

UNDERSTAND UPSC

GS II

SYLLABUS: BILATERAL AGREEMENTS INVOLVING INDIA.

INDIA–MIDDLE EAST–EUROPE ECONOMIC CORRIDOR (IMEC)

THE HINDU, PG.NO: 9.

News: "A mixed report card for the IMEC".

About IMEC:

- With IMEC, India aims to position itself as a global supply chain alternative.
- The proposed corridor is expected to **reduce the transit time between its eastern and western (beyond Haifa) nodes by 40%, and costs by 30%**, compared to transportation via the Suez Canal.
- **IMEC involves** Rail connectivity, Shipping lines, Energy pipelines, High-speed data cables.
- **Two corridors under IMEC:**
 - **Eastern:** Connects India to Arabian Gulf.
 - **Northern:** Connects Arabian Gulf to Europe.

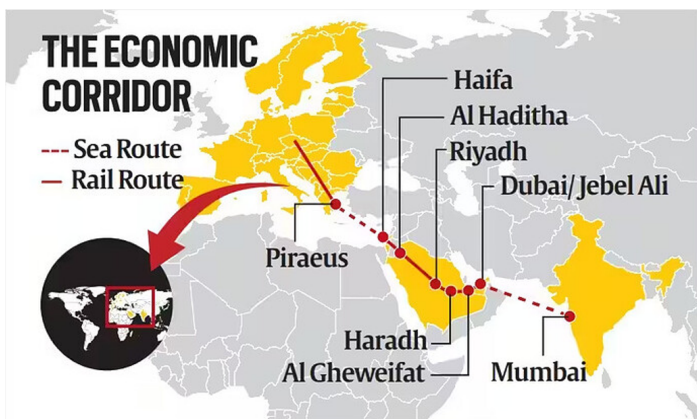
Ongoing Status:

- **Northern End:** Conflict between Israel and Palestine engulfed crisis the whole of West Asia.
- **Eastern End:**
 - India signing **Comprehensive Economic Partnership Agreement (CEPA) with UAE**, led to faster pace of development.
 - India and the UAE launched the **Virtual Trade Corridor** (an integral part of the IMEC):
 - Reduction of administrative processes and time.
 - Reduction of logistics and transportation costs.
 - Ease of doing trade.

Opportunities for India:

- Current crisis on Northern part is to be seen as an opportunity for:
 - Prepare its **ports**.
 - Develop **specific economic zones** along the connectivity nodes.
 - Improve its **domestic logistics for seamless integration** with the IMEC.
 - Enhancing its **manufacturing competitiveness**.

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ENVIRONMENT

PRE-CONTEXT

CARBON MARKETS

THE HINDU, PG.NO: 14.

News: "In Baku breakthrough, COP clears carbon credit trade".

About Carbon Markets:

- Carbon markets promote climate action by enabling the **trading of carbon credits**, which are earned through reducing or removing GHGs from the atmosphere.
- Credits are achieved by actions like shifting from **fossil fuels to renewable energy sources and enhancing or conserving carbon-rich ecosystems** such as forests.

Emission control mechanisms:

- **2 methods:**
 - Perform, Achieve, Trade (**PAT**) method, setting targets for efficient use of energy to reduce emissions.
 - Carbon Market System.
- **India currently follows PAT method.**
- **Now India is making its transition from PAT** to its own carbon market system similar to European Union Emission Trading System (ETS).

PAT method:

- India launched this in 2012 as one of its eight missions comprising the **National Action Plan on Climate Change**.
- **Bureau of Energy Efficiency** is the regulator to reduce specific energy consumption in energy-intensive industries.
- It uses market-based mechanism where excess energy savings can be certified and traded.

Emission Trading (Cap and Trade):

- Market based approach to controlling emissions by setting emission caps for polluters.
- **Focus solely on emission ceilings**, no energy efficiency standards are considered.
- **Provides economic incentives** for reduction of emissions to polluters.
- **Energy Conservation (Amendment) Act of 2022** provided a statutory mandate for such a Carbon Credit Trading Scheme (CCTS).
 - Through this, India aims to align its climate commitments under the Paris Agreement with broader economic goals.
- **United Nations Carbon Offset Platform:** e-commerce platform where a company, an organization or a regular citizen can purchase units (carbon credits) to compensate greenhouse gas emissions.
- **Currently at Baku Summit COP29 common global standards** for carbon credit market is accepted, mechanism is yet to be finalised.

Issues associated with Carbon Markets:

- **No common global standards** for carbon credit market.
- **Inadequate accountability in credit generation**, leading to instances of greenwashing.
- **Authenticity of generated carbon credits concern** Eg. Double counting of carbon credits.
- **Absence of independent third-party verifiers** to assess the quality of carbon reduction projects.
- **High costs of establishing monitoring, reporting, and verification systems.**
- **Carbon Leakage:** product is cheaper in nature due to its country owing to less strict emission norms. This hurts the other nations export competitiveness for following strict emission norms.



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Clean Development Mechanism:

- One of the flexible mechanisms **Kyoto Protocol**.
- CDM allows **industrialised countries** to carry out **climate-friendly projects in developing countries**.
- **Certified Emission Reduction (CER) units** are awarded in return to industrialised nations.
- These CER units can be traded or used to meet their own emission reduction goals.
- By 2011, **India had become the world's second-largest supplier of these CER units**, following China.

India Nationally Determined Contributions: related to energy

- **Reduce emissions intensity** by 45% by 2030 from 2005 level.
- Generation of **50% of total electricity from non-fossil fuel sources** by 2030.

Bureau of Energy Efficiency (BEE)

- Statutory body under **Energy Conservation Act 2001**.
- Works under **Ministry of Power**.
- Primary objective of reducing energy intensity of the Indian economy.
- Assigns Energy codes for **Commercial buildings**.
- Develops **minimum energy performance standards** for equipment and appliances under Standards and Labelling.

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CARBON EMISSIONS

THE HINDU, PG.NO: 8.

News: "CO2 emissions set to rise 0.8% this year, India's contribution to go up by 4.6%".

Carbon Emissions:

- The **concentration of CO2 in the atmosphere** is 52% above pre-industrial levels.
- **Largest absolute contributions** to global fossil CO2 (carbon dioxide) emissions:
 - China (31%), United States (13%), India (8%), and the EU-27 (7%).
- **Global per-capita fossil CO2 emissions** in 2023 were 1.3 tonnes of carbon per person per year and 0.6 for India.
- **Global CO2 emissions from land-use, land-use change, and forestry (LULUCF)** averaged 1 billion tonnes of carbon per year.

Note: The above data is based on **Global Carbon Budget 2024**.

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GS III

SYLLABUS: INDIAN ECONOMY AND ISSUES RELATING TO GROWTH.

INFLATION

THE HINDU, PG.NO: 1.

News: "Food prices spur inflation to 6.2%".

About Monetary Policy Committee:

- **Type:** Statutory body under RBI Act 1934. (Established in 2016).
- **Urjit Patel committee** recommended the formation of MPC.
- **Constituted by:** Central Govt. where 3 members from RBI and 3 nominated by government (nominee must not be a government official).
- **Responsibilities & Functions of MPC:**
 - Entrusted with the responsibility of **deciding the different policy rates**, including MSF, Repo Rate (RR), Reverse Repo Rate (RRR), LAF etc.
 - To **ensure price stability** with sustainable growth.
 - Inflation targeting @ **4% with 2% buffer**.
 - Required to **meet at least four times in a year**.
 - **Decisions are taken by majority**, Governor has a casting vote in case of tie.
 - **RBI must publish half-early MPC report** explaining sources of inflation, forecast of 18 months ahead.
 - In case of failure, it should submit **report to Central Govt**.
- **Instruments of MPC:**
 - LAF, MSF, MSS, OMO (RR & RRR), CRR, SLR, Bank Rate.
- **Failure of MPC:** when average inflation is higher or lower than the desired limit for 3 consecutive quarters.

Challenges to Inflation Targeting:

- **Food inflation challenges:**
 - Monsoon dependent agriculture.
 - Lack of cold storage facilities for perishable goods.
 - Rising input costs.
- **Policy related Challenges:**
 - **Ineffective monetary policy transmission** shows implementation challenges in Banking system.
 - **Fiscal policy:** fiscal deficit remained above FRBM norms since 4 years, adding to increased inflation.
 - **Unemployment issues all year around.**
- **Global Challenges:**
 - Wars and Pandemics.
 - Disruption of Supply chains.
 - Foreign central bank Policies.
 - Climate change Eg. El Niño phenomenon, droughts.

Suggestions:

- **Food Inflation:**
 - Creation of Buffer stocks for essential food items.
 - Banning exports and imposing stock limits.
 - **Higher R&D allocation:** Climate smart agri- reduces Supply shocks.
 - **Rationalising Fertiliser subsidies:** ₹5T in 2022-23 needs to be reduced.
- **Policy measures:**
 - **Coordinated monetary and fiscal policy:** To tackle global disruptions Eg: Oilseeds, Cereals.
 - **Check to freebies:** instead promote rural investments, rural infrastructure, competitiveness in agriculture.
 - **Spending on Infrastructure:** increases multiplier effect Eg: During Covid India showed World how to manage inflation while protecting GDP growth.
 - **Different inflation targets:** Benefits different classes Eg: Food-3-4%.
 - **Improving Data quality and frequency:** AI based Data processing.

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BIO-TECH

PRE-CONTEXT

COMPUTATIONAL BIOLOGY

THE HINDU, PG.NO: 8.

News: "Team at Kolkata institute engineers bacteria to solve maths problems".

About Invention:

- **Bacteria can now decide if a number is prime and if an alphabet is a vowel**, such tasks previously done only by humans or computers.
- In general, organisms like dolphins, chimpanzees, octopuses, crows, and humans are generally considered intelligent. **Now, bacteria are also considered intelligent.**
- Engineered bacteria was a "**bactoneuron**" and the combination of bactoneurons behaved like a multicellular organism capable of abstract mathematics.

Applications:

- Biocomputers "**recognise the molecular patterns of cancer**" at its earliest stages.
- **Bacterial Computers** reducing the need for traditional silicon-based computers.
- **Localised treatments before tumours, diseases ever form.**
- Biochemical nature of intelligence.

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ECONOMY

PRE-CONTEXT

CORE INDUSTRIES

THE HINDU, PG.NO: 15 .

News: "A modest rebound:September industrial production up 3.1%."

Core Industries

- **8 core Industries of Indian economy:** they collectively represent 40% of total items included in the Index of Industrial Production(IIP).
- **Cement, Electricity, Coal, Crude Oil, Refinery products, Natural gas, Fertilisers, Steel.**
- **Highest weight in IIP** assigned to Petroleum Refinery products followed by Electricity and Steel.
- **Index of Industrial Production** released by **NSO**.

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DATA FROM TODAY'S NEWS PAPER

THE HINDU, PG.NO: 8.

Elderly and Non Communicable Diseases (NCDs)

News: "Debating the 'healthy longevity initiative'".

- **Older population (aged 60 years and above)** of India is currently the **world's second largest**.
- **NCDs are, for example**, cardiovascular diseases, cancer, chronic respiratory diseases and diabetes.
- **Growing burden of NCDs in India:** In 1990, NCDs caused 40% of Indian deaths, and this figure is projected to rise to 75% by 2030.

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Thank you!