

Global coal demand likely to decline 2.3% by 2026, agency predicts

Jacob Koshy
NEW DELHI

Despite production of coal reaching a record this year, global demand is expected to decline by 2026, a report by the International Energy Agency (IEA) says. While the decline is expected to be due to a shift towards renewable energy and plateauing demand in China, India will remain the "driving force" for the fuel until that year.

The report, released on December 15, sees the global demand for coal rising

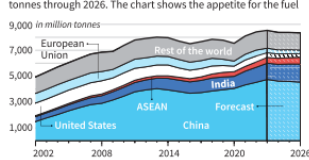
by 1.4% in 2023, surpassing 8.5 billion tonnes for the first time.

This increase, however, masks stark differences among regions. While demand in the European Union and United States is expected to drop by 20% each, it is expected to rise by 8% in India and 5% in China in 2023 due to demand for electricity and diminished generation of hydroelectric power.

The IEA's expectations of a decline in coal demand is premised also on a change in global climate.

Coal consumption

Global coal consumption is expected to remain over 8 billion tonnes through 2026. The chart shows the appetite for the fuel



The current El Nino conditions are expected to turn to La Nina, which is gener-

ally linked to better rainfall, during 2024 to 2026. This will presumably tran-

slate to greater hydroelectric power output.

Steep trend

Moreover, a steep upward trend in low-cost solar photovoltaic deployment is expected to aid renewable power generation. "Further to that, nuclear generation is set to see moderate increases, especially in China, India, and the European Union. Against this background, coal-fired generation is likely to be pushed into a downward trajectory from 2024," the report says.

Currently, a little over half the world's coal demand comes from China. With a major expansion of renewable energy expected, coal demand in the country is expected to fall in 2024 and plateau in 2026. Overall, this will result in a 2.3% fall in global coal demand by 2026. Despite forecasts of a fall, global consumption is expected to remain well over 8 billion tonnes through 2026, the report says.

"We have seen declines in global coal demand a few times, but they were

brief and caused by extraordinary events such as the collapse of the Soviet Union or the COVID-19 crisis. This time appears different, as the decline is more structural, driven by the formidable and sustained expansion of clean energy technologies," Keisuke Sadamori, IEA Director of Energy Markets and Security, said in a statement.

Reducing use of 'unabated' coal is among the explicit agreements of countries signatory to the UN Framework Convention on Climate Change.

'100 elephants electrocuted in 2022-23; Odisha leads tally, followed by Karnataka'

Dhinesh Kallungal
THIRUVANANTHAPURAM

Though there has been a steady rise in human-wildlife conflict in Kerala, the majority of elephant deaths is attributed to electrocution, rather than accidents involving trains or poaching. In the past five years, as many as 25 elephants have been electrocuted in the State, followed by six elephant deaths after being hit by trains, two cases of poaching and one instance of poisoning.

At the national level, electrocution was one of the major causes of elephant deaths, with 100 elephants dead from electrocution in 2022-23 alone, the highest in the past five years. Odisha led the table with 26 deaths, followed by Karnataka with 15 and Tamil Nadu with 14.

Out of 15 elephant deaths due to train hits recorded last year, seven were in Assam, followed by three in Odisha and two in Kerala.

While the country lost 14 elephants to poaching, there were only four deaths due to poisoning during this period.

In Kerala, an elephant has a higher chance of death due to electrocution than due to train accidents, poaching, and poisoning put together.

The majority of human-induced elephant deaths caused by electrocution could be termed 'retaliatory killing' by residents who



Instead of using legal DC-powered fencing, farmers use illegal power fences with direct AC connection from transmission lines. FILE PHOTO



We cannot prevent elephants from reaching human habitations as long as fragmentation and degradation of forests continue. There should be a long-term approach to protecting the habitations of wild animals

N. BADUSHA
wildlife activist

live close to forest fringe areas, said M.N. Jayachandran, a former member of the Kerala State Animal Welfare Board.

Rules violated

Instead of using legally permitted power-fencing with a battery-powered energiser of the prescribed standards, farmers used to power the illegal power fences with direct AC from

transmission lines.

This is the main reason for the high number of elephant casualties due to electrocution in the State. Since the issue has various dimensions, often the cases registered by the Forest department do not reach anywhere with the intervention of political parties, said N. Badusha, wildlife activist and president, Wayanad Prakruthi Samrakshana Samithi.

"We cannot prevent the elephants from reaching human habitations and farmlands as long as the fragmentation and degradation of forests continue. There should be a long-term holistic approach to protecting the habitations of wild animals, like protecting grasslands and ensuring enough fodder and drinking water inside the forest, which is the key to preventing damage or loss of human life and elephants," said Mr. Badusha.

Bhutan to establish massive 1,000-sq. km green city along Assam border

Subasini Haidar
THIMPHU

Bhutan plans to build a massive "international city" in an area of over 1,000 sq. km on its border with Assam, Bhutanese King Jigme Khesar Namgyel Wangchuck announced to applause from a packed audience of 30,000 at the Changlimithang stadium in Thimphu on Sunday, pitching the project as an "economic corridor connecting South Asia with Southeast Asia via India's northeastern states".

"Around two billion people live in South Asia," King Jigme Wangchuck said, thanking Prime Minister Narendra Modi and the Government of India for agreeing to build the first India-Bhutan railway line to Gelephu, which will also connect with roads and border-trading and crossing points along Assam and West Bengal, and over time, he said, give

Bhutan access to Myanmar, Thailand, Cambodia, and Singapore.

New opportunities

"It is a period of awakening and economic transformation in South Asia, a period of growth and immense opportunities," Bhutan's fifth king said. "There is a road and a gateway that leads to new opportunities... towards our future, towards our destiny." The crowd roared in approval. The King's announcement is the first official confirmation of what is known as the "Gelephu Smartcity Project". It is expected to follow environmental standards and sustainability as a goal, and will aim to attract "quality investment" from "specially screened" international companies, the 42-year-old sovereign said.

Apart from an international airport, which will



Major plans: Bhutan King Jigme Khesar Namgyel Wangchuck during National Day in Thimphu. SPECIAL ARRANGEMENT

be Bhutan's second, and geared to land larger planes than at its present airport at Paro, the plans for Gelephu are expected to include "zero emission" industries, a "mindfulness city" that plays to Bhutan's strength in tourism and wellness, as well as infrastructure companies.

Rather than a special economic zone, the Bhutanese King said that the Gelephu project in Sarang district to Bhutan's south would be a "Special Administrative Region" that would be run under different laws to facilitate more international investment.

"This is an inflection point, a moment in history that is very important for us," the Bhutanese King continued, switching from the local Dzongkha language to English for added emphasis on terms he hopes to popularise about the Gelephu project, including "skilling projects", "digital infrastructure", and "economic hub".

"What we lack in numbers, we have to make up with the quality of our people in skills," he added.

In two separate visits to India just this year, he met and discussed the project with Mr. Modi and Assam Chief Minister Himanta Biswa Sarma. King Jigme Wangchuck also engaged Indian industrialists, including Mukesh Ambani and Gautam Adani, and owners and top executives of the Tata, Birla, and Mahindra groups, amongst other infrastructure, real estate, and hospital developers.

"During my recent visit to India, the Government of India expressed their full commitment to improve and expand the major roads leading to Bhutan. They also pledged to connect two or three of our border towns with railway lines. I would like to express our heartfelt gratitude to Prime Minister Narendra Modi and the Government of India for their continued goodwill and support."

The King's decision to announce details of the Gelephu project created a sense of anticipation amongst ordinary Bhutanese citizens as well, and the local *Kuensel* newspaper billed the "green city" plan as a "new dawn for Drukgyul", the Dzongkha name ("land of the thunder dragon") for Bhutan, and said that Bhutan could aspire to the success of countries such as "Singapore, South Korea, and the UAE", which had transformed from "Third World to First World" status within a generation.

Hoping for the better

The Bhutanese King's speech came just four days after the United Nations announced Bhutan was no longer a Least Developed Country (LDC), and was leaving the LDCs, even though economic troubles

have been mounting.

The COVID-19 pandemic, indebtedness on hydro-power projects, and drastic cuts in tourism revenues have caused an economic downturn and unemployment figures reaching 20%, which have spurred a large number of Bhutanese youth and professionals to migrate to other countries in search of opportunities.

Chokey Dorji, 20, was among the hundreds that queued up overnight to enter the stadium. He told *The Hindu* that he wanted to hear about the Gelephu project as he hopes it would create more jobs for his generation.

Ahead of King Wangchuck's speech of over 45 minutes, the palace made special preparations to promote the announcement without revealing too many details, and invited guests from India and several other countries.

From India, Madhya

Pradesh hotelier and cultural activist Priyadarshini Raju Scindia; designers Manav Gangwani and Nandita Mahtani; the head of Medanta Hospital, Naresh Trehan; and author Deepak Chopra, were among the special guests present at the ceremony here, which *The Hindu* was invited to cover.

In the evening, the King attended a rock concert at the stadium that saw artists from Bhutan and other countries.

Over the past two years, the King has been travelling to all 20 districts of Bhutan, trying to speak about the Gelephu project.

Officials said he also travelled to several international destinations to seek both partners, planners, and architects for the project, and prospective investors, but has carried out the most intensive diplomacy with India, which surrounds Bhutan on three sides.

Parliament security breach is a serious issue, says PM

Probe agencies are investigating the security scare and taking stringent measures, Modi says noting that it is equally necessary to go to the root of the people behind it and their motives

Press Trust of India
NEW DELHI

Physics Minister Narendra Modi has said that the seriousness of the security breach in Parliament cannot be underestimated, and called on all parties to avoid squabbling over the issue amid Opposition's protests over it in Parliament.

In an interview to the Hindi daily *Dainik Jagran*, Mr. Modi said probe agencies were investigating the breach and taking stringent measures, noting that it was equally necessary to go to the root of people behind it and their motives.

The newspaper said he described the breach as "painful and a matter of concern". "Efforts should also be made to look for a solution with collective spirit. Everyone should avoid squabbling over such an issue," Mr. Modi said. "The gravity of the incident which happened in Parliament should not be underestimated," he said, adding that the Speaker has also been taking necessary steps with all seriousness.

Two persons jumped



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NARENDRA MODI
Prime Minister

from the visitors' gallery to the Lok Sabha chamber on December 13. Opposition parties have been demanding a statement from Home Minister Amit Shah. Some members have also sought Mr. Shah's resignation.

The government has insisted that the security in Parliament complex is the responsibility of the Lok Sabha Secretariat and it has been following the Speaker's directives. It has also cited numerous such violations in the past, accusing the Opposition of politicising the issue.

New faces in BJP

To a question about the BJP picking relatively new and little-known leaders as Chief Ministers in Madhya Pradesh, Chhattisgarh, and

Rajasthan, Mr. Modi said the leaders had lots of experience and hard work behind them. Taking a jibe at those questioning the BJP's choices, he said it had been the country's misfortune that a big section of people who influenced society were bound to a trite and narrow mindset.

"This is not confined to the political field. This nature troubles us in every field. If in any field, some name becomes big with some branding, then others do not get attention irrespective of their talent and hard work. Similarly in politics," he said.

The media's focus for some decades has unfortunately been the most on a few and due to this, talent and usefulness of new people

are not being discussed, the Prime Minister added. "That is why you often see some people as new. But the truth is that they are not new. They have done the hard work and have their own experience."

The BJP leadership has picked Vishnu Deo Sai, Mohan Yadav and Bhajan Lal Sharma as Chief Ministers of Chhattisgarh, Madhya Pradesh and Rajasthan respectively, looking over the claims of former CMs Ram Singh, Shivraj Singh Chouhan and Vasundhara Raje.

On Article 370

On the Supreme Court verdict on Article 370, Mr. Modi said the top court has put its stamp on the abrogation of Article 370, and added that "no power in the universe can bring it back".

Citing the BJP's stupendous show in the recent Assembly polls, he said it has shown that the party is set to score a historic win again in the 2024 Lok Sabha elections. He said Opposition parties should introspect as to why people do not accept their claims.

Indigenously built Unit-4 at Kakrapar attains criticality

The 700-MWe units of the project are the largest nuclear power reactors to be built by NPCIL; criticality was ascertained after it met the conditions set out by Atomic Energy Regulatory Board

T.S. Subramanian

The fourth unit of the Kakrapar Atomic Power Project (KAPP) in Gujarat started controlled fission chain reaction and thus became critical at 1.17 a.m. on Sunday. Kakrapar is about 80 km from Surat.

The project's units with a capacity of 700 MWe each are the largest indigenous nuclear power reactors to be built by Nuclear Power Corporation of India Ltd. (NPCIL), a public sector undertaking of the Department of Atomic Energy.

Unit-3 of the KAPP started generating commercial electricity from August 30. These reactors are pressurised heavy water reactors (PHWRs), which use natural uranium as fuel and heavy water as coolant and moderator.

The NPCIL is already operating indigenous PHWRs with 220-MWe and 540-MWe capacity at other facilities. The reactor's first criticality was ascertained after it met all the conditions set out by the Atomic Energy Regulatory Board (AERB), India's nuclear safety watchdog.



Moving forward: The third and fourth nuclear reactors with their containment domes (extreme left) at Kakrapar in Gujarat. Their cooling towers are visible. NPCIL

B.S. Pathak, Chairman and Managing Director of NPCIL, was present in the station's control room with the site team when the KAPP-4 was commissioned, as per an NPCIL press release.

He congratulated the NPCIL employees and called the criticality of the KAPP-4, happening within six months of the commercial operation of unit-3, a significant achievement.

It demonstrated the strength of NPCIL in all facets of nuclear power generation – the design, con-

struction, commissioning, and operation of reactors, Mr. Pathak said.

Indian industries supplied the equipment and executed the contract for these two reactors, according to the NPCIL press release.

The Kakrapar Atomic Power Station already has two operating PHWRs with a capacity of 220 MWe each, called KAPS-1 and -2.

Earlier, on December 13, Mr. Pathak told *The Hindu* that the indigenously built 700-MWe reactors are among "the best reactors

of this PHWR category".

They have many advanced safety features, including among others a steel-lining from the floor to the wall and a passive decay heat removal system to cool the fuel core, he added.

The NPCIL at present operates 23 nuclear electricity reactors with a total capacity of 7,480 MWe. It has nine units, including KAPP-4, under construction while 10 more reactors, with a total capacity of 7,000 MWe, are in the pre-project phase.

A cloudy horizon

Latest trade data underscore the criticality of competitiveness

From a rare upward swing this October, India's goods exports retreated into contraction last month, dipping 2.8% from 2022 levels to touch \$33.9 billion. Imports dropped 4.33% to \$54.5 billion, cooling the merchandise trade deficit to \$20.6 billion, almost a third below October's record high. Sequentially, the decline in imports was sharp, despite the Commerce Ministry lowering October's import bill by \$1.6 billion from the initial \$65 billion estimate. On the other hand, though exports contracted in November, they were higher than October's tally, which was the lowest in 12 months, yet denoted a year-on-year uptick unlike in November. Such statistical noise may be hard to listen through, but it is clear that exports have recorded their weakest values in a year, over the last two months. Similarly, the significant dip in imports in November can be attributed to factors like a decline in discretionary demand for high-value goods such as gems and jewellery and the global dip in prices of key items like petroleum products. Economists expect the deficit to stay range-bound between \$20 billion and 25 billion through the remaining four months of the year. But it is difficult to be certain – one may recall that imports had hit an 11-month high of \$60.1 billion in August before easing over 10% in September and resurging in October.

Making sense of such divergences, with a yo-yo effect of sorts every other month, is hazardous, and is exacerbated by significant data corrections that have returned after a few months of relative certainty. August's goods trade deficit was moderated by nearly three billion dollars, with the overall export-import tally seeing revisions of \$5 billion. The magnitude of upward revision in the monthly merchandise trade deficit has averaged around \$1.5 billion since July compared to an average of \$0.5 billion in the first quarter of 2023-24, a QuantEco research note has flagged. At the risk of repeating the obvious, the government must get a better grip on the data it bases its decisions on. Officials hope for an uptick in exports in the final quarter of the year, citing similar trends in recent years. With the World Trade Organization expecting global trade flows to strengthen in 2024 and the US Federal Reserve signalling interest rate cuts that other central banks would take a cue from, global demand may perhaps look up more consistently. But to capture that, India needs to do more to compete with rivals. For instance, a rough government-commissioned study on logistics costs indicates they dropped a little over the past decade. Ongoing infrastructure spends may gradually lower them further, but reducing petroleum prices for users, in tandem with global trends, would boost competitiveness far more effectively.

An oil spill in an ignored wetland

Northern Chennai is subjected to deeply unfair environmental standards

STATE OF PLAY

Geetha Srimathi
geetha.srimathi@thehindu.co.in

On December 3-4, Cyclone Michaung, which lingered 100 km off the coast of Chennai for about 16 hours, brought heavy rainfall to the city. It forced the Tamil Nadu government to not only deal with the problem of heavy flooding, but also turn its attention to the wetlands of the heavily industrialised Ennore-Manali region in the northern part of the city where oil had spilled over from the premises of a public sector refinery.

Even as oil from the Chennai Petroleum Corporation Limited (CPCL) refinery flooded houses and entered the Buckingham Canal and the Kosasthalaiyar river, which empties into the Bay of Bengal, at Ennore, the Tamil Nadu Pollution Control Board underplayed the extent of the ecological disaster. Since the spill occurred in inland waters, the Indian Coast Guard could confirm that the oil had entered the sea only through an aerial assessment.

The State government began to act only eight days after the spillage and after it was nudged by the National Green Tribunal (NGT). The government's 20-member oil spill crisis management committee, headed by the Chief Secretary, inspected the mouth of the river, or Ennore Creek, and directed the CPCL to compensate for the damages caused to the environment and the fisher folk, and ramp up remediation.

The initial work was not only delayed but also haphazard. Without an approved standard operating procedure in place and for reasons that are



unclear, the Tamil Nadu State Disaster Management Authority and district authorities, who, as per the draft 'Tamil Nadu State Oil Disaster Contingency Plan', are the nodal agency and the on-scene commander, respectively, took a back seat.

The Department of Environment, Climate Change and Forests set up a coordination centre at Ennore. Along with the CPCL, the Department deployed one oil skimmer and 200 fishermen with their boats from the hamlets of Ennore to remove the oil. As of December 16, 300 additional workers from four sea-cleaning agencies were brought in along with a fleet of machinery comprising five gully suckers, four skimmers, poiclains and tipplers. Over 50 tonnes of oil-laden sludge have been removed from Kosasthalaiyar so far.

The Department has said that remediation is expected to be completed by December 19. However, it would be unwise to rush the clean up as, in addition to the 11-kilometre stretch from the CPCL plant to Ennore Creek, oil has spread further south till the Kasimedu harbour and up north to the Pulicat backwaters, a fishing ground and also a biodiversity hotspot for thousands of migratory birds.

State government officials and the CPCL said that the incident was "unprecedented" and that they were "caught

unawares". However, in 2017, two cargo ships carrying oil collided near Kamaraj Port in Ennore, significantly affecting the fisherfolk and their livelihoods. Besides, there are 17 highly polluting industries in Manali of which nine are petrochemical, and the residents of the region have been flagging pollution concerns for years.

The Ennore backwaters, where the British once held the Madras Boat Club's annual regatta, is now an ignored wetland. Fly ash from the leaky pipelines of the Tamil Nadu Generation and Distribution Corporation (TANGEDCO), and hot water, used as coolant, from the State-owned thermal power plants have together affected the biodiversity of the region.

In 2017, the NGT ordered TANGEDCO to fix the pipes and remove fly ash from the Ennore Creek. Six years on, no substantial work has been done in this regard. The wetland is still choked with ash, a fine particulate by-product of coal combustion that is known to be carcinogenic.

In 2022, the NGT directed the State to notify under the Tamil Nadu Wetland Mission the full extent of the portion of the Ennore wetlands that have not been encroached on, to protect them from further abuse. It also directed the Environment Department to study the wetlands as per the 1996 Coastal Zone Management Plan and develop a plan to restore the fragile creek ecosystem and the wetland complex of Ennore.

The reluctance of the State government to regulate industries in the Ennore-Manali region and restore the Ennore Creek despite court orders reflects how northern Chennai is subjected to deeply unfair environmental standards.

On selecting Election Commissioners

What does The Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Office and Terms of Office) Bill, 2023 passed by the Rajya Sabha say? How is the new mechanism different from the one spelled out by the Supreme Court?

EXPLAINER

Rangarajan R

The story so far:

On December 12, the Rajya Sabha passed The Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Office and Terms of Office) Bill, 2023. It is likely to be enacted into a law after being passed by the Lok Sabha in the current winter session. It provides for the procedure for appointment of the Chief Election Commissioner (CEC) and the other two Election Commissioners (ECs).

What does the Constitution say?

Article 324 provides for the composition of the Election Commission of India (ECI). It consists of the CEC and two other ECs. The Constitution provides that the appointment of the CEC and ECs shall, subject to the provisions of any law made by Parliament, be made by the President. While the existing parliamentary law provides for their conditions of service, it is silent with respect to appointments. The appointments till date are made by the President, that is the Central Government and there is no mechanism for ensuring independence during the appointment process.

What did the Supreme Court rule?

A Public Interest Litigation (PIL) filed by Anoop Baramwal in 2015 pleaded for the Supreme Court to issue directions to set up an independent, collegium-like system for the appointment of the CEC and ECs. The Supreme Court in this case, in March 2023, held that there has been a legislative vacuum due to the absence of any law by Parliament in the last 73 years (since the adoption of the Constitution) with respect to the appointment of the CEC and EC. The independence of the ECI is essential for ensuring free and fair elections that is paramount for a vibrant democracy. The Supreme Court drew



GETTY IMAGES

reference to various other institutions supporting constitutional democracy that have independent mechanisms for the appointment of its head/members like the National and State Human Rights Commission, the Central Bureau of Investigation (CBI), Information Commission, Lokpal etc.

In the past, the Dinesh Goswami Committee on Electoral Reforms (1990) and the Law Commission in its 258th report on Electoral Reforms (2015), had suggested that the CEC and ECs should be appointed by a committee consisting of the Prime Minister, the Chief Justice of India (CJI) and the Leader of the Opposition or the largest Opposition party in the Lok Sabha. Considering these recommendations, the Supreme Court, exercising its powers under Article 142 (to

issue directions for doing 'complete justice' in any matter), laid down that the CEC and ECs shall be appointed by a committee consisting of the Prime Minister, the CJI and the Leader of the Opposition or the largest opposition party in the Lok Sabha. It said that this mechanism shall be in place till Parliament enacts a law on this matter.

What does the proposed law provide?

The CEC and other ECs shall be appointed from persons who are holding or have held a post equivalent to the rank of Secretary to the Government of India. There shall be a search committee headed by the Minister of Law and Justice, who shall prepare a panel of five persons for consideration to the selection committee. The CEC and EC shall be appointed by the

President on the recommendation of this selection committee consisting of the Prime Minister, the Leader of Opposition in the Lok Sabha and a Union Cabinet Minister to be nominated by the Prime Minister. It is for the first time that the Parliament is proposing a structured mechanism for identification of suitable persons for the post of CEC and EC. However, this bill removes the CJI from the selection process that was laid down in the Anoop Baramwal case.

What are the best practices globally?

The international practices for selection and appointment of members to the electoral body varies between different democracies. In South Africa, the President of the Constitutional Court, representatives of the Human rights Court and gender equality are involved. In the U.K., the House of Commons approves the candidates, whereas in the U.S., the appointment is by the President and confirmed by the Senate.

While the proposed Bill moves the appointment process from just an executive decision to a committee-based selection, it is still tilted in favour of an incumbent government. The Supreme Court had considered the recommendations of various committees and also the mechanism for appointment to certain independent bodies like the CJI (where the CJI is involved) before laying down its selection procedure. While it is the prerogative of Parliament to legislate on this subject, it may have been appropriate to retain the CJI in the selection committee to ensure utmost independence. However, in all likelihood the Bill is likely to be enacted into a law in its present form. It would be laudable and instil a great deal of confidence in the public about the functioning of the ECI, if at least the selections under the new law are made by unanimous decisions by the proposed selection committee.

Rangarajan R is a former IAS officer and author of 'Polity Simplified'. He currently trains civil-service aspirants at 'Officers IAS Academy'. Views expressed are personal.

THE GIST

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An overview of the European Union's Artificial Intelligence Act

The objectives of the EU AI Act, the world's first legislation on AI, are to create a regulatory framework for AI technologies, mitigate risks associated with AI systems, and establish clear guidelines for developers, users, and regulators

Sanhita Chauriha

The European Union's Artificial Intelligence (AI) Act is a significant legislative initiative aimed at regulating artificial intelligence technologies within the EU. With the growing influence of AI across various sectors, the EU seeks to strike a balance between fostering innovation and ensuring ethical and responsible AI development. The objectives of the EU AI Act are to create a regulatory framework for AI technologies, mitigate risks associated with AI systems, and establish clear guidelines for developers, users, and regulators. The act aims to ensure the responsible use of AI by protecting fundamental rights and promoting transparency in AI applications.

The strengths of the Act

One of the notable strengths of the EU AI Act is its risk-based approach. The legislation categorises AI applications into different risk levels, ranging from unacceptable to low. This approach enables tailored regulations, with higher-risk applications subject to more stringent requirements. This flexibility acknowledges AI technologies' diverse potential impact on society. It also explicitly prohibits certain AI practices deemed unacceptable, such as social credit scoring systems for government purposes, predictive policing applications, and AI systems that manipulate individuals such as emotional recognition systems at work or in education. This prohibition reflects the

EU's commitment to preventing the misuse of AI technologies.

The EU AI Act emphasises transparency and accountability in AI development and deployment. It requires developers to provide clear information about the capabilities and limitations of AI systems, enabling users to make informed decisions. Additionally, the legislation mandates that developers maintain comprehensive documentation to facilitate regulatory oversight. Moreover, to ensure compliance with the regulations, the EU AI Act introduces the concept of independent conformity assessment. Higher-risk AI applications like medical devices, biometric identification, and access to justice and services, must undergo assessment processes conducted by third-party entities. This approach enhances objectivity and reduces the risk of conflicts of interest, contributing to the credibility of the regulatory framework.

The limitations

One of the criticisms of the EU AI Act is the challenge in accurately defining and categorising AI applications. The evolving nature of AI technologies may make it difficult to establish clear boundaries between different risk levels, potentially leading to uncertainties in regulatory implementation.

Critics have also argued that the stringent regulations in the EU may hinder the competitiveness of European businesses in the global AI market. While the Act aims to ensure ethical AI practices, some fear that overly restrictive

measures could stifle innovation and drive AI development outside the EU. Additionally, compliance with the EU AI Act may impose a significant burden on smaller businesses and start-ups. The resources required for conformity assessments and documentation may disproportionately affect smaller players in the AI industry, potentially limiting their ability to compete with larger, more established counterparts. Striking the right balance between regulation and fostering innovation is crucial, with critics arguing that the EU AI Act may lean too heavily towards stringent controls.

The potential implications

The EU AI Act is likely to have a global impact, influencing the development and deployment of AI technologies beyond the EU's borders. As a major economic bloc, the EU's regulatory framework may set a precedent for other regions, shaping the trajectory of AI development on a global scale, just like the MiCa regulation did for crypto-assets.

By prioritising ethical considerations and fundamental rights, the EU AI Act contributes to the establishment of global norms for AI development. And the impact on innovation and competitiveness will depend on the balance struck by the EU between regulation and fostering a conducive environment for AI development.

It encourages collaboration and cooperation between regulatory authorities, fostering a unified approach to AI regulation. International collaboration in regulating AI

technologies is essential to address global challenges and ensure consistent standards across borders.

The administrative side

Any individual has the right to report instances of non-compliance. The EU member states' market surveillance authorities will be responsible for enforcing the AI Act. There will be specific limits on fines applicable to small and medium-sized enterprises (SMEs) and start-ups. The EU will establish a centralised 'AI office' and 'AI Board.' In case businesses do not adhere to the EU AI Act, fines could range from \$8 million to almost \$38 million, depending on the nature of the violation and the company's size. For instance, fines may amount to up to 1.5% of the global annual turnover or €7.5 million for providing incorrect information, up to 3% of the global annual turnover or €15 million for general violations, and up to 7% of the global annual turnover or €35 million for prohibited AI violations.

The EU's AI Act represents a significant step towards regulating AI technologies responsibly and ethically. While it addresses key concerns associated with AI, such as transparency, accountability, and risk mitigation, there are challenges and potential drawbacks that need careful consideration. The global impact of the EU AI Act and its potential to shape international norms make it a landmark initiative in the ongoing discourse on the responsible development and deployment of artificial intelligence.

Sanhita is a Technology Lawyer.