes addressing potential biases, discrimination, and impacts on vulnerable groups. Cambodia can draw from documents such as UNESCO's Recommendation, Ethical Impact Assessment (EIA), and ASEAN guidelines. Experiences can also be drawn from similar initiatives and approaches by neighbouring countries, such as Thailand, where the Electronic Transaction Development Agency (ETDA) has developed sectoral guidelines (cybersecurity, health, business, labour, intellectual property, etc.)[105].

[105] https://www.etda.or.th/th/Useful-Resource/documents-for-download.aspx

Guidelines should mandate requirements for transparency and explainability of AI systems to ensure trustworthiness. This includes documenting AI systems' design, operations, limitations, training data, and algorithmic methodologies. Mechanisms for auditability and traceability should also be considered.

The guidelines should establish frameworks for identifying, assessing, mitigating, and monitoring the risks associated with AI systems, including potential harms to individuals, society, and the environment. This should include privacy impact assessments and AI ethical impact assessments before, during, and after AI system development. A risk-based and proportional approach to governing AI products and services should be evaluated in the Cambodian context.

Robust data governance strategies and adequate data protection frameworks are essential. Guidelines should address the collection, use, storage, security, and sharing of data used in AI systems, ensuring compliance with relevant laws and international standards. Principles like privacy by design should be encouraged.

The guidelines should emphasise the importance of human oversight in AI systems and ensure that ethical and legal responsibility can always be attributed to natural persons or legal entities. They should also define clear roles, responsibilities, and delegation of authorities for personnel involved in the AI lifecycle.

Finally, the guidelines should be adaptable to different sectors, recognising the unique challenges and opportunities in specific domains such as government, education, agriculture, and finance. Sector-specific risks and ethical considerations should be addressed.

Timeline: 2026-2027
Priority: Medium
Potential partners: Industry associations, academia, NGOs that work in digital-related areas, and international organisations.

## 3.2. Conduct Public Awareness Campaigns

With the rise of technologies like deepfakes, educating the public about potential AI-driven fraud, such as scams and algorithmic manipulation, and providing guidance on protecting themselves is crucial. This campaign should incorporate elements such as:

- Multistakeholder effort: Campaigns should be co-designed with diverse stakeholders and implemented through joint efforts with academia, industry and civil society. Involving a more varied group of people will ensure a higher adaptation of the messages to different audiences.
- Clear and accessible language: The campaign should use clear and plain language that is understandable by a broad audience, including those who are not AI professionals. Technical jargon should be avoided or explained simply to ensure the message resonates with everyone.
- Focus on demystifying AI: The campaign should aim to demystify AI technology, explaining in simple terms how it works, its potential applications, and its limitations. Understanding the basics of AI is crucial for the public to grasp the associated risks.
- Highlight benefits and risks: While the focus is on risks, the campaign should also acknowledge AI's potential benefits. This provides a balanced perspective and avoids unnecessary fear while emphasising the need to understand and mitigate risks.
- Address specific AI risks: The campaign should clearly articulate the various risks associated with AI, providing concrete examples to illustrate these risks. These risks can include: algorithmic bias leading to unfair or discriminatory outcomes; the spread of misinformation and disinformation, including AI-generated content

like deepfakes; the amplified risks of misinformation in the age of AI; privacy infringements and the potential for invasive surveillance; security and safety issues, including vulnerabilities to cyberattacks; the potential for manipulation and undue influence through algorithmic processes; risks to human rights and fundamental freedoms; the possibility of unexpected harms due to misaligned AI objectives; environmental damage caused by AI technologies; the impact on the labor market and potential unemployment due to AI-driven automation.

- Target diverse audiences: The campaign should consider Cambodia's existing linguistic, social, and cultural diversity to ensure effective reach and understanding. Tailoring messages to different demographics and using various communication channels can enhance impact.
- Promote responsible use and informed decision-making: The campaign's primary goal should be to encourage responsible use of AI and informed decision-making regarding AI technologies. This involves empowering citizens with the knowledge to understand when interacting with AI systems and the potential implications.
- Include information on protection and mitigation: Where appropriate, the campaign should provide information on how individuals can protect themselves from certain AI risks.

Timeline: 2025-2028
Priority: High
Potential partners: Academia, NGOs that work in digital-related areas, and international organisations

## 3.3. Protect and Prepare Children for an AI-Powered World

Protecting children in the age of AI is about safeguarding their fundamental rights, addressing their unique vulnerabilities, ensuring their healthy development, and preparing them for a future where AI will play an increasingly significant role. Failure to prioritise their protection could lead to substantial harm and limit their potential. Therefore, proactive and child-centred policies and practices are essential.

- Consider children in the AI Strategy: It is crucial to develop and implement a national AI strategy specifically focusing on children's rights and well-being. This strategy should integrate the principles of the UN Convention on the Rights of the Child (CRC) as the foundation for AI policies and systems affecting children, considering protection, provision, and participation.
- Strengthen legal and regulatory frameworks: Cambodia needs to update and evaluate existing laws and develop new legislation to address the specific challenges and risks posed by AI to children in the digital environment. This includes: finalising its Privacy Law, including specific provisions for children's data, recognising their unique vulnerabilities; developing online child protection laws to safeguard children from harmful content, including AI-generated misinformation, deepfakes, and child sexual abuse material (CSAM). Existing laws like the Law on Suppression of Human Trafficking and Sexual Exploitation should be reviewed and adapted to address digital forms of exploitation.
- Promoting parents and caregivers' involvement in how children manage their data: Ensure children (and their parents/caregivers) have control over their data. Moreover, Cambodia should work on developing guides for parents and caregivers on AI literacy, digital safety, privacy, and the importance of setting rules for AI use at home.

Timeline: 2026-2027
Priority: High
Potential partners: UNESCO, UNICEF, NGOs related to children's safety and digital topics

### 3.4. Advance Gender Equality in the AI Ecosystem

Cambodia should take a multifaceted approach to creating a policy to address the gender gap in digital technologies and AI, focusing on education, access, representation, and addressing underlying biases.

- Integrate a gender perspective into the AI Strategy: This plan should outline specific objectives, targets, and measures to reduce the gender gap in digital skills and AI participation.
- Continue promoting STEM and ICT education for girls and women: Implement targeted programs and use gender-specific language to increase girls' and women's participation in STEM and ICT disciplines. To do so, Cambodia should support and scale existing initiatives that encourage girls in digital skills and app development, including AI and machine learning fundamentals.
- Scholarships and mentorship: Invest in scholarships, mentorship programs, and STEM initiatives to empower women and other underrepresented groups in AI.
- Encourage female entrepreneurship and participation in the AI Workforce: Offer and promote economic and regulatory incentives, among other support schemes, to encourage female entrepreneurship, participation, and engagement in all stages of the AI system lifecycle. Moreover, Cambodia should implement policies that balance gender participation in AI research in academia and gender representation in companies' top management positions, boards of directors, and research teams

Timeline: 2026-2027
Priority: Medium
Potential partners: Industry associations, academia, NGOs that work in digital-related areas, and international organisations.

## 4.INFRASTRUCTURE, DATA, AND CAPACITY BUILDING

The fourth area has four recommendations focused on strengthening the basic enabling factors of an AI ecosystem, which consist of data, talent, and technological infrastructure I.

### 4.1. Expand Connectivity Infrastructure

Cambodia has made improvements in its connectivity infrastructure, which should continue. However, access to the internet needs to be expanded, as only 56.7% of the population reported using it in 2022. This gap is more pronounced in rural areas, which should be a focus for connectivity policies.

Although internet speed has improved, it still requires more work. Investing in high-speed, reliable digital connectivity is essential as it forms the backbone of AI development and deployment. This includes expanding access in underserved areas and improving the quality of connections.

Timeline: 2025-2027
Priority: Medium
Potential partners: Industry associations, academia, international organisations (e.g., ITU).

### 4.2. Enhance data collection and data sharing Ecosystem and Policies

Cambodia should address gaps in data availability and openness to develop policies and foster the development and adoption of AI systems. In terms of data collection, Cambodia should:

- Collect data about the labour market: There is a significant lack of labour market data related to AI. Cambodia needs to establish mechanisms for collecting data on job openings requiring AI skills, the number of employees with data science and AI expertise, the penetration of AI skills, and the concentration of AI talent in different sectors.
- Improve R&D data collection: Given the lack of granularity in R&D data for ICT and AI, Cambodia should enhance its data collection on research and development expenditure, specifically within these sectors, including public and private investment. In particular, more data should be collected related to companies' spending on R&D in programming, consulting, and other computer-related activities to understand the investment level in AI development.
- Collect sector-specific data: Cambodia should prioritise data collection in high-potential sectors like fintech, agriculture, SMEs, and tourism. This will allow for more targeted AI applications and policy interventions.

Moreover, Cambodia should expedite the drafting and implementation of its Open data and data governance policy, including principles, standards, licenses, and mechanisms for managing, opening, storing, sharing, and protecting government data. The policies should address elements such as:

- Establishing a strong national data governance framework that outlines rules, ethical principles, and institutional responsibilities for trustworthy and safe data access, sharing, and reuse.
- Increasing the availability and accessibility of public data according to open data standards.
- Investing in interoperable technical standards and machine-readable formats to facilitate data usage by entrepreneurs, researchers, and AI developers.
- Generating mechanisms that generate capacity-building support for government agencies and other stakeholders on effectively publishing and utilising open data. Civil servants should be encouraged to publish their internal data in an open and machine-readable format online, preferably on an organised open data platform.
- Implementing open licensing frameworks for public data is essential to promoting its reuse and maximising its impact on innovation and research.
- Promoting safe and ethical data sharing, Cambodia could explore the establishment of data trusts and collaborative platforms to share quality data for research, innovation, and public benefit.

Timeline: 2025-2026
Priority: High
Potential partners: Industry associations and academia.

## 4.3. Create and Foster AI Basic Literacy

Basic AI awareness is crucial for the ethical development and use of AI, enabling individuals to grasp its benefits, risks, and implications. Without foundational knowledge of AI's functions, limitations (such as algorithmic bias), and impacts (massive misinformation, discrimination, digital addiction, etc.), meaningful discussions on ethics or responsible governance become difficult. Basic AI awareness and literacy are foundational to effectively implementing various ethical principles and policy recommendations outlined in UNESCO's Recommendation. It allows individuals to be informed participants in the development and deployment of AI, fostering a more responsible and ethical AI ecosystem.
Awareness and literacy are not solely an educational effort. AI is a general-purpose technology that impacts across multiple domains, so institutions and stakeholders from all sectors should be involved in the actions undertaken under this initiative.

Cambodia should undertake several key actions to improve AI literacy, awareness, and education among its citizens and within its government. The RAM findings highlight the current low AI literacy and a shortage of skilled professionals as significant issues, so different actions should be taken, and the good work that institutions such as CADT, the MPTC, and the MoEYS are doing in this domain should be scaled and potentiated.

- AI courses in Khmer: Free online AI courses in Khmer should be developed to provide accessible learning opportunities. This could be created at different levels, following initiatives such as Elements of AI[106] and/or partnering with private institutions that can provide access to their systems alongside educational programs.
- Train the trainers: Cambodia has already prioritised this aspect and is starting to design projects to train teachers and professors. This is key to updating the educational system to incorporate elements related to AI and digital technologies. Alongside the specific training efforts, Cambodia could develop guidelines and educational resources adapted to the Cambodian reality, adapting existing efforts from other countries.

Due to the rapid advancements in AI, research and innovation are crucial for countries aiming to stay at the forefront of technological progress in AI. Saudi Arabia is making significant progress in AI research and innovation, driven by the efforts of the Research, Development, and Innovation Authority (RDIA), strategic partnerships, Centres of Excellence (CoEs), and a growing network of academic institutions and research centres. To accelerate its journey toward becoming a global hub for AI, there is potential for KSA to further strengthen collaboration with leading AI research centres and enhance the commercialisation of AI innovations.

Timeline: 2025-2028
Priority: Medium
Potential partners: Industry associations, academia, NGOs that work in digital-related areas, and international organisations.

## 4.4. Progressive Approach to Strengthen AI Skills

Advanced human capital is the engine that drives a thriving AI ecosystem. It is not merely about using AI tools but about understanding the technology deeply, developing it responsibly, integrating it effectively, and strategically planning its future impact. Addressing skill gaps and investing in advanced AI education and training are critical for harnessing AI's full potential for economic growth and societal benefit. In the context of UNESCO's recommendations, advanced human capital directly supports the principles of human rights and fundamental freedoms, ethics and responsibility, sustainability, and governance and stewardship. Moreover, it is essential to address various policy areas by fostering the development of specialised AI skills and promoting research on the ethical implications of AI. Furthermore, advanced expertise is crucial for the effective execution of ethical impact assessments and the establishment of robust regulatory frameworks.

- AI Ethics across programs: AI ethics should be integrated across all AI-related programs, ensuring students understand bias, accountability, societal impacts, etc. A progressive approach should first increase undergraduate enrolment in AI-related fields through scholarships, mentorships, and STEM outreach programs while gradually introducing incentives for master's and PhD programs, such as research grants, tuition subsidies, and AI innovation hubs.
- Scale and foster international exchange programs: Establish exchange programs, internships, and research collaborations with international organisations, universities, and AI-driven economies to strengthen local expertise. The latter should build upon Cambodia's existing partners in the ASEAN region and beyond.

[106] https://www.elementsofai.com/

Requirements to contribute to the Cambodian economy should be developed, going beyond a simple requirement to return to the country, and actions should be considered that strengthen investment and research in AI.

- Project-Based learning and Hackathons: Continue organising and promoting project-based learning, on-the-job training, public-private peer learning, and AI and data hackathons to provide practical experience applying AI concepts. These methods help practitioners from diverse backgrounds acquire and practice AI and digital transformation competencies.

Timeline: 2025-2028
Priority: High
Potential partners: Academia and international organisations.

## 5. RESEARCH, DEVELOPMENT, AND INNOVATION ECOSYSTEM

The fifth area focuses on generating a strong and thriving research and development ecosystem by grouping three recommendations that build capacities for researchers, developers, and entrepreneurs.

### 5.1. Foster and Increase Investment and Expenditure in Research and Development

AI is a technology that was made possible by scientific research. Based on UNESCO's Recommendation on Science and Scientific Researchers (RSSR),[107] Cambodia should explicitly integrate R&D into national efforts and strategies to adopt AI. R&D should be seen as an essential component in the national AI strategy, for acquiring knowledge, including on social aspects such as AI and gender biases, AI and local knowledge and languages, etc., anticipating risks, addressing challenges related to climate and environmental degradation and sustainable development, and informing decision-making.

Public funding for R&D should be treated as a long-term investment to remain relevant in the AI race, in which the government provides material assistance, moral support, and public recognition to foster successful R&D performance. In that sense, Cambodia should:

- Enhance the collection of granular data on R&D expenditure, particularly for ICT and AI, across both public and private sectors to better inform policy and investment decisions.
- Significantly increase public funding for R&D, treating it as a long-term public investment, specifically targeting AI research initiatives.
- Explore public-private partnerships to co-finance AI R&D projects.
- Channel seed grants to university–startup consortia working on Khmer language models, ag-tech, tourism analytics, fintech risk, ed-tech, and inclusive health-AI.
- Analyse creating incentives such as super-dedication for private AI R&D, in which firms could deduct twice the value of qualifying AI R&D outlays.

Cambodia should create a climate that attracts high-calibre individuals to R&D careers, offers reasonable prospects and security, encourages the growth of a strong national scientific community, and incentivises researchers trained abroad to return. This includes promoting the utmost respect for the autonomy and freedom of research indispensable to scientific progress, consolidating their right and responsibility to express themselves on projects' ethical and societal value, contributing to national goals, sharing data, and disclosing conflicts of interest. To this end, Cambodia should explore:

[107] https://unesdoc.unesco.org/ark:/48223/pf0000263618

- Support the growth of undergraduate, Master's, and PhD AI and data science programs, incorporating ethics and social sciences modules. Initiatives pioneered by local research institutions such as the Cambodia Academy of Digital Technology (CADT) should be encouraged, sustained, and upscaled.
- Support interdisciplinary research initiatives that examine the immediate and long-term impacts of AI adoption in Cambodia's specific context, considering its demographic, sociocultural and socioeconomic situation. Focus on research areas related to competencies, skills, and talents to prepare future-ready individuals, including those related to misinformation and media and information literacy.
- Promote international exchange programs and collaborations to build local expertise and counter brain drain.
- Provide opportunities for researchers and professionals to continuously update their skills through conferences, access to international resources, and training.
- Create an annual "Khmer AI" conference and hackathon to catalyse local-problem statements and match students with industry mentors.

Finally, Cambodia should continue fostering the international dimension of R&D and facilitate researchers' participation in the global scientific community. This includes establishing partnerships (especially North-South), ensuring equal access to science, facilitating data sharing, balancing intellectual property rights with open access, and ensuring transnational research is ethical and responsive to host country needs

Timeline: 2026-2028
Priority: High
Potential partners: Industry associations, academia, and international organisations.

## 5.2. Create an AI Resource Centre

Cambodian stakeholders still lack in-house AI-dedicated computing power and talents, and Cambodian players in the data centre and/or cloud computing domains have not yet invested in AI computing capabilities per se.

To provide stakeholders with the necessary AI resources, both technical and human, Cambodia should establish a shared AI Resource Centre that provides AI computing power, technical support, and education while fostering connections between academia and industry. This Resource Centre must have its sovereign infrastructure to deliver computing power to various stakeholders and establish partnerships with educational institutions to ensure that individuals acquire the necessary skills to develop and use AI systems responsibly and ethically.

The AI Resource Centre can follow a public-private partnership format, with seed funding from the Government. Still, the mandate should be to generate a sustainable business model in the future to sustain part (or all) of its operations. Access to the AI Resource Centre's computing infrastructure can be achieved directly and through the support of the centre's technical team to ensure optimal and efficient use of the resources, alongside ethical standards when developing and deploying AI systems.

However, developing such a Resource Centre may be challenging due to current international restrictions on hardware procurement (specifically regarding GPUs).

Timeline: 2025
Priority: High
Potential partners: Industry associations, academia, NGOs that work in digital-related areas, and international organisations.

## 5.3. Develop AI-focused Sectoral Policies

There are areas of opportunity to create dedicated policies in which AI can benefit and pose specific risks (see Recommendation: *Elaborate and deploy sectoral guidelines for the ethical use of AI*). In particular, Cambodia should create or update existing policies to address AI in culture, health, education, and the environment.

- Culture: This policy can focus on the preservation, enrichment, promotion, management, and accessibility of tangible, documentary, and intangible cultural heritage, which is particularly rich in Cambodia. Moreover, it should analyse the risks of cultural homogenisation due to biases in AI systems. The policy actions could include, aside from strengthening the initiatives identified in the assessment, the following initiatives:
    - Building on existing initiatives, encourage AI systems to digitise, analyse, restore, and provide access to historical documents, archaeological sites, and fragile artefacts.
    - Implement guidelines to assess and address the cultural impact of AI applications on the nuances of the Khmer language, local dialects, and cultural expressions. Policies should aim to maximise benefits in bridging cultural gaps while safeguarding linguistic diversity.
    - Promote AI education and digital training for Cambodian artists and creative professionals to enable them to understand and utilise AI tools in their work while preserving cultural heritage and artistic freedom.
    - Establish mechanisms to ensure that algorithmic recommendations in digital platforms enhance the visibility and discoverability of local Cambodian cultural content.
    - Foster research at the intersection of AI and intellectual property (IP) to determine how to protect works created using AI and assess AI's impact on the rights of Cambodian IP owners whose works are used in AI development.
- Health: The existing policies on digital technologies could incorporate AI with a focus on improving human health and social well-being, ensuring safety, effectiveness, efficiency, and ethical use of AI in healthcare, while protecting patient data and ensuring human oversight. Some specific actions could include:
    - Establish clear guidelines for the development, validation, and deployment of AI-powered diagnostic tools, treatment recommendations, and other healthcare applications, ensuring they are scientifically and medically proven.
    - Implement policies to minimise and mitigate biases in healthcare AI systems and data, especially considering data from outside the country.
    - Ensure robust cybersecurity systems and regulations to protect the sensitive personal health data used by AI systems in both the public and private sectors.
    - Define the role of human oversight in AI-driven healthcare decisions and establish clear pathways for patient refusal and human intervention.
    - Promote research into the long-term psychological and cognitive impacts of interactions with AI systems in healthcare, especially for vulnerable populations.
- Education: Cambodia is fostering the use of AI in education through different initiatives, both targeting students and teachers. These efforts could be organised into a specific sectoral policy on the use of AI in education that both fosters its use and also anticipates and mitigates potential negative impacts. In doing so, the UNESCO AI Competency Framework for Teachers and for Students should guide and inform the policy. Some specific actions could include:
    - AI concepts should be integrated into the education system from an early age, with Digital and AI literacy considered a core component of education. However, the update should not focus on specific programming languages or AI systems but on developing foundational skills and abilities. In this regard, Cambodia should revise its educational curriculum to emphasise computational and critical

thinking, which are more relevant than particular coding skills, as they enable individuals to undergo reskilling and upskilling processes in the future.
    - Expand the UNESCO–MoEYS programme that began in 2024 into a certified micro-credential or course.
    - Based on the experience of the existing programs, generate a "train-the-trainer" cascade initiative in which master-trainers cover different regions of the country.
    - Collaborate with the National AI Resource Centre to generate an AI learning lab.
    - Consider creating an EdTech AI sandbox.
    - Generate a child-safe AI procurement standard requiring AI developers and suppliers to show age-appropriate design and data minimisation.
- Environment: A policy in this area could focus on assessing and mitigating the direct and indirect environmental impact of AI systems, including carbon footprint and energy consumption, and promoting the development and adoption of rights-based and ethical AI-powered solutions for environmental protection and sustainability. Some specific actions could include:
    - Introduce incentives to encourage the development and deployment of AI systems for disaster risk resilience, environmental monitoring, protection, and regeneration, aligning with Cambodia's sustainable development goals.
    - Prioritise and support research on developing data, energy, and resource-efficient AI methods.
    - Ensure that the development and deployment of AI systems consider their impact on land and water use, and that environmental impact assessments are conducted where necessary.
    - Promote the use of AI to support circular economy approaches and sustainable consumption and production patterns.

Encourage the participation of local and indigenous communities in the development and deployment of AI systems for environmental purposes

Timeline: 2026-2028
Priority: Medium
Potential partners: Industry associations, academia, NGOs that work in digital-related areas, and international organisations.

## LIST OF RECOMMENDATIONS

The following table summarises the recommendations and provides a proposed timeline for design and implementation. Although all the recommendations are important, the table suggests a priority relative to them

| DIMENSION | NO. | RECOMMENDATION | TIMELINE | PRIORITY |
|---|---|---|---|---|
| Institutional Framework for AI Governance | 1.1 | Finalise and deploy the National AI Strategy | 202-2026 | High |
| | 1.2 | Establish Multistakeholder Governance | 2025-2026 | High |
| | 1.3 | Strengthen International Cooperation and Standards Adoption | 2025-2028 | Medium |
| Laws and Regulations | 2.1 | Adapt Regulations to Integrate Ethics of AI | 2025-2026 | High |
| | 2.2 | Implement AI Regulatory Sandboxes | 2026-2027 | Medium |
| Responsible AI, Inclusion and Well-being | 3.1 | Elaborate and Deploy Sectoral Guidelines for an Ethical Use of AI | 2026-2027 | Medium |
| | 3.2 | Conduct Public Awareness Campaigns | 2025-2028 | Low |
| | 3.3 | Protect and Prepare Children for an AI-Powered World | 2026-2027 | Medium |
| | 3.4 | Advance Gender Equality in the AI Ecosystem | 2026-2027 | Medium |
| Infrastructure, Data, and Capacity Building | 4.1 | Expand Connectivity Infrastructure | 2025-2027 | Medium |
| | 4.2 | Enhance data collection and data sharing Ecosystem and Policies | 2025-2026 | High |
| | 4.3 | Create and Foster AI Basic Literacy | 2025-2028 | Medium |
| | 4.4 | Progressive Approach to Strengthen AI Skills | 2025-2028 | High |
| Inclusion and well-being | 5.1 | Foster and Increase Investment and Expenditure in Research and Development | 2026-2028 | High |
| | 5.2 | Create an AI Resource Centre | 2026-2027 | High |
| | 5.3 | Develop AI-focused Sectoral Policies | 2026-2028 | Medium |

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