



Date: 04/06/2026

India Semiconductor Mission (ISM)

Context: NITI Aayog's Frontier Tech Hub (FTH) released a report on India's Semiconductor Vision 2035 and a roadmap to transform India into a globally indispensable semiconductor nation.



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India Semiconductor Mission

About India Semiconductor Mission (ISM):

- ISM was launched in 2021 by the Ministry of Electronics and Information Technology (MEITY).
- It is part of the comprehensive program for development of sustainable semiconductor and display ecosystem in the country.
- Aims to provide financial support to companies which seek to invest in semiconductors, manufacturing displays, and design ecosystem.
- As of December 2025, ten projects with investments of ₹1.60 lakh crore have been approved across six states, covering silicon fabs, compound semiconductors, advanced packaging, and testing facilities.
- India's semiconductor market is worth \$45-50 billion in 2025-26 and will reach \$100-110 billion by 2030.
- India is emerging as a global semiconductor hub, targeting 70-75% self-sufficiency in domestic chip demand by 2029 and aiming to become a leading semiconductor nation with 3 nm and 2 nm manufacturing capabilities by 2035.

Components of ISM:

- Scheme for setting up of Semiconductor Fabs in India:** Fiscal support up to 50% for setting up of semiconductor fabrication facility (or fab).

- In addition to this 50% incentive, states such as Tamil Nadu have provided incentive via their respective policies – thereby covering 75% of the cost of setting up a fab.

- Scheme for setting up of Display Fabs in India:** Fiscal support for setting up of Display Fabs.

- Scheme for setting up of Semiconductor Assembly, Testing, Marking and Packaging (ATMP) facilities in India:** Fiscal support of 30% of capex.

- Design Linked Incentive (DLI) Scheme:** Financial incentives, design infra support across various stages of development and deployment of Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design.

- Chips to Startup Programme:** Aims to train specialized manpower in design of semiconductor chips.

Electronics Component Manufacturing Scheme (ECMS)

- The ECMS was launched in April 2025 as a complement to the ISM.
- It seeks to strengthen India's electronics value chain beyond finished goods and chip fabrication by boosting Domestic Value Addition (DVA) and linking Indian firms with Global Value Chains (GVCs).
- Scheme Tenure:** 6 years (FY2025-26 to FY2031-32)

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- **Incentives will be given on a first-come, first-served basis** to firms ready for early production.
- **Significance:** Electronics is India's 3rd-largest export, and India is the 2nd-largest mobile manufacturer globally. The ECMS, along with Production Linked Incentive (PLI) Scheme and ISM, is crucial for creating a **USD 500 billion electronics manufacturing ecosystem by 2030-31.**

Types of Fiscal incentives offered:

- **Turnover-linked** (on incremental turnover/sales)
- **Capex-linked** (on eligible capital investment) for Supply chain ecosystem and capital equipment
- **Hybrid Incentive of both**, based on industry needs for components.

ISM 2.0 (2026 Union Budget):

- A budgetary provision of ₹1,000 crore has been made for FY 2026–27 to support ISM 2.0. Focus areas include:
 - **Indigenous Manufacturing:** Production of semiconductor equipment, chemicals, gases, and materials within India to reduce import dependence.
 - **Full-Stack IP Development:** End-to-end Indian semiconductor intellectual property for secure and globally competitive chip solutions.
 - **Research & Skills:** Establishment of industry-led research and training centres to support applied R&D and advanced manufacturing skills.
 - **Supply Chains:** Strengthen domestic and global supply chains amid geopolitical uncertainties.



A semiconductor is a material that has electrical conductivity less than that of a conductor (such as copper) & more than that of an insulator (such as glass). Its resistivity falls as its temperature rises; whereas metals behave in the opposite way. They are mostly made of materials such as silicon, gallium arsenide, and germanium.

Source: Groundbreaking of India's First Advanced 3D Semiconductor Packaging Unit in Odisha; Major Boost to AI, 5G and Defence Tech (PIB)

Anusandhan National Research Foundation

Context: The ₹200-crore MAHA Water Mission was launched under the ANRF to support startups in developing high-impact water security solutions.



**Anusandhan
National
Research
Foundation**

About the Anusandhan National Research Foundation (ANRF):

- ANRF is an **entity that replaced the Science & Engineering Research Board of India (SERB)** and aims to catalyse interdisciplinary research for accelerating India's development agenda, through impactful knowledge creation and translation.
- It will function under the **Ministry of Science and Technology.**

The ANRF's Goals:

- **Promote interdisciplinary research** that will address India's most pressing development challenges.
- **Minimize duplication of research.**
- **Promote translation of research into policy and practice.**

Features of ANRF:

- **Presided by PM (ex-officio chairman)** and consists of 10 major directorates focusing on science, arts, humanities, entrepreneurship, etc.
- **Union Ministers of Education and of Science and Tech** will be ex-officio Vice Presidents.
- Will have an **18-member board** with eminent Indian and intl. scientists, senior govt functionaries and industry leaders.

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- Will be registered as a society and have an **independent secretariat**.

Expectations from ANRF:

- Increasing investment in **R&D from 0.7% of GDP to 2% of GDP by 2030**
- **Enhancing India's share of global scientific publications** from about 5% to 7% by 2030
- Create a **pool of talented researchers** across disciplines and sectors
- Developing innovative **solutions for India's development challenges**

Budgetary Updates

- **2021-22 Budget:** Govt announced that for the ANRF, it would set aside Rs **50,000 crore over five years**.
 - 28% of it (14,000 crore) coming from govt and **72% (36,000 crore) from private sector**.
- **2022-23 Budget:** ANRF was allocated a budget of just Rs 1 lakh.
- **2023-24 Budget:** Allocated Rs 2,000 crore for the ANRF, which was then revised to Rs 258.60 crore.
- **2024-25 Budget:** Govt was silent on allocation for the institution or progress made so far.
- **2025-26 Budget:** Allocated Rs 2,000 crore for the ANRF. In March 2026, a parliamentary panel noted that the ANRF had utilized only about 61% of this allocation.
- **2026-27 Budget:** Budgetary allocation of ₹14,000 crore designed to be utilized over five years.

MAHA (Missions for Advancement in High-impact Areas) Water Mission

- It is a national programme that **accelerates innovation in the water sector** by linking research, technology development, validation, and field deployment.
- Nodal Agency: Ministry of Jal Shakti
- Organisations involved:
 - The ANRF will provide funding to research bodies and startups.

- ISRO will contribute satellite technologies for water resource mapping and assessment.

- It aims to support innovations from lab research to field deployment and generate scalable and localised solutions for water security.
- It has a projected outlay of **₹200 crore over five years**, jointly contributed by ANRF and the Ministry of Jal Shakti.

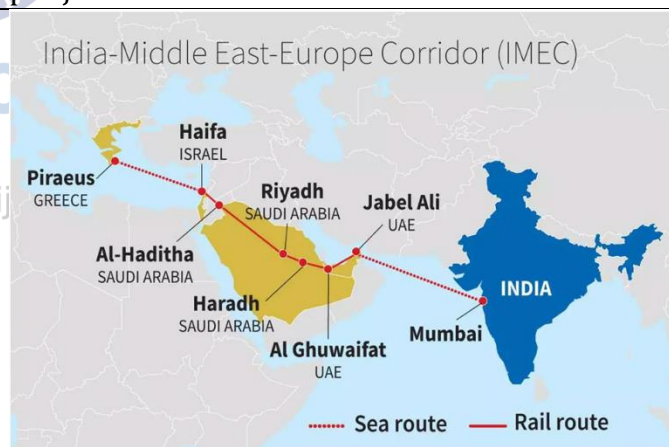


India's R&D spend is only around 0.64% of its GDP, which is lower than developing economies such as Brazil (1.16%) and South Africa (0.84%). The contribution of the private sector to India's total R&D spend is less than 40%.

Source: ANRF is democratising research funding, launches ₹200-crore MAHA Water Mission to support StartUps (PIB)

India-Middle East-Europe Economic Corridor (IMEC)

Context: An editorial in The Hindu analyzes how recent tensions in West Asia have highlighted the urgent need for projects like IMEC.



About IMEC:

- IMEC is a key initiative under the **Partnership for Global Infrastructure and Investment (PGII)**, aimed at infrastructure development in developing regions.
- It was formally endorsed during the **2023 G20 New Delhi summit**.
- It is an ambitious project consisting of Railroad, Ship-to-Rail networks and Road transport routes extending across **two corridors**, that is:

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- The East Corridor – connecting India to the Arabian Gulf,
- The Northern Corridor – connecting the Gulf to Europe.
- The IMEC corridor will also include an electricity cable, a hydrogen pipeline and a high-speed data cable.
- **Signatories:** India, the US, Saudi Arabia, UAE, the European Union, Italy, France, and Germany.

Ports to be Connected:

- **India:** Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai).
- **Middle East:** Fujairah, Jebel Ali, and Abu Dhabi (UAE); Dammam and Ras Al Khair (Saudi Arabia).
 - **A railway line** will link Fujairah port (UAE) to Haifa port (Israel) via Saudi Arabia and Jordan.
- **Israel:** Haifa port.
- **Europe:** Piraeus port in Greece, Messina in South Italy, and Marseille in France.

Objective:

- It aims to create a comprehensive transportation network, comprising rail, road, and sea routes, connecting India, the Middle East, and Europe.
- It aims to enhance transportation efficiency, reduce costs, increase economic unity, generate employment, and lower Greenhouse Gas (GHG) emissions.

Significance:

- It is estimated that the time and cost of transporting goods to Europe from India will be reduced by 40% and 30% respectively.
- The project is also seen as a challenge to China's Belt and Road Initiative (BRI).



The PGII was launched as a joint initiative of G7 Nations (during the 2022 G7 summit in Germany) to help fund infra projects in developing countries through public and private investments.

Source: IMEC is caught between commerce and geopolitics (The Hindu)

Terms in News

Blue Bond



- **Sagarmala Finance Corporation** announced plans to issue **India's first blue bond** to diversify its funding sources and finance maritime and coastal infrastructure projects.
- A blue bond is a debt instrument used to raise **funds specifically for projects linked to** oceans, seas, coasts, rivers and other **water-based ecosystems**.
- The funds will be used for lending towards the development of **maritime and coastal infrastructure**, including ports, port connectivity, shipbuilding, inland waterways and coastal road networks.
- **Seychelles** issued the world's first sovereign blue bond in 2018, while **Belize** used a debt-for-ocean swap in 2021 to support marine conservation.



Sagarmala Finance Corporation is a state-owned maritime-focused lender established in 2016 under the Ministry of Ports, Shipping and Waterways. It received a Non-Banking Financial Company (NBFC) license in June 2025.

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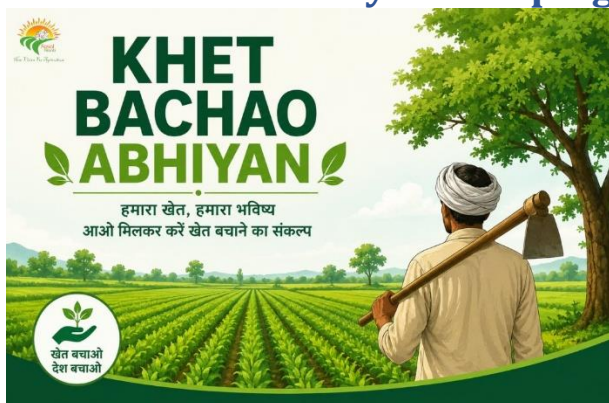
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Khet Bachao Abhiyan Campaign



- Union Minister for Agriculture and Farmers Welfare and Rural Development launched the nationwide Khet Bachao Abhiyan.
- The campaign focuses on **protecting soil health, reducing excessive chemical fertiliser and pesticide use**, and encouraging **scientific farming** practices. It will run across the country from 1st to 30th June 2026.
- It promotes soil testing, issue of **Soil Health Cards**, balanced nutrient management, natural farming, water conservation, improved seeds, seed treatment, green manure, modern sowing techniques and water-efficient farming methods.
- The campaign will also create **awareness against counterfeit fertilisers, seeds and pesticides**, while helping farmers access government schemes such as PM-Kisan Samman Nidhi, Crop Insurance Scheme, Kisan Credit Card and farm mechanization programmes.
- The campaign is based on the idea of "Save the Soil, Save Farming, Save Farmers." It emphasizes that healthy soil is essential for productive agriculture, stronger farmers and long-term national prosperity.

Mission Senehjori



- The **Ministry of Development of North Eastern Region**, in convergence with the **Ministry of Textiles** and the **Government of Assam**, has launched Mission Senehjori, to elevate Assam's unique **Muga silk** into a global luxury brand.
- Muga silk is the **world's only naturally golden silk**, endemic to the **Brahmaputra Valley** in Assam. It is prized for its extreme durability and natural luster that actually improves with every wash.
- It is obtained from semi-domesticated multivoltine silkworm, **Antheraea assamensis**.
- These silkworms feed on the aromatic leaves of **Som and Soalu plants**.
- It was received the Geographical Indication (GI) tag in 2007
- It is one of the **5 major natural varieties of silk**. (India produces all the five). The other types are:
 - **Mulberry** (~92% of India's silk production): Produced mainly in Karnataka, Tamil Nadu, and Andhra Pradesh.
 - **Tropical Tussar (Kosa)**: Grown mainly in Central and Eastern India.
 - **Temperate/Oak Tussar**: It is grown in the sub-Himalayan belt extending from Kashmir to Manipur.
 - **Eri**: It is produced in the North Eastern states (mainly Assam), from the domesticated silkworm *Philosamia ricini*, that feeds mainly on castor leaves.

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- North Eastern Handicrafts & Handlooms Development Corporation Ltd. (NEHHDC) obtained **Oeko-Tex certification** for eri silk.
- Oeko-Tex is a certification for textiles that ensures that no harmful substances were used in the product.
- Eri silk is **called ahimsa or peace silk** because it is harvested without harming or killing the silkworm.

Practice Questions

1. Consider the following statements regarding semiconductors:

1. The resistance of a semiconductor is directly proportional to its temperature.
2. Most semiconductors are manufactured using lithium, nickel and copper as primary materials.
3. The India Semiconductor Mission is implemented by the Ministry of Electronics and Information Technology (MEITY).

How many of the above statements are correct ?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

2. Consider the following statements regarding blue bonds:

1. They are debt instruments specifically linked to projects in water-based ecosystems.
2. India's first blue bonds will be launched by the Ministry of Environment, Forest, and Climate Change (MoEFCC).
3. Seychelles was the first country in the world to launch blue bonds.

Which of the above statements are correct ?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3

(d) 1, 2 and 3

3. Consider the following statements regarding the Anusandhan National Research Foundation (ANRF):

1. It aims to increase India's spend on R&D expenditure as a portion of its GDP.
2. The Union Minister of Science and Technology will act as its ex-officio Chairman.
3. The union govt. aims to share the funding of NRF with the private sector on a 50:50 basis.

How many of the above statements are INCORRECT ?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

4. Consider the following ports located in Asia and Europe:

1. Jebel Ali
2. Chabahar
3. Haifa
4. Piraeus
5. Marseille
6. Rotterdam
7. Tel Aviv

Which of the above ports will be connected by the proposed India-Middle East-Europe Economic Corridor (IMEC) ?

- (a) 1, 2, 3, 4 and 7
- (b) 2, 4, 5 and 6
- (c) 1, 3, 4, 6 and 7
- (d) 1, 3, 4 and 6

5. With reference to Indian artisanal products, the terms "Eri", "Muga", and "Tussar" refer to:

- (a) Varieties of cotton textiles found in the Indian subcontinent
- (b) Tribal metalcraft from the Chota Nagpur plateau region
- (c) Types of silk that are traditionally produced in India
- (d) Indigenous types of high-quality leather made in India

Answers:

1. A 2. C 3. B 4. D 5. C

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