



India-Middle East-Europe Corridor

For Prelims: India-Middle East-Europe Corridor, [G20 Summit](#), [Greenhouse Gas \(GHG\)](#), [Belt and Road Initiative \(BRI\)](#), Eurasian region, [SEZs \(Special Economic Zones\)](#).

For Mains: India-Middle East-Europe Corridor, its Significance for India and Challenges.

[Source: TH](#)

Why in News?

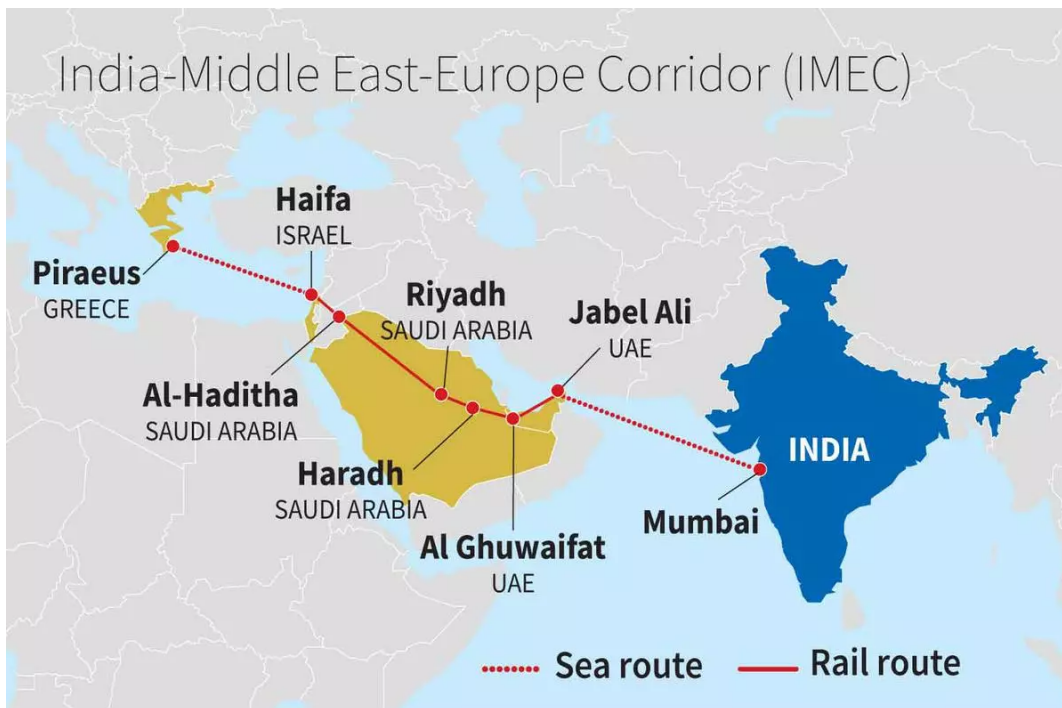
Recently, the India-Middle East-Europe Economic Corridor (IMEC) Project was signed at the [G20 Summit in New Delhi](#), which holds significant geopolitical and economic implications for India.

- The project forms part of the [Partnership for Global Infrastructure and Investment \(PGII\)](#). PGII is a values-driven, high-impact, and transparent infrastructure partnership to meet the **enormous infrastructure needs of low and middle-income countries**.

What is the India-Middle East-Europe Economic Corridor (IMEC) Project?

- **About:**
 - The proposed IMEC will consist of **Railroad, Ship-to-Rail networks** and Road transport routes extending across two corridors, that is,
 - **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**.

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- **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, Jabel Ali, and Abu Dhabi in the UAE as well as Dammam and Ras Al Khair ports in Saudi Arabia.
 - **Railway line will connect** Fujairah port (UAE) to Haifa port (Israel) via: Saudi Arabia (Ghuwaifat and Haradh) 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**.
 - It is expected to transform the integration of Asia, Europe, and the Middle East by facilitating trade and connectivity.
- **Significance:**
 - Upon completion, it would provide a “reliable and cost-effective cross-border ship-to-rail transit network to supplement existing maritime and road transports”.

What are the Geopolitical and Economic Implications of IMEC?

- **Geopolitical:**
 - **Thwart to China’s BRI:**
 - IMEC is seen as a **potential counter to China's [Belt and Road Initiative \(BRI\)](#)** in the [Eurasian](#) region.
 - It can serve to **counterbalance China's growing economic and political influence**, especially in regions with historically strong ties to the U.S.
 - **Integration Across Civilizations:**
 - The project can strengthen **ties and integration across continents and civilizations**.
 - It offers a **strategic opportunity for the U.S.** to maintain influence and reassure traditional partners amidst China's growing influence in the region..
 - **Breaking Pakistan's Overland Connectivity Veto:**
 - IMEC **bypasses Pakistan**, breaking its veto over **India's overland connectivity**

to the West, a hurdle persistently faced in the past.

- **Strategic Engagement with Arabian Peninsula:**
 - The corridor deepens **India's strategic engagement with the Arabian peninsula** by establishing enduring connectivity and **elevating political and strategic links** with nations in the region.
- **Promoting Intra-Regional Connectivity and Peace:**
 - IMEC has the potential to promote intra-regional connectivity and could help reduce **political tensions in the Arabian peninsula**.
 - It holds the prospect of becoming an "infrastructure for peace" in the region.
- **India's Strategic Role in Africa:**
 - The corridor's model **could be extended to Africa**, aligning with the US and EU's plan to develop a **Trans-African corridor**.
 - This signifies India's intent to strengthen its engagement with Africa and contribute to its infrastructure development.
- **Economic:**
 - **Enhanced Trade Opportunities**
 - IMEC presents a **transformative opportunity for India to boost economic growth** by enhancing its trade connectivity with key regions.
 - The route could **significantly reduce transit times**, making trade with Europe 40% faster compared to the Suez Canal maritime route.
 - **Stimulated Industrial Growth:**
 - The corridor will create an **efficient transport network for the seamless movement of goods**.
 - This will encourage industrial growth, particularly in regions connected to the corridor, as companies will find it easier to transport raw materials and finished products.
 - **Job Creation:**
 - As economic activities **expand due to improved connectivity**, there will be a surge in job opportunities across sectors.
 - The growth in trade, infrastructure, and allied industries will necessitate skilled and unskilled labor, promoting employment.
 - **Energy Security and Resource Access:**
 - The corridor can **facilitate secure energy and resource supplies**, especially from the Middle East.
 - Reliable access to these resources will stabilize India's energy sector and support its growing economy.
 - **Facilitating Special Economic Zones (SEZs):**
 - The corridor can be strategically leveraged to develop **SEZs (Special Economic Zones)** along its route. SEZs can attract foreign investment, promote manufacturing, and drive economic growth in these designated zones.

What are the Challenges to the India-Middle East-Europe Corridor (IMEC)?

- **Logistics and Connectivity Issues:**
 - Developing a **multimodal transport corridor** involving rail, road, and sea routes spanning multiple countries requires **complex logistical planning and coordination** among stakeholders.
 - Selecting the **most viable and cost-effective routes**, assessing the feasibility of rail and road connections, and ensuring optimal connectivity are key challenges.
- **Missing Rail Links and Construction:**
 - Significant portions of rail links are missing, **especially in the Middle East**, requiring substantial construction efforts and **investment to complete the rail network**.
- **Coordination among Multiple Countries:**
 - Coordinating efforts, policies, and regulations among multiple countries with diverse interests, legal systems, and **administrative procedures is a major challenge** in realizing this cross-continental corridor.
- **Potential Opposition and Competition:**
 - Opposition or competition from existing transport routes, especially Egypt's Suez Canal, which may see reduced traffic and revenue, **could pose challenges and diplomatic**

hurdles.

▪ **Cost and Financing:**

- Estimating and securing adequate financing for the construction, operation, and maintenance of the corridor is a significant challenge.
- The costs for development are estimated to be substantial, and funding sources need to be identified.
 - Initial estimates suggest that developing each of these IMEC routes could cost anywhere **between USD 3 billion to USD 8 billion.**

Way Forward

- Achieving technical compatibility and standardisation in terms of gauges, train technologies, container dimensions, and other critical aspects across different countries is vital for seamless operations.
- **Balancing the geopolitical interests of participating nations** and addressing potential political sensitivities, especially regarding Israel, is crucial for smooth implementation.
- **Addressing environmental impact concerns**, ensuring sustainability, and adhering to green and eco-friendly practices in construction and operation are critical aspects of the project.
- Implementing robust security measures to safeguard cargo and infrastructure from potential threats, theft, piracy, and other security risks is essential.

29th World Ozone Day

For Prelims: [World Ozone Day](#), Vienna Convention, [Montreal Protocol](#), Ozone Depleting Substances, [ICAP](#), Tropospheric Ozone, Kigali Amendment.

For Mains: India's Achievements in Montreal Protocol Implementation

Source: [PIB](#)

Why in News?

The **Ministry of Environment, Forest and Climate Change (MoEF&CC)** recently marked the **29th World Ozone Day**, an annual event dedicated to raising awareness about the **critical issue of ozone layer depletion and the global efforts to combat it.**

What is World Ozone Day?

▪ **About Ozone and Related Convention:**

- The **ozone layer**, located in the [stratosphere](#) **between 10 and 40 kilometers above Earth's surface**, shields us from harmful UV radiation.
 - This protective layer, known as **stratospheric ozone or good ozone**, prevents **adverse health effects like cataracts and skin cancer** and safeguards agriculture, forestry, and marine life.
 - However, **man-made [Ozone Depleting Substances](#)** have caused **ozone depletion in the stratosphere.**
- The international community recognized the need for action, **leading to the Vienna Convention in 1985** and the **subsequent Montreal Protocol in 1987.**

▪ **World Ozone Day:**

- **World Ozone Day** is observed on the **16th of September** each year, commemorates the signing of the [Montreal Protocol in 1987](#), a significant international treaty aimed at phasing out the production and consumption of Ozone Depleting Substances (ODS).
 - **Theme 2023:** "Montreal Protocol: Fixing the Ozone Layer and Reducing Climate Change"

What are India's Achievements in Montreal Protocol Implementation?

- **India, a signatory since June 1992**, has made significant strides in implementing the Montreal Protocol:
 - **Phase-out Success:** India successfully phased out **ODS like Chlorofluorocarbons, Carbon Tetrachloride, Halons, Methyl Bromide, and Methyl Chloroform** for controlled uses by **1st January, 2010**.
 - **Hydrochlorofluorocarbons (HCFCs) Phase-out:** HCFCs are currently being phased out, with Stage-I completed from 2012 to 2016 and **Stage-II in progress until the end of 2024**.
 - **Achieving Reduction Targets:** India exceeded its target, achieving a **44% reduction in HCFCs by 1st January, 2020**, compared to the baseline's 35%.
 - **The India Cooling Action Plan (ICAP):** Launched in **March 2019**, [ICAP](#) focuses on **reducing cooling demand, transitioning to alternative refrigerants**, enhancing energy efficiency, and technological advancement.
 - It aims to maximize socio-economic and environmental benefits through synergies with existing government programs.

Note

The **inclusion of [Hydrofluorocarbons \(HFCs\)](#) in the Montreal Protocol led to the Kigali Amendment**, with India ratifying it in September 2021. India's phasedown of HFC production and consumption, **starting from 2032**, aligns with the amendment's goals.

What is Tropospheric Ozone?

- **Tropospheric (or ground-level) ozone or bad ozone** is a **short-lived climate pollutant** that remains in the **atmosphere for only hours to weeks**.
 - It **does not have any direct emissions sources**, rather it is a compound formed by the interaction of sunlight with [volatile organic compounds \(VOCs\)](#) - including [methane](#) - and **nitrogen oxides (NOX)** emitted largely by human activities.
- Strategies to prevent the formation of tropospheric ozone are primarily based on **methane reductions and cutting the levels of atmospheric pollution arising from cars, power plants and other sources**.
 - The **Gothenburg Protocol** was established in **1999** to address pollutants that **cause acidification and ground-level ozone**.
 - It sets limits on air pollutants including **sulfur dioxide, nitrogen oxide, ammonia and volatile organic compounds** that are hazardous to human health and the environment.
 - It was updated in **2012** to include **particulate matter (PM) and black carbon** (as a component of PM) and to **include new commitments for 2020**.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q1. Which one of the following is associated with the issue of control and phasing out of the use of ozone depleting substances? (2015)

- (a) Bretton Woods Conference
- (b) Montreal Protocol
- (c) Kyoto Protocol
- (d) Nagoya Protocol

Ans: (b)

Q2. Consider the following statements: (2012)

1. Chlorofluorocarbons, known as ozone-depleting substances, are used
2. in the production of plastic foams
3. in the production of tubeless tyres
4. in cleaning certain electronic components
5. as pressurizing agents in aerosol cans

Which of the statements given above is/are correct?

- (a) 1, 2 and 3 only
- (b) 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

Ans: (c)

Samudra Prahari's Deployment to ASEAN

For Prelims: [Indian Coast Guard](#) , Samudra Prahari, Pollution Control Vessel, [ASEAN](#), Chetak Helicopter, Puneet Sagar Abhiyan, [UN Convention on the Law of the Sea, 1982](#), London Convention, [India-Norway Marine Pollution Initiative](#)

For Mains: Key Features of Samudra Prahari, International Initiatives Related to Marine Pollution.

Source: [PIB](#)

Why in News?

The [Indian Coast Guard Ship Samudra Prahari](#), a specialized **Pollution Control Vessel**, has embarked on an **overseas deployment to ASEAN countries** from 11th September 2023 to 14th October, 2023.

- The initiative was announced during the ASEAN Defence Minister Meeting Plus meeting in **Cambodia in November 2022**.
- During this deployment, the ship is scheduled to make **port calls in Bangkok(Thailand), Ho Chi Minh (Vietnam), and Jakarta(Indonesia)**.

What are the Key Features of Samudra Prahari?

- **About:**
 - The Indian Coast Guard Ship Samudra Prahari boasts **state-of-the-art pollution response**. It was **commissioned at Mumbai on October 9, 2010**.

▪ **Major Features:**

- The vessel is outfitted with **advanced pollution control gear**, including containment tools like **Hi-Sprint Booms and river booms to contain oil spills**, as well as oil recovery devices like **skimmers and side sweeping arms**, along with storage facilities within the **Indian Exclusive Economic Zone**.
 - The ship is also equipped with a **Chetak Helicopter in Pollution Response configuration**.
- It also possesses the **ability for unmanned machinery operation**.

Note:

An **oil spill is the release of a liquid petroleum hydrocarbon** into the environment, especially marine areas, due to human activity. The term is usually applied to marine oil spills, where oil is released into the ocean or coastal waters, but spills may also occur on land.

▪ **Activities:**

- As part of an overseas exchange program, the **ship has embarked 13 National Cadet Corps cadets to participate in "Puneet Sagar Abhiyan," an international outreach program** focused on beach clean-ups and similar activities in coordination with partner nations.



What are the International Initiatives Related to Marine Pollution?

- **UN Convention on the Law of the Sea, 1982** calls signatory states to develop a legal framework to **prevent, reduce and control pollution of the marine environment by dumping**.
 - **India** is a signatory to UNCLOS.
- The **International Convention for the Prevention of Pollution from Ships (MARPOL)** calls for **prevention of pollution of the marine environment** by ships from operational or accidental causes.
 - **India** is a signatory to MARPOL.
- The **London Convention and London Protocol** aims to protect the marine environment from pollution caused by the **dumping of wastes and other matter into the ocean**.

- The **London Convention was adopted in 1972** and entered into force in 1975. The **London Protocol was adopted in 1996** and entered into force in 2006.
- **India is not a participant in either of them.**
- **The India-Norway Marine Pollution Initiative:** India and Norway are committed to share experiences and competence, and **collaborate on efforts to develop clean and healthy oceans**, sustainable use of ocean resources and growth in the blue economy.

UPSC Civil Services Examination, Previous year Question (PYQ)

Prelims

Q1. Consider the following countries: (2018)

1. Australia
2. Canada
3. China
4. India
5. Japan
6. USA

Which of the above are among the 'free-trade partners' of ASEAN?

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

Ans: (c)

Q2. The term 'Regional Comprehensive Economic Partnership' often appears in the news in the context of the affairs of a group of countries known as (2016)

- (a) G20
(b) ASEAN
(c) SCO
(d) SAARC

Ans: (b)

Mains

Q. Evaluate the economic and strategic dimensions of India's Look East Policy in the context of the post-Cold War international scenario. **(2016)**

Q. What is oil pollution? What are its impacts on the marine ecosystem? In what way is oil pollution particularly harmful for a country like India? **(2023)**

Deoxygenation in Riverine Ecosystems

For Prelims: Deoxygenation in Riverine Ecosystems, [Artificial Intelligence \(AI\)](#), [Greenhouse Gas Emissions \(GHG\)](#).

For Mains: Deoxygenation in Riverine Ecosystems and its implications on Environment and Human Health.

Source: [DTE](#)

Why in News?

Recently, in a study published in **Nature Climate Change** by Pennsylvania State University, the US, has highlighted the issue of **Deoxygenation in Riverine Ecosystems**.

- The team of Researchers utilized [Artificial Intelligence \(AI\)](#) to analyze water quality data from nearly 800 rivers across the United States and Central Europe.
- **Riverine water temperature and dissolved oxygen levels** are essential measures of water quality and ecosystem health.

What is Deoxygenation in Water Bodies?

- **About:**
 - Deoxygenation in water bodies **refers to the reduction or depletion of dissolved oxygen levels** in aquatic environments, such as rivers, lakes, oceans, and other bodies of water.
 - This decrease in oxygen availability can occur due to **various natural and anthropogenic factors**, disrupting the delicate balance necessary for the survival of aquatic organisms.
- **Impacts of Deoxygenation:**
 - **Aquatic Life:** Deoxygenation can **result in "dead zones"** where fish and marine life struggle to survive due to lack of oxygen. In severe cases, it can lead to mass fish kills and other marine organism die-offs.
 - Excessive nutrient runoff and pollution from industrial and urban sources have caused **oxygen depletion in the Baltic Sea**. The resulting **dead zones** have impacted fisheries and biodiversity.
 - Coastal areas, like the **Gulf of Mexico**, often have **dead zones** in the summer.
 - **Shifts in Species Distribution:** Some species may **move to other areas with higher oxygen levels**, disrupting the ecosystem's balance and potentially leading to the dominance of invasive species.
 - **Human Health:** Deoxygenation affects drinking water quality, potentially making it unsafe for human consumption if pollutants and contaminants are present in low-oxygen waters.
 - **Economic Impact:** Reduced fish populations impact fisheries, leading to **economic losses for fishing industries**. Additionally, diminished aesthetics and recreational opportunities due to impacted water quality **can negatively affect tourism**.

What are the Key Highlights of the Study?

- **Warming and Oxygen Loss:**
 - Rivers are **warming up and deoxygenating faster** than oceans, which could have serious **implications for aquatic life** -- and the lives of humans.
 - A significant portion of rivers, approximately 87%, experienced **warming, while 70% suffered from oxygen loss**. This indicates a pervasive issue affecting river ecosystems.
- **Urban vs. Rural Impact:**
 - Urban rivers demonstrated rapid warming, contrasting with rural rivers that showed slower warming but faster deoxygenation.
 - This differentiation **emphasizes the varying impacts in different environments**.
- **Greenhouse Gas Emissions and Toxic Metal Release:**
 - Deoxygenation is a driver for [Greenhouse Gas Emissions \(GHG\)](#) and the release of toxic metals, amplifying the multifaceted consequences of this phenomenon.

▪ **Future Projections:**

- Within the next 70 years, river systems, especially in the **American South, are likely** to experience periods with **such low levels of oxygen** that the rivers could "induce acute death" for **certain species of fish and threaten aquatic diversity** at large.
- Future deoxygenation rates are estimated to be 1.6 to 2.5 times higher than historical **rates across all studied rivers.**

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. The acidification of oceans is increasing. Why is this phenomenon a cause of concern? (2012)

1. The growth and survival of calcareous phytoplankton will be adversely affected.
2. The growth and survival of coral reefs will be adversely affected.
3. The survival of some animals that have phytoplanktonic larvae will be adversely affected.
4. The cloud seeding and formation of clouds will be adversely affected.

Which of the statements given above is/are correct?

- (a) 1, 2 and 3 only
(b) 2 only
(c) 1 and 3 only
(d) 1, 2, 3 and 4

Ans: (a)

PM Vishwakarma Scheme

Source: PIB

Why in News?

Recently, the Prime Minister of India has launched the '**Prime Minister (PM) Vishwakarma Scheme**' on the occasion of **Vishwakarma Jayanti**.

What is the PM Vishwakarma Scheme?

▪ **About:**

- The scheme is designed to **uplift traditional artisans and craftspeople** engaged in various occupations like **blacksmithing, goldsmithing, pottery, carpentry, and sculpting**, with a focus on preserving cultural heritage and integrating them into the formal economy and global value chains.
- It will be implemented as a **Central Sector Scheme**, fully funded by the Government of India.

▪ **Ministry:**

- **Ministry of Micro, Small and Medium Enterprises (MoMSME)** is the Nodal Ministry for the Scheme.
- The Scheme will be jointly implemented by the MoMSME, the Ministry of Skill Development and Entrepreneurship and the Department of Financial Services, Ministry of Finance, Government of India.

▪ **Features:**

- **Recognition and Support:** Artisans and **craftspeople enrolled in the scheme will**

receive a **PM Vishwakarma certificate** and an identity card.

- They will also be eligible for collateral-free credit support of up to Rs 1 lakh (first tranche) and Rs 2 lakh (second tranche) at a concessional interest rate of 5%.
- **Skill Development and Empowerment:** The Scheme has been allocated a budget ranging from **Rs 13,000 crore** for five financial years from 2023-2024 to 2027-2028.
 - The scheme offers a stipend of **Rs 500 for skill training and Rs 1,500** for the purchase of modern tools.
- **Scope and Coverage:** The scheme encompasses **18 traditional trades across both rural and urban areas.**
 - These trades encompass carpenters, boat-makers, blacksmiths, potters, sculptors, cobblers, tailors, and more.
- **Registration and Implementation:** Registration for the Vishwakarma Yojana can be completed at **common services centers in villages.**
 - While the central government will provide funding for the scheme, state governments' support will also be sought.
- **Objectives:**
 - To ensure that artisans are seamlessly integrated into both domestic and global value chains, thus enhancing their market access and opportunities.
 - Preservation and promotion of **India's rich cultural heritage** of traditional crafts.
 - Assisting artisans in **transitioning to the formal economy** and integrating them into global value chains.
- **Significance:**
 - Vishwakarmas (Traditional Artisans) play a critical role in society regardless of technological advancements.
 - There is a need to recognize and support these artisans and integrate them into the global supply chain.

What are the Government Initiatives for the Upliftment of Artisans?

- [Ambedkar Hastshilp Vikas Yojana](#)
- [Mega Cluster Scheme](#)
- [National Handicraft Development Programme](#)
- [Comprehensive Handicrafts Cluster Development Scheme](#)
- [Export Promotion Council for Handicrafts](#)
- [One District One Product](#)
- [Atmanirbhar Hastshilpkar Scheme.](#)

Disability Certificate for Sickle Cell Patients

[Source: TH](#)

Why in News?

A plan to issue **permanent disability certificates for Sickle Cell Disease (SCD) patients** above the age of 5 years has been stuck in a dilemma between three Union Ministries (Health, Social Justice and Empowerment, Tribal Affairs) for nearly three years.

What Causes Delays in Issuing Permanent Disability Certificates for SCD?

- After SCD was included in the list of disabilities **under the Rights of Persons with Disabilities Act, of 2016**, the Department of Empowerment of Persons with Disabilities (DEPwD) increased the validity of disability certificates for SCD patients **from one year to three years**, but still required a **minimum of 25% disability**.
- The **Ministry of Health and Family Welfare**, which is in charge of setting the **criteria and rules** for the certificates.
- The **Ministry of Social Justice and Empowerment issues the certificates**, while the **Ministry of Tribal Affairs advocates for the rights of SCD patients**.
- The Parliamentary Standing Committee on Empowerment of Women noted that SCD is a "**lifelong illness**" with a **blood and bone marrow transplant** being the only cure, "which very few people, especially among the tribal population, can undertake."
 - They urged the government to expedite the process of issuing permanent or longer-term certificates for SCD patients.
- The **Ministry of Health and Family Welfare** is expected to release a report on the issue by October 2023.

What is Sickle Cell Disease (SCD)?

- **About:**
 - SCD is a group of inherited [red blood cell disorders](#). In SCD, the red blood cells become hard and sticky and look like a **C-shaped farm tool called a "sickle."**
- **Symptoms:**
 - Symptoms of sickle cell disease can vary, but some common symptoms include:
 - **Chronic Anaemia:** leading to fatigue, weakness, and paleness.
 - **Painful episodes** (also known as sickle cell crisis): these can cause sudden and intense pain in the bones, chest, back, arms, and legs.
 - **Delayed growth and puberty**
- **Treatment:**
 - **Blood Transfusions:** These can help relieve anaemia and reduce the **risk of pain crises**.
 - **Hydroxyurea:** This is a medication that can help **reduce the frequency of painful episodes** and prevent some of the long-term complications of the disease.
 - It can also be treated by **bone marrow or [stem cell transplantation](#)**
- **Government Initiatives to Tackle SCD:**
 - The **National Sickle Cell Anemia Eradication Mission** aims to eliminate sickle cell anemia from **India by 2047**.
 - The government released technical operational guidelines for the **prevention and control of sickle cell anaemia in 2016**.
 - Integrated centres have also been established in **22 tribal districts for treatment and diagnosis**.
 - The [State Haemoglobinopathy Mission](#) has been established in **Madhya Pradesh** to address the challenges in screening and management of the disease.
 - [Anaemin Mukh Bharat Strategy](#).

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. Consider the following statements in the context interventions being undertaken under Anaemin Mukh Bharat Strategy :

1. It provides prophylactic calcium supplementation for pre-school children, adolescents and pregnant women.
2. It runs a campaign for delayed cord clamping at the time of child-birth.
3. It provides for periodic deworming to children and adolescents.
4. It addresses non-nutritional causes of anaemia in endemic pockets with special focus on malaria, hemoglobinopathies and fluorosis.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Ans: (c)

Exp:

Interventions of Anaemia Mukh Bharat:

- Not Prophylactic calcium supplementation but **Prophylactic Iron and Folic Acid Supplementation** is provided to children, adolescents and women of reproductive age and pregnant women irrespective of anemia. **Hence, statement 1 is not correct.**
- Appropriate Infant and Young Child Feeding (IYCF) with emphasis on adequate and age-appropriate complementary foods for children 6 months and above.
- Increase intake of iron-rich, protein-rich and vitamin C-rich foods through dietary diversification/quantity/frequency and food fortification
- **Promoting practice of delayed cord clamping** (by at least 3 minutes or until cord pulsations cease) in all health facility deliveries followed by early initiation of breastfeeding within 1 hour of birth. **Hence, statement 2 is correct.**
- **Bi-annual mass deworming for children in the age groups between 1-19 years** is carried out every year under National Deworming Day (NDD) programme. **Hence, statement 3 is correct.**
 - The Anemia Mukh Bharat, also integrates deworming of women of reproductive age and for pregnant women as part of the NDD strategy.
- **Addressing non-nutritional causes of anemia in endemic pockets**, with special focus on malaria, haemoglobinopathies and fluorosis.
- **Hence, statement 4 is correct.**

Ayushman Bhav Campaign

Source: TH

Why in News?

In a move towards achieving **Universal Health Coverage (UHC)** and ensuring healthcare for all, the President of India virtually launched the **Ayushman Bhav campaign** and the **Ayushman Bhava portal**.

- This initiative aims to deliver healthcare services to the **last mile and consolidate access and affordability for underserved populations.**
- The campaign also raises awareness about vital health schemes and diseases, leveraging **India's digital inclusion efforts to extend healthcare accessibility.**
- The 'Ayushman Bhav' campaign will be implemented during the '**Seva Pakhwada**' embodying a **whole-of-nation and whole-of-society approach.**

Note:

- The Seva Pakhwada is a two-week initiative (running from September 17th to October 2nd, 2023) that aims to outreach essential health services programs at the state level.

How Does Ayushman Bhava Transform India's Healthcare Landscape?

- **Universal Health Coverage (UHC) Goal:**
 - The campaign adopts a collaborative, multi-ministerial approach.
 - Ayushman Bhava aligns with the motto of "**Sabka Saath Sabka Vikas**" (**Together with All, Development for All**).
 - This philosophy underscores inclusivity, leaving no one behind in healthcare access.
- **Three Key Components of Ayushman Bhava:**
 - **Ayushman - Apke Dwar (AAD) 3.0:** AAD 3.0 will enable eligible beneficiaries to **create Ayushman cards for himself/herself/any of the family members**.
 - This streamlines healthcare access and benefits.
 - **Ayushman Melas at HWCs and CHCs:**
 - **Health Melas and Medical Camps** are established weekly at Health and Wellness Centres (HWCs) and Community Health Clinics (CHCs).
 - They prioritize the delivery of super-specialty healthcare services, including **non-communicable disease** screenings, tele-consultations, free medicines, and diagnostics.
 - **Ayushman Sabhas:**
 - Ayushman Sabha is a community-level assembly, **led by the Village Health and Sanitation Committee (VHSNC) in rural areas or the Ward Committee/Municipal Advisory Committee (MAS) in urban wards**.
 - Its primary mission is to ensure comprehensive health coverage and optimal healthcare service delivery.
- **Ayushman Gram Panchayats:** [Gram Panchayats](#) that successfully meet their healthcare objectives will attain the status of **Ayushman Gram Panchayats**.
 - This encourages local participation and dedication.

What are the Recent Government Initiatives Related to Healthcare?

- [National Health Mission](#)
- [Ayushman Bharat](#)
- [Pradhan Mantri Jan Arogya Yojana \(AB-PMJAY\)](#)
- [National Medical Commission](#)
- [PM National Dialysis Programme](#)
- [Janani Shishu Suraksha Karyakram \(JSSK\)](#)
- [Rashtriya Bal Swasthya Karyakram \(RBSK\)](#)

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Which of the following are the objectives of 'National Nutrition Mission'? (2017)

1. To create awareness relating to malnutrition among pregnant women and lactating mothers.
2. To reduce the incidence of anaemia among young children, adolescent girls and women.
3. To promote the consumption of millets, coarse cereals and unpolished rice.
4. To promote the consumption of poultry eggs.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 1, 2 and 3 only
- (c) 1, 2 and 4 only
- (d) 3 and 4 only

Ans: (a)

Exp:

- National Nutrition Mission (POSHAN Abhiyaan) is a flagship programme of the Ministry of Women and Child Development, GoI, which ensures convergence with various programmes like Anganwadi services, National Health Mission, Pradhan Mantri Matru Vandana Yojana, Swachh-Bharat Mission, etc.
- The goals of National Nutrition Mission (NNM) are to achieve improvement in nutritional status of children from 0-6 years, adolescent girls, pregnant women and lactating mothers in a time bound manner during the next three years beginning 2017- 18. **Hence, 1 is correct.**
- NNM targets to reduce stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and reduce low birth weight of babies. **Hence, 2 is correct.**
- There is no such provision relating to consumption of millets, unpolished rice, coarse cereals and eggs under NNM. Hence, 3 and 4 are not correct.
- **Therefore, option (a) is the correct answer.**

Boosting Rubber Cultivation in Northeastern India

[Source: TH](#)

Why in News?

The [Rubber Board](#), in partnership with the **Central government and the Automotive Tyre Manufacturers' Association**, is spearheading a project to **increase the area dedicated to natural rubber in the [Northeastern States](#)**, excluding Sikkim but including West Bengal.

- Tyre manufacturers, the primary consumers of rubber, have committed **₹1,000 crore to this five-year project that started in 2021.**

What is the Current Rubber Landscape in India?

- **About Natural Rubber:**
 - Natural rubber is a versatile and essential raw material derived from the **latex or milky sap of certain plant species**, primarily the rubber tree, scientifically known as *Hevea brasiliensis*.
 - This latex contains a **complex mixture of organic compounds**, with the primary component being a polymer called [polyisoprene](#).
- **Growing Conditions:**
 - Tropical climate with annual rainfall of **2000 - 4500 mm** is suited for cultivation.
 - It requires **deep and lateritic fertile soil with an acidic pH of 4.5 to 6.0** and highly deficient in available phosphorus.
 - Minimum and maximum temperature should be ranged from **25 to 34°C with 80 % relative humidity is ideal for cultivation.**
 - Regions prone to heavy winds should be avoided.
 - Bright sunshine amounting to about 2000 hours per annum **at the rate of 6 hours per day through all the months.**
- **Rubber Production and Consumption:**
 - India is **currently the world's fifth largest producer of [natural rubber](#)** while it also remains the second biggest consumer of the material globally. (About **40% of India's total natural rubber consumption is currently met through imports**)
- **Rubber Distribution:**
 - As of now, India boasts approximately **8.5 lakh hectares of rubber plantations.**
 - Major rubber producing states include: **Kerala, Tamil Nadu, Tripura, Assam.**

- The lion's share of this rubber farming, nearly **5 lakh hectares**, is concentrated in the southern states of Kerala and the Kanyakumari district of Tamil Nadu.
- Additionally, **Tripura contributes around 1 lakh hectares** to the rubber production landscape

▪ **Major Applications:**

- **Tyre Manufacturing:** Rubber is a key component in tire production due to its excellent grip and wear resistance.
- **Automotive Parts:** Used in seals, gaskets, hoses, and various components for vehicles.
- **Footwear:** Commonly used in shoe soles for its cushioning and slip-resistant properties.
- **Industrial Products:** Found in conveyor belts, hoses, and machinery components.
- **Medical Devices:** Used in gloves, syringe plungers, and medical equipment.
- **Consumer Goods:** Used in products like balloons, erasers, and household gloves.
- **Sporting Goods:** Found in items like tennis balls, golf balls, and protective gear.

What is a Rubber Board?

- The **Rubber Board is a statutory organization constituted under Section (4) of the Rubber Act, 1947** and functions under the administrative control of the Ministry of Commerce and Industry.
- The **Board is headed by a Chairman appointed by the Central Government** and has 28 members representing various interests of the natural rubber industry.
 - The Board's headquarters is located at Kottayam in Kerala.
- The Board is responsible for the development of the rubber industry in the country by assisting and encouraging **research, development, extension and training activities related to rubber.**

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. Which one of the following groups of plants was domesticated in the 'New World' and introduced into the 'Old World'? (2019)

- (a) Tobacco, cocoa and rubber
- (b) Tobacco, cotton and rubber
- (c) Cotton, coffee and sugarcane
- (d) Rubber, coffee and wheat

Ans: (a)

Q. Match List-I with List-II and select the correct answer using the code given below the Lists: (2008)

	List-I (Board)		List-II (Headquarters)
A.	Coffee Board	1.	Bengaluru
B.	Rubber Board	2.	Guntur
C.	Tea Board	3.	Kottayam
D.	Tobacco Board	4.	Kolkata

Code: A B C D

- (a) 2 4 3 1
- (b) 1 3 4 2
- (c) 2 3 4 1
- (d) 1 4 3 2

Rapid Fire Current Affairs

Global Impact of Lead Exposure on Cardiovascular Health

- A recent study published in *The Lancet Planetary Health journal* reveals that **lead** exposure had a significant role in causing **cardiovascular deaths** worldwide.
 - In 2019, approximately **5.5 million people succumbed to cardiovascular diseases** linked to lead exposure, comprising 30% of all global cardiovascular deaths.
- **Low- and middle-income countries (LMICs)** bore the brunt of lead exposure-related health impacts, with about **95% of the affected population residing in these regions**.
 - Despite the elimination of leaded petrol, **LMICs witnessed six times more deaths from cardiovascular diseases** than high-income countries.
 - **Nations with the highest lead exposure burdens include** Iran, Afghanistan, Yemen, Peru, Vietnam, the Philippines, and parts of Central Africa.
- Apart from cardiovascular disease, lead exposure is associated with **chronic kidney disease and developmental intellectual disabilities**.
 - Lead exposure resulted in the loss of **765 million Intelligence quotient (IQ) points** among children under five, with an **80% higher loss in LMICs compared to previous estimates**.
- The economic costs of lead exposure, including IQ loss in children and cardiovascular disease deaths, **amounted to USD 6 trillion globally in 2019, or 7% of the global GDP**.

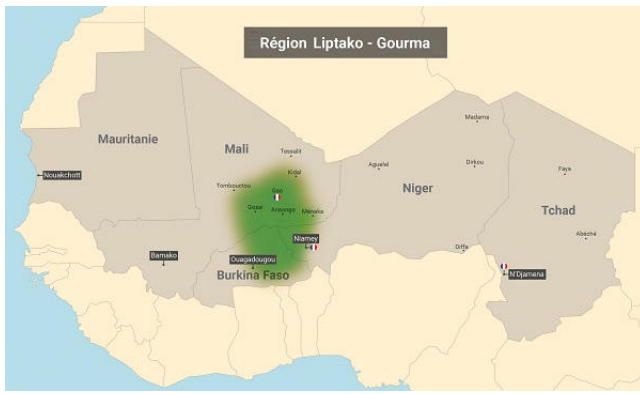
Read more: [Lead Poisoning](#)

Operation Sajag

- '**Operation Sajag**' was conducted on September 18, 2023, by the **Indian Coast Guard (ICG)** along the west coast.
 - 'Operation Sajag' is a monthly, day-long drill that serves as a continuous feedback loop. The drill's primary goals are to revalidate coastal security mechanisms and raise awareness among sea-going fishermen.
 - The drill involved extensive document verification and crew pass checks for all fishing boats, barges, and crafts at sea.
- ICG was established in **August 1978 by the Coast Guard Act, 1978** as an **independent Armed force of India**.
 - ICG is the **fourth largest Coast Guard in the world**, it has played a significant role in securing the Indian coasts and enforcing regulations in the **maritime zones of India**.
- To fortify coastal security, the ICG has introduced various measures, including the issuance of **biometric cards for fishermen, implementation of colour coding for fishing boats based on state, coastal mapping**, and training of marine police personnel.

Read more: [Indian Coast Guard](#)

Mali, Niger and Burkina Faso Signed a Mutual Defence Pact



Recently, ministerial delegations from three [Sahel Countries](#), i.e., **Mali, Niger and Burkina Faso** announced a mutual defense pact at Mali's Capital Bamako.

- It aims at establishing an architecture of Collective Defence and Mutual Assistance among the three countries.
- The Pact has been signed **under the provisions of Liptako-Gourma Charter**, which established the alliance of Sahel states.
- The region of **Liptako-Gourma includes the border areas of Mali, Burkina Faso, and Niger**, where these countries meet.
- The Alliance will be a combination of Military and Economic efforts of the three countries, which is largely targeted towards fighting terrorism and Jihadism.
- The pact also assumes significance in the wake of West African Regional Grouping **ECOWAS** threatening to attack Niger over the [coup](#) that happened in the country.

Read More :- [ECOWAS](#)

Funding Challenges for Indian Space Start-Ups

There have been rising concerns and issues with respect to funding mechanisms of space start-ups, marring the growth of a prospective sector.

- **The Space sector** can grow up to 44 Billion dollars over the next 10 years from the current value of 8 billion dollars, as per the Director of [INSPACe](#).
- Government **should consider setting up soft funds and additional incentives** to propel the growth of the space sector, along the lines of [Start Up India Scheme](#) etc.
- Another concern that arises is that **95% of the equipment required for space sector manufacturing needs to be imported** and it may take India another 10 years to attain self-sufficiency.
- India's Space Sector has already been witnessing **rapid growth as the IN-SPACe portal has registered around 420 start-ups until now.**
- **India's Draft Space Activities Bill, 2017 and Indian Space Policy, 2023** is slated to provide much needed push and vigour to the burgeoning sector in the near time, if implemented effectively.

Read More:- [Draft Space Activities Bill.2017](#) and [Indian Space Policy.2023](#)

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