First Legally Binding International AI Treaty

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Why in News?

According to the **Council of Europe**, the first legally binding **international treaty on Artificial Intelligence (AI)** will be open for signing by the participating nations, including **European Union** members, the United States, and the United Kingdom.
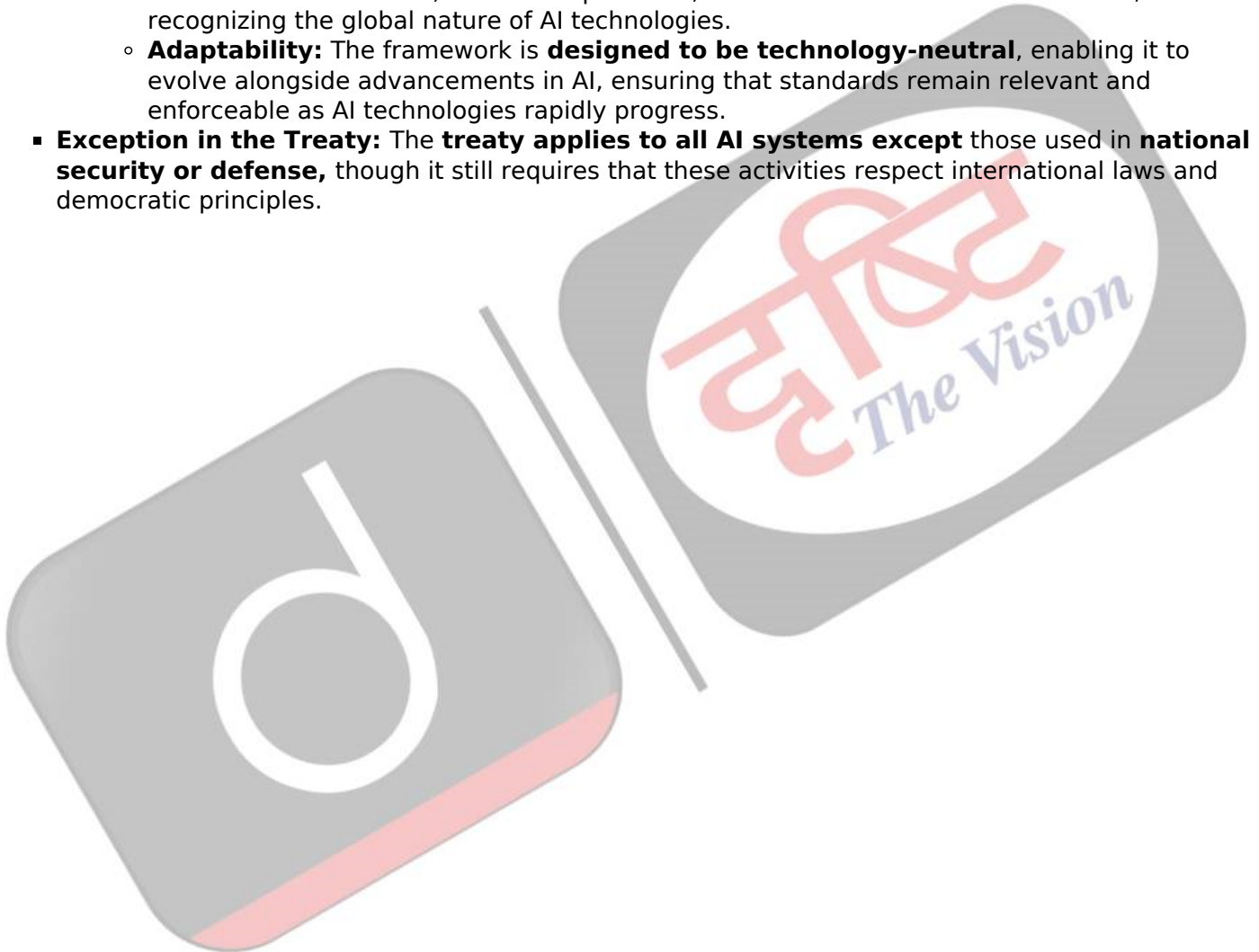
Council of Europe (COE)

- The Council of Europe (COE) is an international organisation **founded in 1949** and **headquartered in Strasbourg, France.**
- It is distinct from the European Union (EU) and consists of **46 member states,** including most European countries.
- The COE's primary mission is to **uphold and promote democracy, human rights,** and the **rule of law** across its member states.

What are the Key Facts about the AI Convention?

- **About:**
  - **"The Framework Convention on Artificial Intelligence and Human Rights, Democracy, and the Rule of Law",** primarily emphasises the protection of human rights for individuals impacted by AI systems and operates independently of **the EU AI Act.**
    - The EU AI Act establishes comprehensive regulations **governing the development, deployment, and use of AI** systems within the EU's internal market.
  - The AI Convention has been **under development for several years** and was **adopted in May 2024** following deliberations among 57 countries.
  - It aims to **mitigate the risks associated with artificial intelligence** while fostering responsible innovation.
- **The Conditions for the Treaty:**
  - **Human-Centric AI:** The treaty mandates that **AI systems** must be designed and operated **in alignment with human rights principles**, ensuring they support and uphold democratic values.
  - **Transparency and Accountability:** The treaty stipulates that AI systems, particularly those interacting with humans, must **operate transparently.**

- It also **requires governments to provide legal recourse when AI systems** infringe on human rights.
    - **Risk Management and Oversight:** The treaty establishes frameworks for assessing and managing the risks associated with AI, along with oversight mechanisms to **ensure adherence to safety and ethical standards.**
    - **Protection Against Misuse:** The treaty incorporates safeguards to **prevent AI from being used to undermine democratic processes**, including the preservation of judicial independence and ensuring public access to justice.
- **Key Enforcement Mechanisms:**
    - **Legal Accountability:** Signatory nations are required to **enact legislative and administrative measures** to ensure AI systems adhere to the treaty's principles like human rights and accountability in AI deployment.
    - **Monitoring and Oversight:** The treaty establishes **oversight mechanisms to monitor compliance** with AI standards.
    - **International Cooperation:** The treaty promotes **collaboration among signatories** to harmonise AI standards, share best practices, and address transnational AI issues, recognizing the global nature of AI technologies.
    - **Adaptability:** The framework is **designed to be technology-neutral**, enabling it to evolve alongside advancements in AI, ensuring that standards remain relevant and enforceable as AI technologies rapidly progress.
- **Exception in the Treaty:** The **treaty applies to all AI systems except** those used in **national security or defense,** though it still requires that these activities respect international laws and democratic principles.
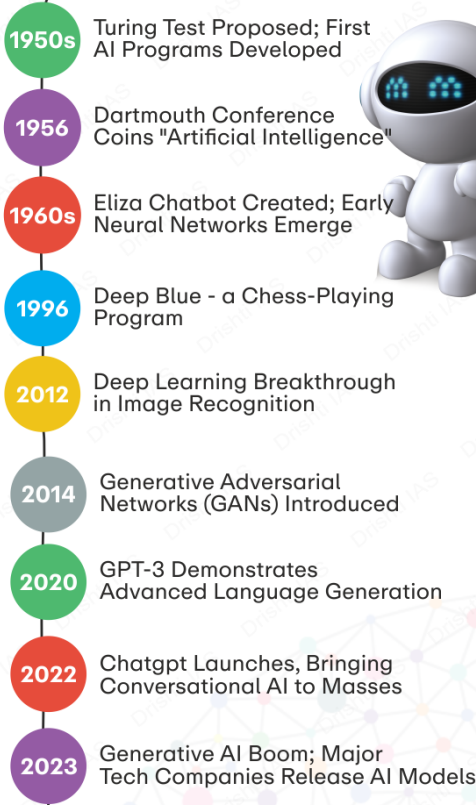
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Artificial intelligence(AI)

AI is the simulation of human intelligence in machines programmed to think and learn like humans, capable of problem-solving, reasoning, and adapting to new information.

AI Timeline - Major Milestones

- **1950s** Turing Test Proposed; First AI Programs Developed
- **1956** Dartmouth Conference Coins "Artificial Intelligence"
- **1960s** Eliza Chatbot Created; Early Neural Networks Emerge
- **1996** Deep Blue - a Chess-Playing Program
- **2012** Deep Learning Breakthrough in Image Recognition
- **2014** Generative Adversarial Networks (GANs) Introduced
- **2020** GPT-3 Demonstrates Advanced Language Generation
- **2022** Chatgpt Launches, Bringing Conversational AI to Masses
- **2023** Generative AI Boom; Major Tech Companies Release AI Models

Applications of AI

- **Healthcare:** Personalised medicine
- **Finance:** Algorithmic trading
- **Transportation:** Autonomous vehicles
- **Marketing & Customer Service:** Targeted advertising, chatbots
- **Education:** Adaptive learning systems, personalised tutoring
- **Agriculture:** Crop monitoring
- **Cybersecurity:** Threat detection
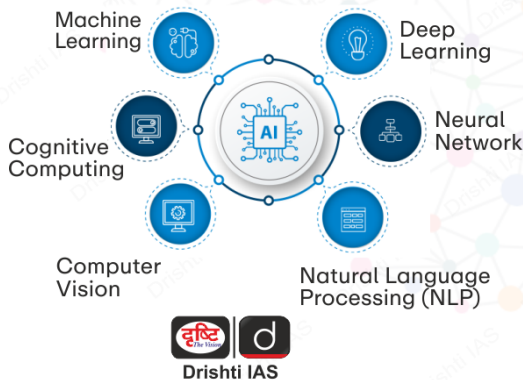- **Energy:** Smart grid management, consumption forecasting

Concerns

- Deepfakes & misinformation
- Algorithmic bias
- Automation & job displacement
- Privacy issues
- Data ownership & liability issue
- Ethical decision-making complexes

Regulating AI

- **Global Partnership on AI (GPAI)** launched in 2020
- **Bletchley Declaration (2023):** Enhance Global Collaboration on AI
- **G20 New Delhi Leaders' Declaration (2023):** Harnessing AI responsibly for good and for all
- **Hiroshima AI Process (2023)** by G7

India and AI

- **National Strategy For AI 2018**
- **AI For All:** Self-learning online program
- **GPAI Summit 2023** hosted by India
- **IndiaAI Mission 2024**
- **US India Artificial Intelligence (USIAI) Initiative:** AI cooperation in critical areas
- **AIRAWAT** (AI Research, Analytics and Knowledge Assimilation Platform): Supercomputer

KEY COMPONENTS OF AI

- Machine Learning
- Deep Learning
- Cognitive Computing
- Neural Network
- Computer Vision
- Natural Language Processing (NLP)

Drishti IAS

What is the Significance of the AI Convention?

- **Comprehensive Drafting:** The treaty was **meticulously drafted adopting a risk-based approach** to the design, development, use, and decommissioning of AI systems.
- **Broad Applicability:** It **applies to AI systems across** both the **public sector, and the private sector,** with enforcement across various geographical regions.
- **Global Legal Standard:** The Framework Convention on Artificial Intelligence represents a **first-of-its-kind, globally binding treaty designed to** respond to the need for an international legal standard endorsed by states across different continents with shared values.
- **Balancing Innovation and Risk:** The treaty aims to **promote the responsible use of AI** by harnessing its benefits while effectively mitigating associated risks, ensuring that AI development aligns with human rights, the rule of law, and democratic principles.

What are the Issues and Concerns of the AI Convention?

- **Concerns Over Enforcement:** Despite being labelled as **"legally binding,"** the treaty has raised concerns due to its **lack of provisions for punitive sanctions, such as penalties or fines**, which weakens its deterrent effect from an enforcement perspective.
- **Reliance on Monitoring:** Compliance with the treaty is primarily ensured through **"monitoring" mechanisms,** which **may not be sufficient to effectively enforce the treaty's provisions.**
- **Balancing Regulation and Innovation:** Striking the right balance between stringent regulations and fostering innovation is a critical concern. **Excessive regulatory burdens may stifle the development of AI technologies**, particularly for small and medium-sized enterprises (SMEs) and start-ups, thereby affecting competitiveness in the global AI market.
- **National Sovereignty vs. International Standards:** The convention's provisions may conflict with national laws, creating **tensions between state sovereignty.**
- **Addressing National Security Concerns:** While the convention attempts to balance AI governance with national security interests, the **intersection of AI with defense and intelligence activities presents challenges**. Ensuring that national security is not compromised while maintaining ethical AI practices requires a delicate balancing act, which the convention may struggle to achieve.

Conclusion

"The Framework Convention on Artificial Intelligence and Human Rights, Democracy, and the Rule of Law" marks a **pivotal advancement in the global governance of artificial intelligence**. By engaging with the critical interplay between AI, human rights, democracy, and the rule of law, **it addresses a vital deficiency in current regulatory structures**. Its comprehensive scope, including provisions for national security considerations, establishes a benchmark for responsible AI governance, fostering **international cooperation and setting standards** that could resonate both regionally and globally.

> ***Drishti Mains Question:***
>
> Q. Discuss the key issues and concerns associated with Europe's AI Convention in the context of global artificial intelligence governance.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With the present state of development, Artificial Intelligence can effectively do which of the following? (2020)

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

(a) 1, 2, 3 and 5 only

(b) 1, 3 and 4 only

(c) 2, 4 and 5 only

(d) 1, 2, 3, 4 and 5

Ans: (b)

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