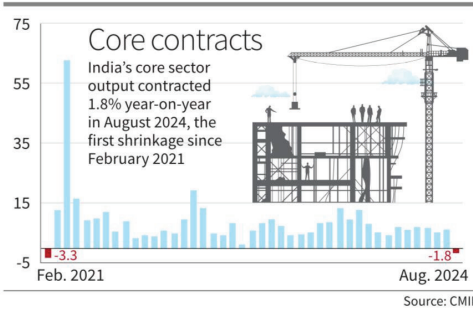


# NEWS IN 360°

— CIVILS360 IAS ACADEMY



# Core sector output tanks for the first time in 42 months



**Vikas Dhoot**  
NEW DELHI

Output levels in India's core sectors slipped to a nine-month low in August, even as year-on-year growth slipped 1.8%, marking the first contraction in three and a half years.

Six of eight infrastructure segments witnessed a year-on-year contraction in production, while fertilizers and steel output grew at a milder pace than July,

when core sectors' output rose 6.1%. The 4.5% uptick in steel production was the slowest in 26 months.

In absolute terms, electricity generation was at a five-month low in August, while refinery products were at a six-month low. Coal and electricity output recorded their first contraction in at least 13 months.

**CONTINUED ON**  
» PAGE 10

# Core sectors' output tanks for first time in 42 months

Coal and electricity output declined 8.1% and 5%, respectively, in August.

Cement production fell 3%, the worst performance in nine months, while refinery products declined 1%, the second decline in three months. Fertilizer output grew 3.2%.

The Index of Core Industries (ICI), which constitutes about 40% of the broader index of India's industrial output (IIP), stood at 155.8 in August, marking a third consecutive month of sequential decline, and was 4.2% below July levels. In July, the ICI was up 6.1% on a year-on-year basis, with just two sectors reporting a contraction – crude oil and natural gas.

Industrial output growth had been estimated at 4.8% in July, mildly higher than 4.7% recorded in June, but the core sectors' trends in August suggest weaker factory output levels in the month.

“The core sectors' performance has been skewed due to the base effect of 13.4% growth recorded last year,” said Bank of Baroda chief economist Madan Sabnavis, who expects industrial output growth to be marginally positive in August at around 0.5%. Aditi Nayar, chief economist at ICRA, who expects the IIP to have risen around 1% in August, reckoned that the late withdrawal of the monsoon may continue to weigh on core sectors' output in September.

Ms. Nayar noted that the weak performance of cement and steel sectors during July and August suggests that construction activity weakened in the second quarter of this year.

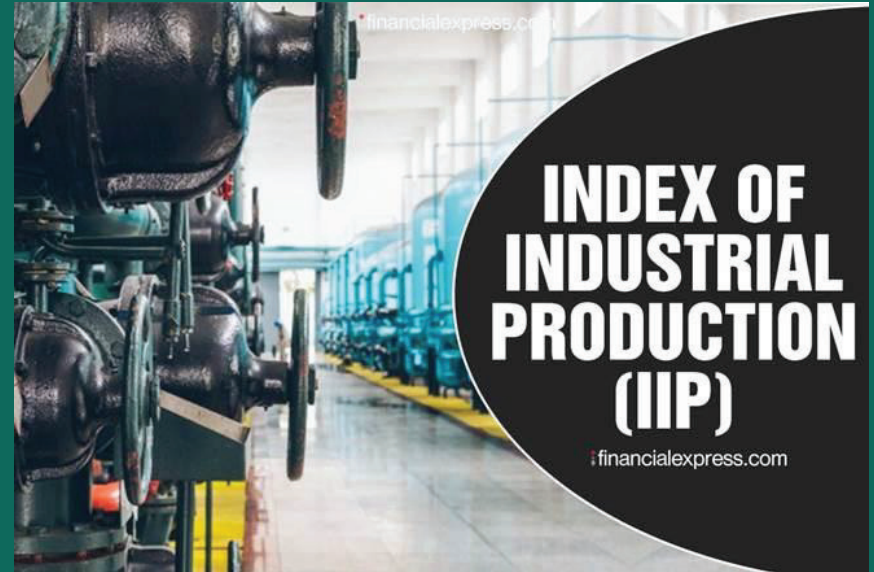
## Index of 8 Core Industries

- 8 Core Industries comprise **40.27%** of the weight of items included in the IIP
- Published by: **Office of the Economic Adviser (OEA)**, Department for Promotion of Industry and Internal Trade (**DPIIT**), and **Ministry of Commerce & Industries**

Industry	Weight (In percentage)
Petroleum & Refinery production	28.04
Electricity generation	19.85
Steel production	17.92
Coal production	10.33
Crude Oil production	8.98
Natural Gas production	6.88
Cement production	5.37
Fertilizers production	2.63

# INDEX OF INDUSTRIAL PRODUCTION

- Indicator that measures the **changes in the volume of production** of industrial products during a given period.
- Compiled and published by: **National Statistical Office (NSO), Ministry of Statistics and Programme Implementation**
- Base Year: **2011-12**
- Broad Sectors:
  - **Manufacturing: 77.6%**
  - **Mining: 14.37%**
  - **Electricity: 7.9%**



# Having private participation in India's nuclear energy

In July 2024, the Government of India, while presenting the Union Budget for FY 2024-25, *inter alia*, made announcements on the expansion of India's nuclear energy sector, proposing partnerships with the private sector for research and developing Bharat Small Reactors (BSR), Bharat Small Modular Reactors (BSMR) as well as newer nuclear energy technologies. Presumably, this announcement is aimed at India's ambitious pursuit of the decarbonisation of energy generation and achieving 500 Gigawatts of non-fossil fuel-based energy generation in India by 2030, as pledged at the COP26 Summit in Glasgow, in 2021.

With the government's new announcement, there is renewed interest in revisiting the existing framework governing the Indian nuclear energy sector to assess what kind of changes that may be required. The Atomic Energy Act, 1962 (AEA) – it was amended as the Atomic Energy (Amendment) Act, 1987 (No. 29 of 1987) – is the primary governing statute at the helm of the development and the operation of the nuclear energy sector. Pertinently, Section 3(a) of the AEA, 1962 empowers only the central government "to produce, develop, use and dispose of atomic energy".

Ironically, on September 17, 2024, the Supreme Court of India dismissed a petition, *Sandeep T.S. vs Union of India & Ors.*, challenging the provisions of the AEA, which restrict involvement of private entities in the licensing of nuclear power, observing that "The Parliamentary regime envisages a calibrated exploitation of atomic power, subject to stringent safeguards, bearing in mind the likely consequences of misuse and, for that matter, of an accident".

In addition to the challenges listed above, there is also the issue of the pending challenge to the constitutionality of the Civil Liability for Nuclear Damage Act, 2010 (CLNDA), which seeks a declaration for the act to be void *ab initio*. These challenges not only introduce a high degree of regulatory uncertainty but also have the potential to leave private investments in the sector in a state of limbo.

Thus, the road map for private participation in the Indian nuclear energy sector must run consonance, and not in conflict with the applicable laws.

## AEA, restrictions on private sector

The governing scheme, i.e., the AEA, gives the government sole control and responsibility over all activities in respect of nuclear energy either through an authority or company established by it. In essence, the Department of Atomic Energy (DAE) and the Nuclear Power Corporation of India Limited (NPCIL) currently have overarching control over the nuclear energy infrastructure.

This, however, does not suggest that there is



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With the government proposing such a partnership, the existing framework governing the nuclear energy sector needs to be assessed

no record of or attempt to alter this situation. Last year, the DAE and NITI Aayog released "A Report on the Role of Small Modular Reactors in the energy Transition", which specifically discusses key enablers to promote the private sector in Small Modular Reactors (SMRs). The report focuses on "Conductive SMR regulatory framework led by national regulators" and "Unambiguous Civil Nuclear Liability Framework and supporting legal structure" to ensure a sustainable and continuous engagement of the private sector.

Historically, the NPCIL has involved the private sector only in engineering, procurement and construction (EPC) where the infrastructure for the reactor is developed by private entities such as Megha Engineering & Infrastructures and Reliance.

In so far as the cost implications are concerned, the NITI Aayog report, and the Union Minister of Finance's statement contemplate partnering with private participants to attract nearly \$26 billion of investments into the sector. Such involvement, specifically for research and development (R&D), is strictly prohibited as in Section 3(a) of the AEA.

Rule 35 of the Atomic Energy (Radiation Protection) Rules, 2004, grants Atomic Energy Regulatory Board (AERB) authority over radioactive technology. But concerns about its lack of independence persist. The Nuclear Safety Regulatory Authority Bill 2011 aimed to address this but it was never enacted. Attracting private investment in nuclear energy will require significant changes to the AERB's structure and functions, alongside efforts by organisations such as the NPCIL and the DAE to create programmes that encourage private participation while ensuring a robust regulatory oversight of the sector.

## A possible structure

A possible approach is in forming public-private partnerships, where the NPCIL, or a similar government body/authority holds 51% ownership of nuclear plants, aligning with existing laws. This structure may invite private capital while keeping responsibility, ownership, and accountability with the government. Additionally, entities with a majority government stake would also be covered under Section 2(h) of the Right to Information Act (RTI) Act, ensuring transparency. The entity would also be required to make disclosures under Section 4 and respond to reasonable public queries under Section 6 of the RTI Act, maintaining public accountability.

The other large concern is a significantly higher standards of liability with nuclear infrastructure. For reasons that are obvious to anyone who is vaguely familiar with nuclear technology, the presence of nuclear reactors in

the vicinity of human settlements introduces a gnarly threat. The Chernobyl disaster of 1986 and the Fukushima Daiichi accident of 2011 are near synonymous with the word nuclear in this context.

In India, compensation for nuclear disasters is given to affected parties under the CLNDA. The CLNDA aims to provide civil liability for nuclear damage and prompt compensation to victims of a nuclear incident through a no-fault liability to the operator. As mentioned at the outset, the constitutionality of this act is presently challenged in a writ petition and is pending adjudication before the Supreme Court. This petition challenges the constitutionality of the CLNDA, *inter alia*, on the grounds of: violation of absolute liability principle; violation of polluter pays principle and serious dangers to nuclear safety.

The judgment in *G. Sundararajan vs Union Of India and Ors.* (2013) has references to the Chernobyl and Fukushima disasters while addressing a Special Leave Petition (SLP) concerning protests over the Kundankulam nuclear power plant in Tamil Nadu. Although the Supreme Court allowed the plant's commissioning, it issued directions for regular inspections, reports, and due diligence by the DAE, the NPCIL, and Ministry of Environment, Forest, and Climate Change.

## Specific needs

India's country profile, as published by the World Nuclear Association in September 2024 recognises an in-principle proposed gross increment of 32 GWe in the Indian nuclear energy production capacity. It is evident that this ambitious growth in nuclear energy infrastructure is very capital intensive and requires extremely skilled construction resources due to high-risk physical reactions.

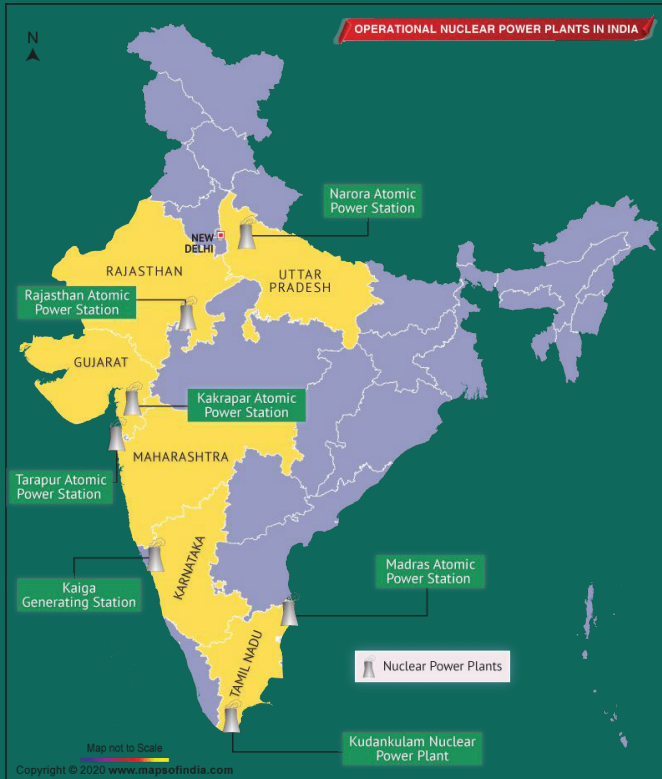
Given the sensitive requirements for nuclear technology, strict and comprehensive legislation is crucial to address these needs and ensure ease of business. The legislative restriction on R&D under the AEA is just one issue, while litigation on the constitutionality of the Civil Liability Law, has been pending before the top court for over 12 years now. These factors only contribute to uncertainty of this ambitious target.

Energy generation capacity has been central to all economic development across the globe after the Industrial Revolution and a commitment to achieving the same through renewable sources makes India's ambition just as admirable as it is challenging. It will undoubtedly be interesting to see how legislative and policy changes will shape the Indian nuclear energy sector.

*The writers have significant experience in dispute resolution and litigation in the energy sector*

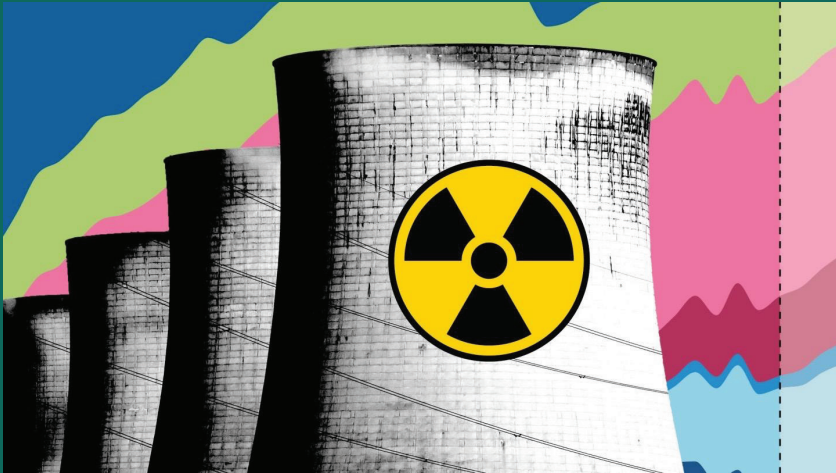


# Nuclear Energy in India



- India's present installed nuclear capacity: **7.48 GWe**
- Nuclear power in India necessary to meet **INDC target** of 500 GW of non-fossil fuel based energy by 2030
- Advantages:
  - Clean source of energy
  - Possibility of consistent production unlike solar or wind which are dependent on natural factors
  - High relative efficiency

# Challenges to nuclear power generation



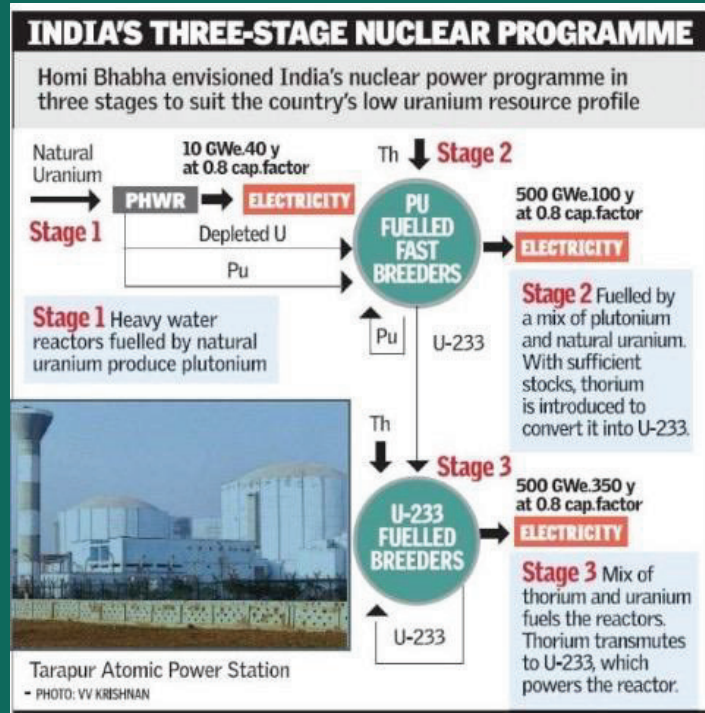
- Nuclear waste and safe disposal
- Scarcity of nuclear minerals like Uranium
- Risk of nuclear accidents: Eg: Chernobyl 1986, Fukushima 2011
- Risks of radiation exposure

# LAWS GOVERNING OPERATION OF NUCLEAR POWER IN INDIA

- Atomic Energy (Amendment) Act, 1987 -Atomic Energy (Amendment) Act, 1987
    - empowers only the central government “to produce, develop, use and dispose of atomic energy
  - Civil Liability for Nuclear Damage Act, 2010 (CLNDA)
    - aims to provide civil liability for nuclear damage and prompt compensation to victims of a nuclear incident through a no-fault liability to the operator
-



# India's Three Stage Nuclear Programme



- developed by the late H. J. Bhabha
- ultimate goal is to fully exploit India's massive Thorium deposits and become self-sufficient in nuclear energy generation (India holds 25% of the world's thorium reserves but just around 2% of the world's uranium reserves)
- The 3 stages of 3 Stage Nuclear Program are:
  - Natural uranium-fueled Pressurised Heavy Water Reactors (PHWRs),
  - Fast breeder reactors (FBRs) using plutonium-based fuel,
  - Advanced nuclear power systems using thorium

# India's 'silver dividend', challenge to opportunity

**W**hile the rising quantum and share of the elderly population is a global concern, India and China, the two population giants in the world, have a disproportionate share of the elderly given their large population size. And rising longevity is intensifying this concern every day. Therefore, it is pertinent to transform this challenge into an opportunity that involves suitable reforms to cater to the evolving needs of this population. In this regard, evidence indicates that it is not merely the quantum of this population but also its quality that needs attention and intervention.

**Rising health-care consumption and reform**  
For instance, the health-care consumption of this segment of the population, presently estimated at \$7 billion, is rising. Such a rise in India is because three-quarters of the elderly have at least one chronic ailment along with a quarter of them having limitations in daily living. In addition, a third of them display depressive symptoms along with low-life satisfaction. When these adversities are coupled with economic insecurities, there is every reason to dwell on senior care reform to ensure the better well-being of this population segment.

Such a reform initiative needs to recognise the multi-sectoral attention involving health, social, economic/financial and, above all, digital domains towards mainstreaming the elderly within the evolving environment. Health empowerment and inclusion can happen by improving health literacy among the elderly and their care-givers. On this front, the initiative of adopting comprehensive health care at health and well-being centres under the renewed mission of the Ayushman Arogya Mandir (AAM) may be considered a good initiative. This involves a preventive, promotive, curative and rehabilitative component under the multiple system of ayurveda, yoga, naturopathy, unani, siddha and homoeopathy (AYUSH).



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**U.S. Mishra**

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There need to be tailored reforms to cater to the evolving needs of the country's senior citizens

Strengthening the health-care infrastructure to focus on the elderly by expanding tele-consultation services, enhancing the skilled workforce for the elderly, and capacity building of the existing workforce may facilitate the utilisation of health care among senior citizens despite limitations of means on the one hand and specific need on the other. This all-inclusive package has a mental health services aspect as well as nutrition-related services that will operationalise senior care through preventive, wellness and therapeutic interventions and is thus holistic.

## Addressing financial insecurities

The social inclusion of the elderly may well be served by sensitising the larger community on their needs and sensitivities and by establishing peer support groups for interaction. At the same time there is a need to make them aware of their entitlements and legal safeguards on inheritance, succession and protection that will help their confidence in handling ugly eventualities that could arise in the course of life.

Economic and financial insecurities need to be addressed through innovative schemes and plans specifically for the elderly, in terms of investments, to reduce their financial burden. Such a burden that is largely on account of health care costs may be protected with well-designed insurance products such as ₹5 lakh coverage for every individual above the age of 70 years. Reskilling the younger population that is also aging (given their adaptability to modern technology and infrastructure) to be engaged in the labour market may be another option to maintain the economic independence of the elderly.

Finally, the inclusion of the elderly in a rapidly growing digital environment is equally important for the elderly to benefit from many schemes and programmes with ease and convenience. Digital adaption among the elderly still remains below

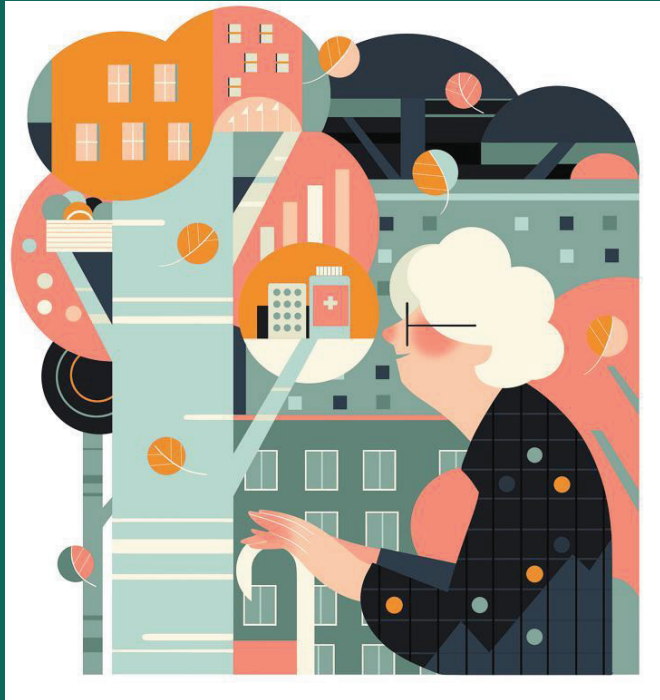
expectation, excluding them from desirable schemes and benefits. Targeting the current elderly population and those younger who are also aging to go digital should get a second look from the domain of finance to the delivery of numerous care services that are meant for the elderly.

## As an economic segment

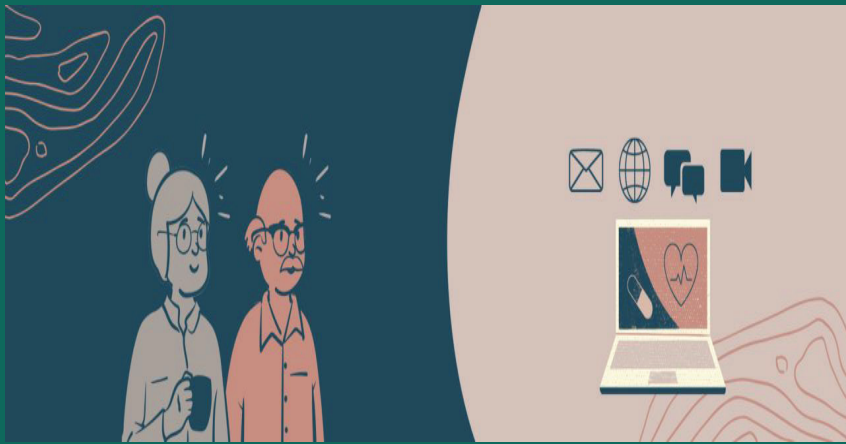
Besides this five-point care reform for seniors, the idea of turning this emerging challenge into an opportunity lies in viewing a silver economy that comprises economic activities, and goods and services catering to this population segment. On this count, the available worth of this economy is estimated at ₹73,082 crore and is expected to grow manifold over the years. While the 60-plus share is estimated at 13.2% in 2031, and at 19% by mid-century, the elderly will constitute a major consumer segment that is also characterised as the wealthiest given the professional in the age group of 45-64 years is the richest. Therefore, one has the quote these days which says 'they become rich before they grow old'. Further, as health-care consumption is about a third of their entire consumption, it can ignite the health and wellness-driven businesses among the senior care segment in India. On the whole, the silver economy is set to grow in India and the world, with a market size that has potential for innovation in the health technology domain as well as utility infrastructure for varying limitations that come with age.

In recognition of this eventual reality, the government appears to have given consideration to rehabilitating the silver segment by launching the Senior Able Citizens for Re-Employment in Dignity (SACRED) portal to connect senior citizens with job providers in the private sector. Another initiative is the Senior care Ageing Growth Engine (SAGE), by the Ministry of Social Justice and Empowerment, to promote and incentivise senior care products.

# Harnessing India's Silver Dividend



- **UNFPA Report:** Elderly (60 years and above) comprise 10.5% of population as of 2022- expected to be 20% by 2050
- Ageing population presents both challenges and opportunities for India



# Challenges of ageing population

## SOCIAL

- Isolation due to generation gap
- Disability and illness
- Mental and physical abuse
- Digital illiteracy

## ECONOMIC

- Lack of financial security
- Lack of economic productivity

## INFRASTRUCTURAL

- Lack of adequate geriatric care facilities
  - Absence of elderly-friendly infrastructure
-



# Opportunities of silver dividend



- Present healthcare consumption: \$7 billion
  - Investment in care economy: reskilling younger population to meet specific needs of elderly
  - Foster Digital inclusion and adaptation
  - Foster silver economy (comprises economic activities, and goods and services catering to elderly):
    - available worth : ₹73,082 crore
  - Government Schemes for Rehabilitation of Silver segment
    - Senior Able Citizens for Re-Employment in Dignity (SACRED) portal to connect senior citizens with job providers in the private sector
    - Senior care Ageing Growth Engine (SAGE), by the Ministry of Social Justice and Empowerment, to promote and incentivise senior care products
-

# Demographic Winter



situation where a country or region experiences a significant and prolonged decline in population growth due to low fertility rates, aging populations, and increased mortality rates.

7. 'जनसांख्यिकीय शीत (डेमोग्राफिक विन्टर)' की अवधारणा क्या है? क्या यह दुनिया ऐसी स्थिति की ओर अग्रसर है? विस्तार से बताइए। (उत्तर 150 शब्दों में दीजिए)

What is the concept of a 'demographic winter'? Is the world moving towards such a situation? Elaborate.

(Answer in 150 words) 10



# Manipur government extends AFSPA in hill districts for 6 months

**The Hindu Bureau**  
NEW DELHI

The Manipur government has extended the Armed Forces (Special Powers) Act (AFSPA) in the hill districts of the State for another six months, a September 26 notification said.

Effective October 1, the provisions of the Act will be extended to the whole State, except 19 police station limits in seven valley districts, thus maintaining the *status quo*, since three such notifications were passed since March 2023.

## Valley areas exempted

The notification said the "Governor of Manipur is of the opinion that the violent activities of various extremist/insurgent groups warrant the use of Armed Forces in aid of civil administration in the entire State of Manipur except the areas falling under the jurisdiction of the 19 police stations under Imphal, Lamphel, City, Singjamei, Sekmai, Lamsang, Patsoi, Wangoi, Porompat, Heingang, Lamlai, Irilbung, Leimakhong, Thoubal, Bishnupur, Nambol, Moirang, Kakching and Jiribam."

It added that the "disturbed area" status could

**Provisions of Act will cover whole State, except for 19 police station limits in seven valley districts**

not be reviewed and a detailed ground assessment could not be done as "the sister security agencies are preoccupied with maintenance of law and order" and "it will be premature to arrive at any conclusion or decision on such sensitive matter without detailed assessment."

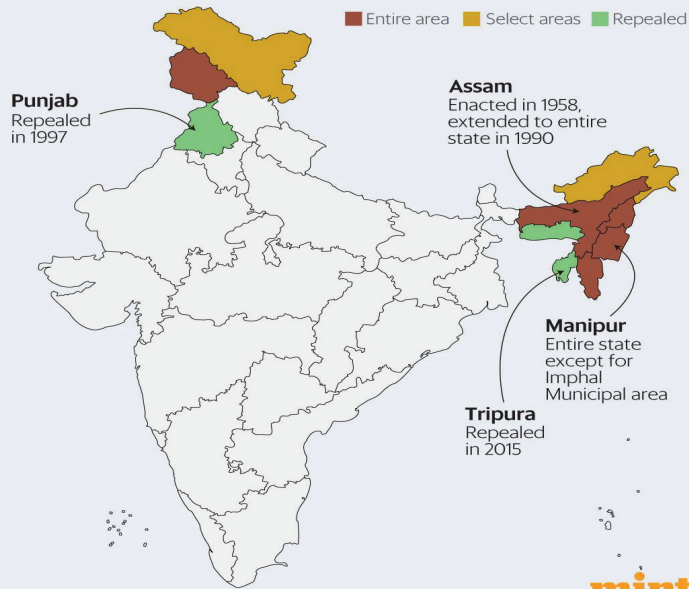
The 1958 law gives power to the Army and the Central Armed Police Forces deployed in "disturbed areas" to arrest or kill anyone acting in contravention of law, search any premises without a warrant, and grant them protection from prosecution and legal suits without the Union government's sanction.

Both the State and Centre can issue notification regarding AFSPA. Currently, the Ministry of Home Affairs issues "disturbed area" notifications only for Nagaland and Arunachal Pradesh. The notification for Manipur and Assam are issued by the State governments.

# ARMED FORCES SPECIAL POWERS ACT (1985)

## ARMED POWER

Status of Armed Forces (Special Powers) Act (AFSPA)



Source: MHA, Mint research

**mint**  
Graphic: Sarvesh Kumar Sharma

- Gives the armed forces the power to maintain public order in “disturbed areas”
- Both Union and State governments can declare “disturbed areas”
  - Arunachal Pradesh, Nagaland- MoHA
  - Manipur, Assam- State governments
- gives power to the Army and the Central Armed Police Forces deployed in “disturbed areas” to arrest or kill anyone acting in contravention of law, search any premises without a warrant, and grant them protection from prosecution and legal suits without the Union government’s sanction

# Justice Jeevan Reddy Committee

- AFSPA should be repealed and appropriate provisions should be inserted in the Unlawful Activities (Prevention) Act, 1967
- The Unlawful Activities Act should be modified to specify the powers of the armed forces and paramilitary forces
- Grievance cells should be set up in each district where the armed forces are deployed.

