



VAJIRAM & RAVI
Institute for IAS Examination

The Analyst

CURRENT AFFAIRS Handout

28th January 2025



Lateral Entry: A Catalyst for Change?



CONTEXT: Politics & Legal processes have stalled Government Lateral Entry Scheme. This hinders a possible transformation of Governance.

What is Lateral Entry?

- **Private Sector Professionals, Academics and Domain Experts** – Middle and Senior management positions – Civil Services
- This **bypasses traditional entry mechanisms** – UPSC CSE
- Typically done at the **Joint Secretary, Director and Deputy Secretary** levels

Need for Lateral Entry in India

- **Addressing Specialized Requirements:** complexity of governance – domain-specific expertise – AI, Digital Tech., RE, etc. – Professionals – Skill Set
- **Filling Vacancies in Civil Services: shortage of IAS officers** – efficient way – fill gaps
- **Enhancing Policy-Making:** private-sector challenges & solutions – fresh ideas, innovative approaches
- **Learning from Global Best Practices:** US, UK, and Singapore – efficiency and agility in governance – US-SES – UK's Fast Stream Program
- **Strengthening Public-Private Collaboration:** act as bridges – fostering synergy
- **Promoting Competition and Accountability:** encourages healthy competition – enhance performance

Importance of Lateral Entry

- **Modernizing Governance:** introduce – efficiency-driven practices
- **Leveraging Professional Expertise:** economics, law, data science, etc. – evidence-based policymaking
- **Catalyzing Administrative Reforms:** NITI Aayog's vision of 'Transforming India' by infusing meritocracy
- **Bridging Talent Gap:** ministries – dearth of experienced personnel – 9 JS – 2019
- **Strengthening Public Services Delivery:** healthcare management or digital governance

Challenges to Lateral Entry

- **Lack of Institutionalized Mechanisms:** ad-hoc basis – without a clear framework – affects credibility and acceptance
- **Resistance from Bureaucracy:** "as outsiders" – creates friction within departments

- **Political Influence and Patronage:** rather than merit-based selections – undermines the credibility
- **Lack of Accountability and Performance Metrics:** not evaluated under the PAR System
- **Limited Field Experience:** lack grassroots exposure – socio-economic challenges
- **Equity Concerns:** primarily – professionals from urban, private, or corporate backgrounds
- **Short Tenures:** contractual nature – not enough to implement long-term reforms
- **Lack of Sectoral Ecosystems:** RUs & policy think tanks within ministries

Way Forward

- **Institutionalizing the Recruitment Process:** independent body – credibility and impartiality – clear eligibility criteria, etc.
- **Training and Orientation Programs:** customized Training – LBSNAA – (Constitution, Socio-Economic challenges, etc.)
- **Performance Monitoring and Accountability:** robust performance appraisal system – annual review – KPIs; independent oversight
- **Ensuring Collaboration with Career Civil Servants:** workshops and TB exercises – Role Definition
- **Expanding the Scope of Lateral Entry:** State, PSEs and regulatory bodies; Technology Integration – AI, Data Analytics
- **Enhancing Equity and Diversity:** rural and underprivileged backgrounds – women and marginalized groups
- **Addressing Public Perception and Political Neutrality:** merit-based – trust among stakeholders

Mains Practice Question

"Critically examine the concept of lateral entry into civil services in India. Discuss its significance in modern governance, the challenges it poses, and suggest measures to ensure its effective implementation."

(15 Marks, 250 words)



Glacial Lake Outburst Floods(GLOFs)

CONTEXT: Fourteen months after a devastating GLOF in Sikkim washed away the Teesta-3 dam, killing at least 100, an expert committee of the Environment Ministry has recommended that the dam be reconstructed.

What are GLOFs?

- Glacial Lakes - often dammed by Moraines or Ice - Unstable
- Disaster Events - Boundary Breaks - **abrupt discharge of water** - GLOF event
- **Triggered By** - CC, Earthquakes, Glacial Calving, breakage of Terminal Moraine
- GLOFs - **unleash large volumes of water**, sediment and debris downstream

Why are GLOFs under the spotlight?

- Himalayas - **ICIMOD** - 8k - 200 dangerous; Rise in GLOFs events - Kedarnath, Chamoli
- CC - *Nature* 2021 - 53% increase - GLs
- South Lhonak Lake in **Sikkim**
- Soaring Global Temperatures & Rapid Infra Development
- *Nature* 2023 - 15 mn - particularly in **Southeastern Tibet** and the **China-Nepal** border area

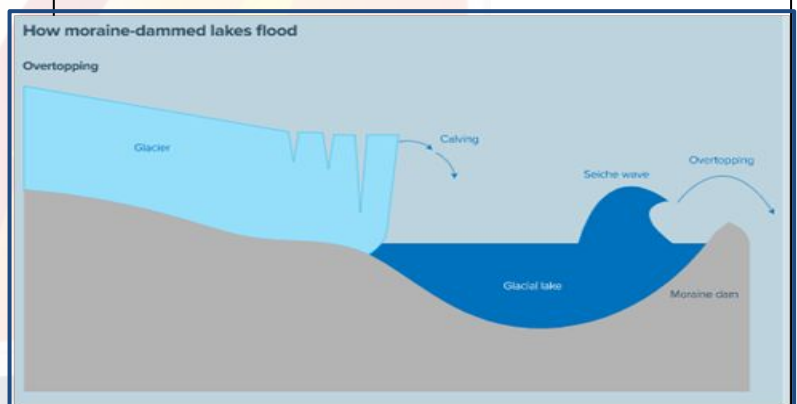
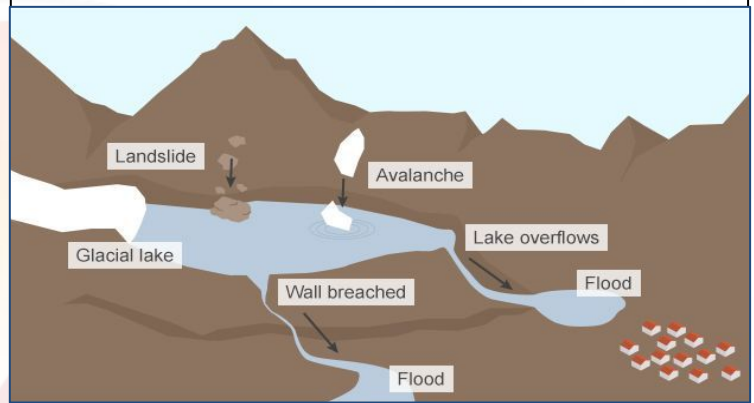
Mitigation Measures Taken:

- National Glacial Lake Outburst Floods Risk Mitigation Programme
- ICIMOD - Hindu-Kush Himalayas
- CWC - Remote Sensing
- State Disaster Management Authority
- NDMA - list of 189 "high-risk" glacial lakes
- Scientific Expeditions

Measures required:

- **Early Warning Systems:** Continuous monitoring; Establishing robust EWSs - Real time - Bhutan
- **Structural Measures:** Dams or Diversion channels; protective barriers or embankments; Strengthening of moraine dam

- **Community Preparedness:** Developing and practicing evacuation plans; Conducting public awareness campaigns
- **Climate Change Mitigation:** Reducing GHGs
- **Cooperation:** Strengthening regional cooperation



Mains Practice Question

"The Himalayan region is prone to devastating Glacial Lake Outburst Floods. Highlight the measures taken to mitigate its effect and the additional efforts required"

(15 Marks, 250 words)

Q1. With reference to the Glacial Lake Outburst Flood (GLOF), consider the following statements:

1. Glacial lakes are typically dammed by stable materials like ice and sediment composed of loose rocks and debris.
2. Seismic activity can disrupt the fragile balance around glacial lakes, leading to their sudden release of water.
3. Intense and prolonged rainfall in the region can contribute to the rapid expansion of glacial lakes, increasing the risk of a GLOF event.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None



SYLLABUS: GS-3: Climate Change & Budget
Newspaper : The Hindu Page No : 8

PRIME MINISTER'S PANCHAMRIT ANNOUNCED IN GLASGOW

Promise	Whether included in new NDC
Non-fossil fuel electricity installed capacity to reach 500 GW	Not included
At least 50 per cent of total installed electricity generation capacity to come from non-fossil fuel sources	Included
Reduction of one billion tonnes of carbon dioxide equivalent from cumulative projected emissions between now and 2030	Not included
At least 45 per cent reduction in emission intensity of GDP by 2030	Included
Net zero status by 2030	Never intended to be part of NDC

There is much work to be done

The Budget must prioritise key policy measures to strengthen India's climate response and accelerate progress on both adaptation and mitigation fronts. First, to accelerate India's green energy transition, the PM Surya Ghar Muft Bijli Yojana needs a comprehensive review. While the scheme has seen around 1.45 crore registrations, the completion rate of only 6.34 lakh installations (4.37%) indicates the presence of significant implementation gaps. To address this, the FY26 Budget must take a multi-pronged approach. In the first instance, fiscal allocations should prioritise the Renewable Energy Service Company (RESCO) model, effectively transforming the prohibitive upfront costs into manageable operating expenses for lower-income households through innovative financial instruments and credit guarantees.

All eyes will be on Union Finance Minister Nirmala Sitharaman when she takes centre stage on February 1 to present the Union Budget. As the nation grapples with increasingly frequent extreme weather events and mounting pressure to meet its climate commitments, the FY26 Budget carries the weight of both urgency and opportunity. With just five years left to achieve India's first interim Net-Zero target, the Budget must take decisive steps to protect those on the frontlines of climate change.

Previous Budgets have demonstrated the government's commitment to climate action, notably through initiatives such as the PM Surya Ghar Muft Bijlee Yojana, support for electric vehicle charging infrastructure, viability gap funding for offshore wind energy, and increased allocations for the National Green Hydrogen Mission. Yet, with a total renewable energy installed capacity of 203.18 GW, far short of the 2030 target of 500 GW, accelerated investment and policy support are imperative.

No upfront investment

Unlike a solar EPC or capex proposition, wherein the consumer owns the system and invests upfront, the RESCO model is a zero-investment model in which the consumer pays only for the electricity generated, while the solar plant is owned by the RESCO developer. You can enjoy the electricity that is generated without worrying about any of the associated operations and maintenance issues. In return, all you need to do is pay a pre-decided monthly tariff which is lower than prevailing grid electricity tariff.

Target (for 2030)	Existing: First NDC (2015)	New: Updated NDC (2022)
Emission intensity reduction	33-35 per cent from 2005 levels	45 per cent from 2005 levels
Share of non-fossil fuels in installed electricity capacity	40 per cent	50 per cent
Carbon sink	Creation of 2.5 to 3 billion tonnes of additional sink through afforestation	Same as earlier



Union Budget & Climate Change



SYLLABUS: GS-3: Climate Change & Budget
Newspaper : The Hindu Page No : 8

PM Surya Ghar Muft Bijli Yojana

- Free electricity for households.
- Reduced electricity costs for the government.
- Increased use of renewable energy.
- Reduced carbon emissions.

In the second instance, the Budget must expand the scope of production-linked incentives (PLI) across the solar module supply chain, addressing the critical supply-demand mismatch, where domestic manufacturing fulfils only 40% of

current requirements. This expansion would boost manufacturing capacity and create economies of scale, potentially reducing costs that are 65% higher for domestically manufactured panels than those imported to the country.

EU mechanism and India

Second, the European Union's Carbon Border Adjustment Mechanism (CBAM), which will take effect on January 1, 2026, necessitates urgent budgetary interventions to protect India's export competitiveness. India's total exports of CBAM products to the EU amount to \$8.22 billion annually and will likely face carbon levies ranging from around 20% to 50%.

This presents an existential challenge for India's Micro, Small and Medium Enterprises (MSME), which have a contribution of 30% of GDP and 45% of exports. The Budget can establish a dedicated 'Climate Action Fund', modelled after successful initiatives such as Japan's Green Transformation (GX) Fund for industrial decarbonisation, particularly across the most vulnerable export sectors. The Fund can also support the capacity-building initiatives for MSMEs to ensure proper compliance and reporting under CBAM.

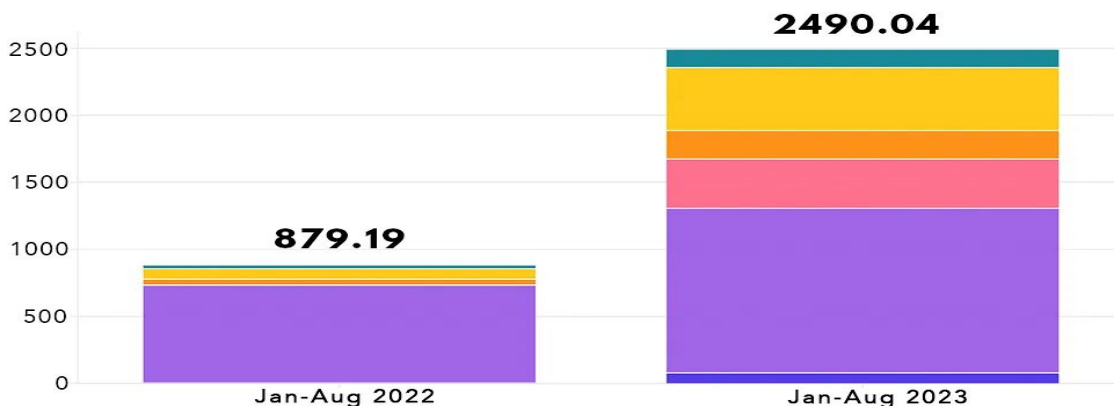
So, while China's share in India's solar imports came down to a still-dominant 49 per cent in the January-August 2023 period from an overwhelming 83 per cent in the same period last year, the gap has been filled by Cambodia, Malaysia, Thailand and Vietnam, the government data analysed showed.

INDIA'S SOLAR CELL IMPORTS

ThePrint

in \$ million

Cambodia China Malaysia Thailand Vietnam Others



Source: Ministry of Commerce & Industry

Note: Solar cells include photovoltaic cells that have been assembled in modules or panels, and cells that have not been assembled



Union Budget & Climate Change



SYLLABUS: GS-3: Climate Change & Budget
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In the third instance, India's vast railway network offers untapped potential for renewable energy generation. Estimates suggest that the Railways' extensive land banks and track corridors could host up to 5 GW of solar and wind installations. The Budget should encourage innovative public-private partnership models to unlock this opportunity.

Third, the Budget must accelerate India's transition to a circular economy. A recent study by the Council on Energy, Environment and Water estimates that the benefit of adopting a circular economy can yield an annual profit of ₹40 lakh crore (\$624 billion) for India by 2050 while reducing greenhouse gas emissions by about 44%. A weighted deduction of 150% on investments in recycling infrastructure and refurbishment technologies, complemented by accelerated depreciation benefits for circular economy assets, can encourage businesses to

invest in recycling and refurbishment technologies. The Budget should establish a sovereign green bond framework specifically for financing circular economy infrastructure.

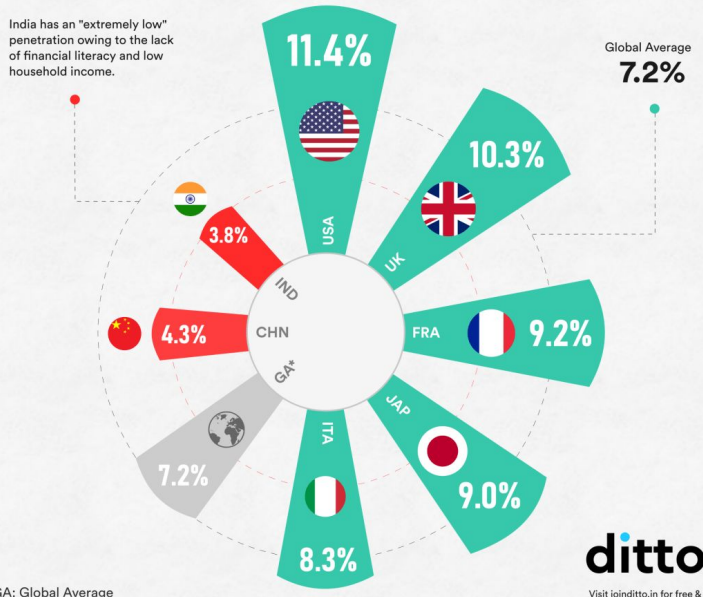


On insurance products, green finance
 Fourth, there is a strong need to strengthen climate resilience. India's insurance penetration remains worryingly low. According to the Insurance Regulatory and Development Authority of India (IRDAI) 2023-24 Annual Report, it has declined from 4% in FY23 to 3.7% FY24. To address this challenge, the Budget could offer tax deductions to insurance companies on income from climate-linked policies and advocate lower Goods and Services Tax (GST) rates on premiums for insurance products specifically designed for climate resilience and disaster protection.

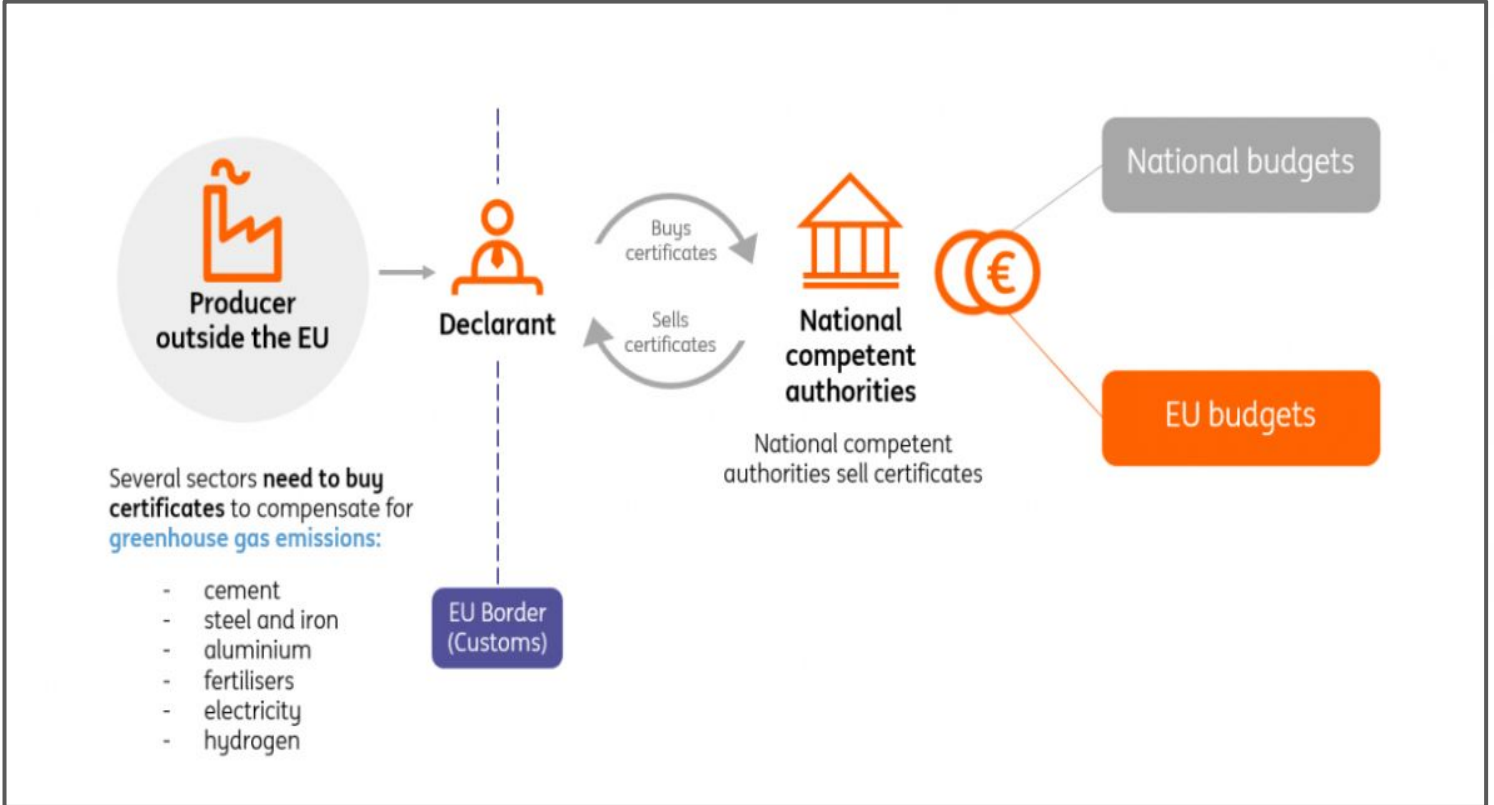
Finally, some estimates indicate that standardising green finance definitions could help build investor confidence and help India get part of the ₹162.5 trillion (\$2.5 trillion) needed to achieve the Nationally Determined Contribution by 2030. The Budget should allocate funds to build the institutional and technical infrastructure required to implement the climate finance taxonomy effectively, including for market readiness programmes, verification systems, and capacity building of financial

Comparing insurance penetration across nations

Insurance penetration in selected countries (ratio of premiums to GDP), FY21



SYLLABUS: GS-3: Climate Change & Budget
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Know the term

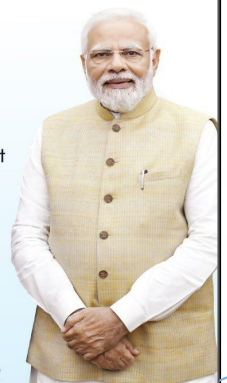
- ▷ **Insurance penetration:** It is measured as the **percentage of insurance premium to Gross Domestic Product (GDP)**.
- ▷ **Insurance density:** It is calculated as the **ratio of premium to population (per capita premium)**.

CABINET DECISION 29TH FEBRUARY, 2024

PM-Surya Ghar Muft Bijli Yojana

Benefits

- ❖ Households will be able to save electricity bills
- ❖ Households can earn additional income through sale of surplus power to DISCOMs
- ❖ Will result in addition of 30 GW of solar capacity through rooftop solar in the residential sector
- ❖ Reduction of 720 million tonnes of CO₂ equivalent emissions over the 25-year lifetime of rooftop systems
- ❖ Scheme will create around 17 lakh direct jobs in manufacturing, logistics, supply chain, sales, installation, O&M and other services



SYLLABUS: GS 2 : Constitutional Bodies
Newspaper : Indian Express **Page No :** 9

The Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023

- **Appointment Committee:**
 - The CEC and other Election Commissioners will be appointed by a **Selection Committee** comprising:
 1. **Prime Minister** (Chairperson).
 2. **Leader of the Opposition (LoP)** in the Lok Sabha.
 3. A **Union Cabinet Minister** nominated by the Prime Minister.
- **Eligibility Criteria:**
 - The Act does not specify detailed qualifications but emphasizes the need for individuals with experience in governance and administration.
- **Tenure:**
 - The CEC and Election Commissioners will have a fixed tenure of **6 years** or until they attain the age of **65 years**, whichever is earlier.
- **Resignation and Removal:**
 - They may resign by submitting a written notice to the President.
 - The CEC can only be removed through a process similar to the removal of a Supreme Court judge (via impeachment).
 - Other Election Commissioners can only be removed on the recommendation of the CEC.



SYLLABUS: GS 2 : Constitutional Bodies
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- **Salary and Allowances:**
 - The CEC and other Election Commissioners will have salaries, allowances, and privileges equivalent to a **Supreme Court Judge**.
 - These will not be altered to their disadvantage during their tenure.
- **Prohibition on Post-Service Employment:**
 - After demitting office, the CEC and Election Commissioners are barred from holding any office of profit under the Government of India or any State Government.
- The Act reaffirms the constitutional mandate of the Election Commission of India (ECI) under Article 324 to conduct free and fair elections in India.
- It grants the CEC and Election Commissioners the authority to make decisions collectively.

EXPRESS NEWS SERVICE
NEW DELHI, JANUARY 27

WITH CHIEF Election Commissioner Rajiv Kumar set to demit office on February 18, the Union Law Ministry recently set up a Search Committee headed by Law Minister Arjun Ram Meghwal to shortlist names for his replacement, sources said.

The Search Committee would shortlist names to be considered by the Selection Committee comprising Prime Minister Narendra Modi, a Cabinet Minister and Leader of the Opposition in the Lok Sabha Rahul Gandhi.

The process of appointing the CEC from a panel of five as per the Chief Election Commissioner And Other Election Commissioners (Appointment, Conditions of Service And Term of Office) Act, 2023, would be a first. *The Indian Express* had reported on January 11 that the selection process for the CEC would involve a panel of five names as per the Act. While

the procedure was adopted for the appointment of Election Commissioners Gyanesh Kumar and Sukhbir Singh Sandhu in March 2024, the new appointment process for appointing the CEC will be used for the first time. Prior to the enactment of the law, the CEC was usually appointed by elevating the senior-most EC.

It is learnt that the Law Ministry has set up the search committee of the Minister and two Secretaries (of Finance and Department of Personnel and Training) on January 17, as per provisions of the Act. The Search Committee would soon shortlist five secretary-level officers for the Selection Committee to select from, as per a source. The Act gives the Selection Committee the option of selecting a name from outside this panel of five as well. Sources say that Gyanesh Kumar, who is the senior-most EC after Rajiv Kumar, could still become CEC, but the process as prescribed in the Act would have to be followed.

-WITH PTI INPUTS



SYLLABUS:

GS

3:

Technology

Newspaper : Indian Express Page No : 19

HOW TO leverage the power of AI while mitigating its risks: that seems to be the biggest challenge confronting policymakers across countries on the issue of AI regulation. Amid growing concerns over how to develop regulatory oversight of artificial intelligence, without stifling the AI ecosystem, global leaders are set to gather in Paris on February 10 for a two-day AI Action Summit. This builds on a AI Safety Summit held in Britain in Bletchley Park in 2023 and a smaller meeting in Seoul in 2024.

While the Bletchley summit was focused on the debate surrounding the 'doomsday' concerns posed by AI, and eventually resulted in all 25 states, including the US and China, signing the Bletchley Declaration on AI Safety, the Seoul summit last May saw 16 top AI companies making voluntary commitments to develop AI in a transparent manner.

where Macron has taken a personal initiative, is important for Europe because the development of powerful AI is now increasingly perceived as a race between the tech majors of America and the state power of China. In his widely cited report on the challenges to Europe's economy, Mario Draghi, the former president of the European Central Bank, highlighted red tape and laws that prevent the European technology sector from competing with America and China in this new field. Brussels is seen to be trailing

Paris Summit

The Paris summit is an initiative of French President Emmanuel Macron and focuses on the broader agenda of global AI governance, innovation and on ways of serving the larger public interest leveraging this new technology. Prime Minister Narendra Modi is set to co-chair the Paris summit and has accepted the invitation to travel to France. The Paris summit aims to address the increasing concentration of power in the AI market, especially with respect to the foundational models being owned by a few companies – Microsoft, Alphabet, Amazon and Meta. The summit will kick off in the Grand Palais on February 10, starting with a forum bringing together multiple stakeholders from around the world – representatives of governments, businesses and civil society, researchers, artists and journalists.

The summit also comes close on the heels of Washington announcing a mega AI announcement, with the likes of OpenAI, Softbank, Oracle, Microsoft and Nvidia coming together to build AI infrastructure in that country. An investment of \$500 billion is expected to be made in a new company – Stargate Project – to catalyst this expansion of AI capabilities over the next four years.

EXPLAINED



SYLLABUS:

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Technology

Newspaper : Indian Express **Page No :** 19

But the elephant in the room is likely to be China, and the astounding advances made by the country in AI, despite efforts by Washington to thwart this progress. A Chinese company has recently showcased a new large language model (LLM) — a foundational AI model trained on large amounts of data — that is being touted to be almost on par with OpenAI's new o1 'reasoning model' in math, coding, and reasoning benchmarks. The model released by China's DeepSeek has shown that training an AI model may not be as expensive an en-

Approaches on Regulation

All these developments come as policymakers across jurisdictions have stepped up regulatory scrutiny of generative AI tools, but have taken varying approaches. The concerns being flagged fall into three broad heads: privacy, system bias and violation of intellectual property rights.

The policy response has been different across jurisdictions, with the European Union having taken a predictably tougher stance by proposing a regulation that segregates AI as per use case scenarios, based broadly on the degree of invasiveness and risk. The UK is seen to be on the other end of the spectrum, with a decidedly 'light-touch' approach that aims to foster, and not stifle, innovation in this nascent field.

deavour as previously thought, with foundational models possible at a fraction of the cost of what it took companies like OpenAI and Google to build theirs. Chinese tech major Alibaba too released a new AI model in November, which is said to rival OpenAI's GPT-o1 series models in reasoning capability. The emergence of China's AI tech is a relatively new phenomenon that could be a factor in the Paris deliberations.

The US approach so far has slotted somewhere in between, which could see further deregulation now. China too has released its own set of measures to regulate AI. India has maintained that the weaponisation represented by social media must be overcome and steps should be taken to ensure AI represents safety and trust, even as the technology represents a big opportunity.



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Technology

Newspaper : Indian Express **Page No :** 19

Announcing The Stargate Project

The Stargate Project is a new company which intends to invest \$500 billion over the next four years building new AI infrastructure for OpenAI in the United States. We will begin deploying \$100 billion immediately. This infrastructure will secure American leadership in AI, create hundreds of thousands of American jobs, and generate massive economic benefit for the entire world. This project will not only support the re-industrialization of the United States but also provide a strategic capability to protect the national security of America and its allies.

The initial equity funders in Stargate are SoftBank, OpenAI, Oracle, and MGX. SoftBank and OpenAI are the lead partners for Stargate, with SoftBank having financial responsibility and OpenAI having operational responsibility. Masayoshi Son will be the chairman.

Arm, Microsoft, NVIDIA, Oracle, and OpenAI are the key initial technology partners. The buildout is currently underway, starting in Texas, and we are evaluating potential sites across the country for more campuses as we finalize definitive agreements.

As part of Stargate, Oracle, NVIDIA, and OpenAI will closely collaborate to build and operate this computing system. This builds on a deep collaboration between OpenAI and NVIDIA going back to 2016 and a newer partnership between OpenAI and Oracle.

This also builds on the existing OpenAI partnership with Microsoft. OpenAI will continue to increase its consumption of Azure as OpenAI continues its work with Microsoft with this additional compute to train leading models and deliver great products and services.



SYLLABUS: GS 2: Statutory; Regulatory Bodies
Newspaper : Indian Express **Page No :** 19

Mumbai: The Ministry of Finance has invited applications for the post of Chairman of the Securities and Exchange Board of India (SEBI).

The current three-year tenure of Sebi Chairperson Madhabi Puri Buch will end on February 28. She took over as the first woman chief of the capital markets regulator on March 2, 2022.

Securities and Exchange Board of India (SEBI)

The Securities and Exchange Board of India (SEBI) is the regulatory body for the securities and commodities market in India. It was established to protect investor interests, develop and regulate the securities market, and ensure its smooth functioning.

Formation and Evolution

- **Established:** April 12, 1988 (as a non-statutory body).
- **Statutory Status:** Achieved under the SEBI Act, 1992.
- **Headquarters:** Mumbai, Maharashtra.
- **Motto:** "To protect the interests of investors in securities and to promote the development of, and to regulate, the securities market."

Functions of SEBI

1. Protective Functions:

- Prohibiting unfair trade practices like insider trading.
- Promoting investor education and awareness.
- Regulating substantial acquisition of shares and takeover of companies.



SYLLABUS: GS 2: Statutory; Regulatory Bodies
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“Applications are invited from the eligible candidates for filling up the post of Chairman in Securities and Exchange Board of India (SEBI),” a public notice issued by the Department of Economic Affairs (Financial Markets Division) on January 27 read. Applications are invited from candidates till February 17. The chairman will hold office for a period not exceeding five years or till the age of 65 years of age, whichever is earlier, and will be eligible for re-appointment, the notice said. The appointment of the Sebi chairman would be made by the Central government on the recommendation of the Financial Sector Regulatory Appointments Search Committee (FSRASC).

ENS

2. Developmental Functions:

- Training intermediaries in the securities market.
- Facilitating innovations like online trading platforms.
- Promoting self-regulatory organizations (SROs).

3. Regulatory Functions:

- Framing rules and regulations for intermediaries like brokers, sub-brokers, and underwriters.
- Conducting inquiries and audits of market intermediaries.
- Registering and regulating mutual funds and credit rating agencies.

Powers of SEBI

Quasi-Judicial Powers:

- SEBI can pass orders, such as imposing penalties and suspending or canceling registration of market intermediaries.

Quasi-Executive Powers:

- SEBI can inspect books of accounts and other documents of listed companies and intermediaries.

Quasi-Legislative Powers:

- SEBI has the authority to draft regulations for the securities market. These regulations need to be consistent with the SEBI Act.



SYLLABUS: GS 2 : International Relations; Defence
Newspaper : The Hindu **Page No :** 12

Amid negotiations between India and Indonesia for the sale of BrahMos supersonic cruise missile systems, the Chief of Staff of the Indonesian Navy, Admiral Muhammad Ali, visited BrahMos Aerospace Private Ltd. here on Monday and “exchanged ideas and insights on further strengthening bilateral cooperation in the area of defence and strategy”.

BRAHMOS is a two-stage missile with a solid propellant booster engine as its first stage which brings it to supersonic speed and then gets separated. The liquid ramjet or the second stage then takes the missile closer to 3 Mach speed in cruise phase. Stealth technology and guidance system with advanced embedded software provides the missile with special features.

The missile has flight range of up to 290-km with supersonic speed all through the flight, leading to shorter flight time, consequently ensuring lower dispersion of targets, quicker engagement time and non-interception by any known weapon system in the world.

It operates on ‘Fire and Forget Principle’, adopting varieties of flights on its way to the target. Its destructive power is enhanced due to large kinetic energy on impact. Its cruising altitude could be up to 15 km and terminal altitude is as low as 10 meters. It carries a conventional warhead weighing 200 to 300 kgs.

Compared to existing state-of-the-art subsonic cruise missiles, BRAHMOS has:

- o 3 times more velocity
- o 2.5 to 3 times more flight range
- o 3 to 4 times more seeker range
- o 9 times more kinetic energy

The missile has identical configuration for land, sea and sub-sea platforms and uses a Transport Launch Canister (TLC) for transportation, storage and launch.

BRAHMOS System on Various Platforms



Ship-based Weapon Complex System

BRAHMOS missile is capable of hitting sea or land based targets beyond radar horizons. It can be launched in either inclined or vertical configuration based on the type of the ship or user requirements.



Land-based Weapon Complex System

BRAHMOS Land-based Weapon Complex comprises of four to six Mobile Autonomous Launchers (MAL) controlled by a Mobile Command Post (MCP), and a Missile Replenishment Vehicle (MRV).



Air Launched Weapon System

The highly advanced Air-Launched Cruise Missile (ALCM) with precision attack capability against sea and land targets has been designed and developed for IAF's frontline air combat platform Sukhoi-30MKI.



Submarine Based Weapon System

BRAHMOS missile is capable of being launched from submarine from a depth of 40-50 metres. The missile is installed in a modular launcher vertically in the pressure hull of the submarine.



SYLLABUS: GS 2 : International Relations; Defence
Newspaper : The Hindu **Page No :** 12

Ali held bilateral interactions with Indian Navy chief Admiral Dinesh K. Tripathi to deepen maritime cooperation and strengthen ties between the two close maritime neighbours, the Indian Navy said in a statement.

Key points of discussion

“The key areas of discussion between the two naval leaders included advancing joint initiatives like ‘Exercise Samudra Shakti’, strengthening operational collaboration, and addressing shared maritime challenges, including piracy and other illegal activities at sea.”

Mr. Ali visited several naval establishments, in-

cluding the Information Fusion Centre-Indian Ocean Region (IFC-IOR) and the Weapons and Electronics Systems and Engineering Establishment.

He is on an official visit as part of the high-level delegation accompanying Indonesian President Prabowo Subianto, who was the chief guest at the Republic Day parade on Sunday.

The \$450-million deal for the BrahMos systems is in advanced stages of negotiations, and Indonesia will become the second export market of the missile system after the Philippines, which has signed a \$375-million deal in 2022 for three regiments of the anti-ship variant of the missile.



BrahMos Aerospace was formed as a joint venture between **Defence Research and Development Organisation (DRDO)** of India and Joint Stock Company “Military Industrial Consortium” “**NPO Mashinostroyenia**” (earlier known as Federal State Unitary Enterprise NPOM of Russia). The company was established in India through an Inter-Governmental Agreement signed on February 12, 1998, between **The Republic of India** and **The Russian Federation**.

BrahMos - the name represents the fury of Brahmaputra and the grace of Moskva rivers. The company was established with an authorised capital of \$250 million with 50.5% from Indian side and 49.5% from Russian side. The company is responsible for designing, developing, producing and marketing the **BRAHMOS** supersonic cruise missile with active participation of a consortium of Indian and Russian industries.



Q1. Consider the following statements regarding Glacial Lake Outburst Floods (GLOFs):

1. GLOFs occur when a dam containing a glacial lake fails, leading to sudden and catastrophic flooding.
2. GLOFs are primarily caused by volcanic activity beneath glaciers.
3. Early warning systems and monitoring of glacial lakes can help mitigate the risks associated with GLOFs.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

Answer: b

Q2. Consider the following statements regarding India's "Panchamrit" targets announced at COP26:

1. India aims to achieve net-zero carbon emissions by the year 2047 under the Panchamrit targets.
2. One of the targets includes meeting 50% of India's energy requirements from renewable energy sources by 2030.
3. India aims to reduce the carbon intensity of its economy by 45% by 2030 as part of the Panchamrit initiative.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Answer: b

Q3. Consider the following statements regarding the PM Surya Ghar: Muft Bijli Yojana:

1. The scheme provides a subsidy of 60% for solar systems up to 2 kW capacity.
2. Households consuming more than 300 units of electricity per month are not eligible for the scheme.
3. The scheme aims to benefit 1 crore households across India.
4. Applicants must own a house with a suitable roof for installing solar panels to be eligible.

How many of the statements given above is/are correct?

- a) Only One
- b) Only Two
- c) Only Three
- d) All Four

Answer: c

Q4. Consider the following statements regarding the Chief Election Commissioner (CEC) in India:

1. The Chief Election Commissioner is appointed by the President of India.
2. The tenure and service conditions of the Chief Election Commissioner are determined by the Parliament.
3. The Chief Election Commissioner enjoys the same status and salary as that of a Supreme Court judge.
4. The Chief Election Commissioner can be removed from office by the Prime Minister on the recommendation of the Election Commission.

How many of the statements given above is/are correct?

- a) Only One
- b) Only Two
- c) Only Three
- d) All Four

Answer: b

Q5. Consider the following statements regarding the BrahMos missile:

1. BrahMos is a joint venture between India and Israel for the development of a supersonic cruise missile.
2. The BrahMos missile is capable of being launched from land, air, and sea platforms.
3. BrahMos has a maximum range of 500 kilometers and can carry both conventional and nuclear warheads.
4. The BrahMos missile is designed for both strategic and tactical defense purposes, with a focus on countering land-based targets only.

How many of the statements given above is/are correct?

- a) Only One
- b) Only Two
- c) Only Three
- d) All Four

Answer: a





VAJIRAM & RAVI

Institute for IAS Examination

A unit of Vajiram & Ravi IAS Study Centre LLP

9-B, Bada Bazar Marg, Old Rajinder Nagar,
New Delhi - 110060 • Ph.: 41007400, 41007500

New No. 62, P Block, 6th Avenue, Anna Nagar,
Chennai - 600040 • Ph.: 044-4330-2121

Visit us at : www.vajiramandravi.com