

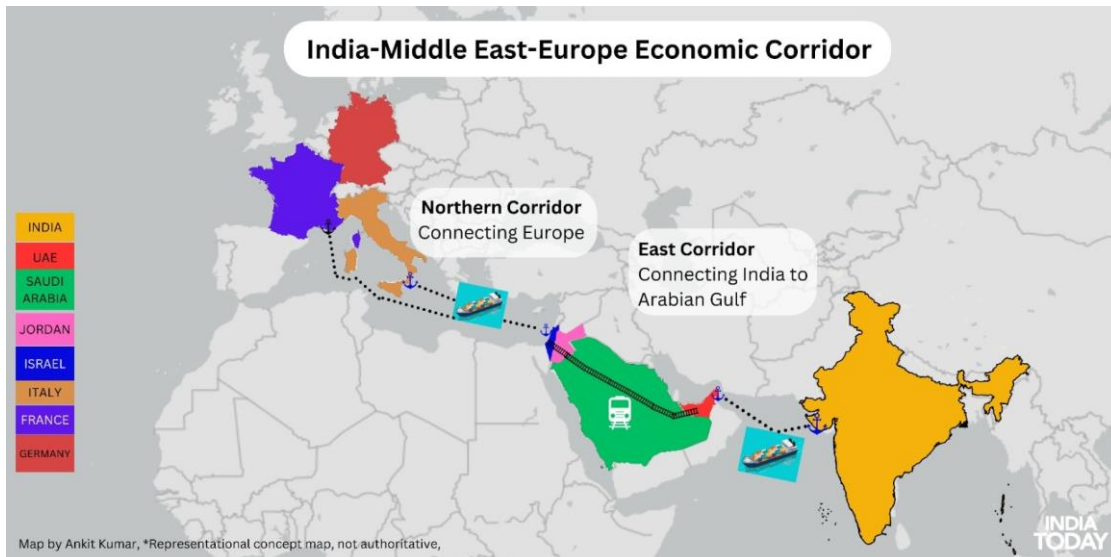


11 September, 2023

## India-Middle East-Eastern Europe Economic Corridor

**Context:** Prime Minister Narendra Modi has declared the initiation of a mega economic corridor connecting India, the Middle East, and Europe.

- The India-Middle East-Europe Economic Corridor (IMEC) was announced by Prime Minister Narendra Modi at the G20 India Summit.
- IMEC aims to establish economic connectivity between India, the Middle East, and Europe.
- It will address obstacles created by Pakistan's denial of overland access and China's connectivity plans in the region.
- IMEC includes an Eastern Corridor linking India to the Gulf region and a Northern Corridor connecting the Gulf region to Europe.
- The corridor involves railway, ship-rail transit, and road transport routes.
- The MOU on IMEC was signed by India, USA, Saudi Arabia, UAE, European Union, Italy, France, and Germany.
- Better connectivity is seen as a means to increase trade and build trust among nations.
- The G20 Delhi Declaration addressed contentious issues like Ukraine and acknowledged the impact of conflicts on global economic distress.



### Project: A Green and Digital Bridge Across Continents and Civilizations

- The rail and shipping corridor is a part of the Partnership for Global Infrastructure Investment (PGII), which involves G7 nations collaborating to fund infrastructure projects in developing nations.
- PGII is viewed as a response to China's Belt and Road Initiative, a massive global infrastructure program.
- The corridor's primary objective is to facilitate increased trade among the participating countries, including the trade of energy products.
- It is considered a substantial and ambitious countermeasure to China's infrastructure program, which seeks to enhance China's economic connectivity with the world.
- The corridor will consist of various components, including a railway connection, an electricity cable, a hydrogen pipeline, and a high-speed data cable.

### Need

- **Increased Prosperity:** The corridor is expected to enhance prosperity among participating countries by facilitating the flow of energy and digital communications.
- **Infrastructure Development:** It aims to address the infrastructure deficit in lower- and middle-income nations, essential for their economic growth.
- **Regional Stabilization:** The project could help reduce turbulence and insecurity originating from the Middle East, contributing to regional stability.

The project is appealing to both the participating nations and the global community due to its characteristics:

- **Transparency:** The project is conducted openly and transparently.
- **High Standards:** It adheres to high standards of development and governance.
- **Non-Coercive Nature:** It does not involve coercive tactics, making it more acceptable internationally.

## Face to Face Centres





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## Artefacts at Bharat Mandapam Cultural Corridor

**Context:** The Corridor of G20 venue was studded with cultural pieces from all the G20 countries.

A few artefacts from the corridor are listed below:

- **Manuscripts of the Rig Veda:**
  - Time Period: Ancient
  - Country of Origin: India
  - Description: Ancient manuscripts of the Rig Veda, one of the oldest sacred texts of Hinduism.
  - Significance: Represents India's rich religious and cultural heritage.
- **An anamorphic digital image of the Mona Lisa:**
  - Time Period: 16th century (Painting)
  - Country of Origin: France
  - Description: A digital representation of Leonardo da Vinci's famous painting, the Mona Lisa.
  - Significance: Showcases the iconic artwork from France's cultural legacy.
- **A rare copy of the Magna Carta from the United Kingdom:**
  - Time Period: 1215 (Document)
  - Country of Origin: United Kingdom
  - Description: An original copy of the historic Magna Carta, signed in 1215, emphasizing rights and liberties.
  - Significance: A symbol of the United Kingdom's contribution to the development of constitutional law.
- **Certified original copies of the US' Charters of Freedom:**
  - Time Period: 18th century (Documents)
  - Country of Origin: United States
  - Description: Original documents, including the Declaration of Independence, Constitution, and Bill of Rights.
  - Significance: Highlights the United States' foundational principles of democracy and freedom.
- **Panini's grammar treatise "Ashtadhyayi" from India:**
  - Time Period: Around 500 BCE (Text)
  - Country of Origin: India
  - Description: Panini's Ashtadhyayi, a linguistic text explaining the structure and rules of Sanskrit.
  - Significance: Reflects India's linguistic heritage and ancient scholarly contributions.
- **Bhimbhetka cave paintings from Madhya Pradesh in digital format:**
  - Time Period: Prehistoric
  - Country of Origin: India
  - Description: Digital representations of ancient cave paintings from Bhimbhetka, Madhya Pradesh, India.
  - Significance: Depicts India's prehistoric artistic expressions and cultural richness.
- **Gutenberg Bible:**
  - Time Period: 15th century
  - Country of Origin: Germany
  - Description: The earliest book printed in 1455 in Mainz, Germany, using movable type.
  - Significance: A landmark in the history of printing and an iconic cultural treasure.
- **Abrahamic Family House:**
  - Time Period: Modern
  - Country of Origin: United Arab Emirates
  - Description: An interfaith complex located on Abu Dhabi's Saadiyat Island, promoting religious harmony.
  - Significance: Represents the UAE's commitment to interfaith dialogue and tolerance.
- **Kosode:**
  - Time Period: Pre-modern (Precise time varies)
  - Country of Origin: Japan
  - Description: A short-sleeved garment, a predecessor of the Kimono, representing Japan's traditional clothing.
  - Significance: Showcases Japan's rich textile and fashion heritage.
- **Fahua-lidded jar:**
  - Time Period: Ming dynasty (1368-1644)

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- Country of Origin: China
- Description: An artefact associated with the Ming dynasty, displaying intricate ceramic design.
- Significance: Highlights China's historical achievements in ceramic artistry.

## Global Biofuel Alliance

**Context:** PM Narendra Modi, alongside global leaders such as President Biden, President Lula da Silva of Brazil, Prime Minister Sheikh Hasina of Bangladesh, and Prime Minister Giorgia Meloni of Italy, launched the Alliance during the G-20 Summit.

- **Launch at G-20 Summit:** The Global Biofuels Alliance was launched at the G-20 Summit, focusing on biofuels' stable supply, affordability, and sustainability.
- **Climate Change Focus:** It aligns with efforts to combat climate change and fulfill commitments, with support from leaders like Prime Minister Modi and President Biden.
- **Renewable Energy:** Biofuels are renewable energy derived from biomass, contributing to a sustainable energy transition.
- **Global Cooperation:** The Alliance promotes global cooperation, market strengthening, and technical support for biofuel programs worldwide.
- **India's Initiative:** India's proposal accelerates biofuels' deployment and aligns with its efforts to reduce oil imports and achieve carbon neutrality by 2070.
- **Key to Energy Transition:** It plays a vital role in advancing alternative fuels and reducing carbon emissions on a global scale.

### Biofuels

- **Chemical Composition:** Biofuels contain hydrocarbons from biological sources.
- **Feedstock Variability:** Properties vary based on feedstock (e.g., biodiesel from vegetable oil).
- **Biochemical Conversion:** Produced through fermentation or transesterification.
- **Carbon Neutral:** CO<sub>2</sub> emissions balanced by feedstock absorption.
- **Energy Density:** Lower than fossil fuels, impacting performance.
- **Blending Ratios:** Mixed with conventional fuels for emissions control.
- **Octane and Cetane Ratings:** Affect engine performance and efficiency.
- **Cold Flow Properties:** Gelling issues in cold weather may require additives.
- **Water Content:** Hygroscopic nature necessitates water control.
- **Feedstock Sustainability:** Responsible sourcing crucial for environmental impact.
- **Engine Compatibility:** Some engines may need modifications.
- **Biodegradability:** Biofuels are biodegradable.
- **Emissions Reduction:** Lower carbon footprint compared to fossil fuels.

Generation	Definition	Source Material	Greenhouse Gas Emissions
1st	Produced from edible items like sugar, corn, starch	Corn, Sugarcane, Edible Plants	Higher carbon content and emit greenhouse gases
2nd	Produced from leftover food crops like rice husk, wood chips	Agricultural Residues, Non-edible Biomass	Greenhouse gas emissions lower than 1st generation biofuels
3rd	Produced from microorganisms like algae	Algae, Microorganisms	Carbon Neutral (CO <sub>2</sub> emitted equals CO <sub>2</sub> sequestered)
4th	Produced from genetically engineered crops like GM crops	Genetically Modified Crops	Carbon Negative (captures more CO <sub>2</sub> than emitted)

## Face to Face Centres







## NEWS IN BETWEEN THE LINES

### Spiny Lizard



**Spiny Lizard (Nilgiri Spiny Lizard):** A spiny lizard is a type of lizard characterized by its spiky or pointed scales on its body.

**Scientific Name:** "Salea horsfieldii."

**Habitat:** It is typically found in the Western Ghats region of India, particularly in the Nilgiri Hills.

**Appearance:** This lizard is characterized by its spiny and textured scales, which give it a unique appearance. The spines on its scales serve both as a form of protection and a distinguishing feature.

**Conservation Significance:** The presence of the Nilgiri Spiny Lizard in the South Wayanad Forest Division highlights the conservation significance of this region, as it is home to several unique and often rare species of reptiles.

**Biodiversity Hotspot:** The Western Ghats is recognized as a global biodiversity hotspot, making the presence of species like the Spiny Lizard crucial for the region's conservation efforts.

**Conservation Efforts:** Conservation initiatives and protection of the habitat of the Spiny Lizard are essential to ensure the survival of this unique and endemic species.

### Konark Temple Wheel



**Konark Temple Wheel:**

- It is a replica of the Konark Wheel from Odisha's Sun Temple was used as a backdrop for the Prime Minister's welcome at the G20 Summit.

- It built in the 13th century under King Narasimhadeva-I.

- It has 24 spokes and symbolizes India's wisdom, civilization and progress.

**Konark Sun Temple:**

- It is located on India's eastern coast, it's a pinnacle of Kalingan temple architecture.

- Designated as a UNESCO World Heritage Site in 1984.

- 'Konark' derives from 'Kona' (corner) and 'arka' (sun), signifying its sun god focus.

- It follows the Kalinga or Orissa style of Hindu temple architecture.

### African Union



**AU's G20 Membership:**

- The African Union (AU) became a member of the G20, a major international economic forum.

- India's proposal led to this inclusion, highlighting Africa's growing global importance.

**Formation of AU:**

- The AU is an intergovernmental organization consisting of 55 African member states.

- It was established in 2002, succeeding the Organisation of African Unity (OAU), founded in 1963.

**OAU's Focus:**

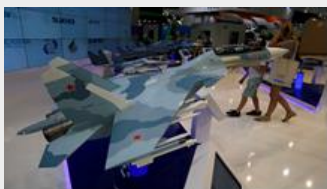
- The OAU primarily aimed to assist African nations in gaining independence from European colonial rule, providing diplomatic and logistical support to liberation movements.

**Limitations of OAU:** The OAU did not effectively promote political and economic integration among its member countries, leading to reforms in the mid-1990s and the establishment of the AU.

**AU's Objectives:** The AU aims to foster unity, socio-economic integration, address challenges and advance peace, stability and human rights among African nations.

**AU's Achievements:** The African Continental Free Trade Area, launched in 2021, is a significant achievement.

### Su-30 Fighter Jets



Recently, Myanmar has received two Su-30 fighter jets from Russia as part of a contract between the two countries.

**Su-30SME Fighter Jet:** The Su-30SME multi-role fighter jet is designed for various purposes, including engaging aerial targets, aerial reconnaissance, combat deployment, and pilot training. It is part of Russia's defense export portfolio.

**Contract Signing:** In September 2022, Russia and Myanmar signed a contract for the delivery of a total of six Su-30SME fighter jets.

**U.S. Concerns:** The United States has expressed concerns about Russia's support for Myanmar's military rulers, viewing it as destabilizing and contributing to the ongoing conflict in Myanmar.

### Hemp



**About:**

- Hemp is a variety of Cannabis sativa cultivated for industrial and medicinal purposes.

- Regulated by laws like the NDPS Act, which distinguishes it from narcotic cannabis.

- It is used for textiles, paper, ropes and building materials due to its strong fibers.

- Hemp contains compounds like CBD with potential therapeutic benefits.

- It is used to remove contaminants from soil.

- Hemp seeds are rich in protein, fatty acids and vitamins.

- It requires minimal water and pesticides, grows quickly, and suits various climates.

- It faces legal restrictions, confusion with narcotic cannabis and public perceptions.

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## Place in News

### Morocco

**Morocco: (Capital: Rabat)**

On September 8, 2023, a devastating magnitude 6.8 earthquake struck Morocco's High Atlas Mountains, causing widespread destruction and loss of life.

**Geographical Location:** Located in North Africa, Morocco shares borders with Algeria to the east and has coastal borders along the Atlantic Ocean to the west and the Mediterranean Sea to the north.

**Physical Features:**

**Atlas Mountains:** These mountains run from the northeast to the southwest, divided into High Atlas, Middle Atlas and Anti-Atlas ranges.

**Rif Mountains:** It is located in the north along the Mediterranean coast, known for their rugged terrain.

**Sahara Desert:** It covers the southeast, known for its arid landscapes and extreme temperatures.



## POINTS TO PONDER

- ❖ **What served as a backdrop of Welcome Handshake with G20 leaders?** - Wheel of the Konark Sun Temple
- ❖ **At which plate boundary is the Tonga-Kermadec Islands Volcanic Arc located?** - Pacific and Indo-Australian Plate
- ❖ **What is the measure of Probability of two people chosen from a random group having different mother tongues called?** - Greenberg's Diversity Index
- ❖ **Who has become the latest member of G20 grouping?** - African Union
- ❖ **Mustafa Hajrulahovic Memorial Tournament is related to which sport?** - Boxing

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