

12 September, 2023

Tribal Artisanal Treasures at G20

Context: TRIFED, a part of the Ministry of Tribal Affairs, showcased India's tribal heritage at the G20 Summit.

➤ **Longpi Pottery:**

- Originates from the village of Longpi in Manipur
- Practiced by the Tangkhul Naga tribes
- No use of potter's wheel; shaping done by hand and molds
- Known for gray-black cooking pots, kettles, bowls, mugs, and nut trays
- Incorporating new design elements to expand product range

➤ **Chhattisgarh Wind Flutes:**

- Curated by the Gond Tribe of Bastar in Chhattisgarh
- Features the 'Sulur' bamboo wind flute
- Unique one-handed twirl for producing melodies
- Meticulous bamboo selection, hole drilling, and surface etching
- Serves utilitarian purposes in animal control and cattle guidance

➤ **Gond Paintings:**

- Reflect the artistic brilliance of the Gond tribe
- Depict intricate stories connected to nature and tradition
- Innovative adaptation to contemporary mediums
- Characterized by dot-based techniques and vibrant colors
- Reflect the tribe's social milieu and connection with surroundings

➤ **Gujarat Hangings:**

- Curated by the Bhil & Patelia Tribe in Dahod, Gujarat
- Stem from an ancient Gujarat art form
- Originally featured dolls and cradle birds
- Now incorporate cotton cloth, recycled materials, mirror work, zari, stones, and beads
- Blend of tradition and contemporary fashion

➤ **Sheep Wool Stoles:**

- Crafted by tribes including Bodh, Bhutia, and Gujjar Bakarwal from Himachal Pradesh/Jammu & Kashmir
- Transition from monochromatic to dual-colored designs
- Hand-operated looms with four pedals and stitching machines used
- Intricate diamond, plain, and herringbone patterns woven
- Labor-intensive process showcasing tribal artistry

➤ **Araku Valley Coffee:**

- Hails from Araku Valley in Andhra Pradesh
- Known for unique flavors and sustainable cultivation
- Organic production with meticulous oversight
- Premium coffee beans cultivated, harvested, pulped, and roasted in-house
- Renowned for rich flavor, invigorating aroma, and purity

➤ **Rajasthan Artistry Unveiled (Mosaic Lamps, Ambabari Metalwork, and Meenakari Crafts):**

- Originates from Rajasthan and reflects tribal heritage
- Glass Mosaic Pottery creates lamp shades and candle holders
- Illuminates spaces with a kaleidoscope of colors
- Meenakari involves adorning metal surfaces with vibrant mineral substances
- Metal Ambabari Craft extends beyond gold to silver and copper, showcasing intricate enameling
- Reflects Rajasthan's rich cultural legacy and craftsmanship

➤ **Maheshwari Silk Sarees:**

- Originating from the town of Maheshwar in Madhya Pradesh, India
- Renowned for their elegant and lightweight silk fabric
- Typically feature distinctive motifs, zari work, and unique pallus
- Blend of traditional craftsmanship and modern design

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- Maheshwari sarees are a symbol of exquisite Indian textile artistry.
- **Dhokra Jewellery:**
 - Dhokra is a traditional metal casting technique practiced by tribal communities in India.
 - Jewelry made using the Dhokra technique is known for its rustic and tribal charm.
 - Commonly includes necklaces, earrings, bangles, and anklets.
 - Utilizes brass or other non-ferrous metals to create intricate and unique designs.
 - Each piece is handmade and one-of-a-kind, reflecting the tribal heritage of India.
- **Konyak Jewellery:**
 - Originates from the Konyak Naga tribe of Nagaland in Northeast India.
 - Known for its bold and intricate designs, often featuring animal motifs and tribal symbols.
 - Utilizes materials like beads, shells, bones, and sometimes metal.
 - Konyak jewelry is an essential part of their cultural identity and signifies social status.
 - The craftsmanship involved in creating Konyak jewelry is a testament to the tribe's artistic prowess.
- **Saura Painting:**
 - An indigenous art form practiced by the Saura tribe of Odisha, India.
 - Features vibrant and geometric patterns, often depicting scenes from daily life and nature.
 - Traditionally created on walls and floors using natural colors and pigments.
 - Saura painting has evolved to include canvas and other contemporary mediums.
 - Celebrates the tribe's spiritual and cultural connection with their environment

India- Saudi Arabia MoU on Energy

Context: India and Saudi Arabia have inked a Memorandum of Understanding (MoU) to collaborate in the energy sector. As per the MoU, India and Saudi Arabia will engage in cooperation across the following domains:

- Renewable Energy, Energy Efficiency, Hydrogen, Electricity, and Grid Interconnection between the two nations.
- Petroleum, Natural Gas, Strategic Petroleum Reserves, and Energy Security.
- Promotion of bilateral investments in Renewable Energy, Electricity, Hydrogen, Storage, Oil & Gas.
- Advancement of Circular Economy and associated technologies to mitigate the impacts of climate change, including carbon capture, utilization, and storage.
- Facilitation of digital transformation, innovation, cyber-security, and artificial intelligence within the Energy sector.
- Collaborative efforts to establish high-quality partnerships for the localization of materials, products, and services pertaining to all energy sectors, supply chains, and related technologies.
- Enhancement of cooperation with specialized energy sector companies.
- Exploration of any other energy-related fields upon mutual agreement between the two countries.

India-Saudi Arabia Relations

- **Oil & Gas Cooperation:**
 - Saudi Arabia is India's second-largest supplier of crude oil.
 - India imports approximately 18% of its crude oil and 22% of its Liquefied Petroleum Gas (LPG) from Saudi Arabia.
 - Saudi Arabia is involved in setting up the world's largest greenfield refinery in Maharashtra, in partnership with Saudi Aramco, Adnoc, and Indian public sector oil companies.
- **Bilateral Trade:**
 - Saudi Arabia is India's fourth-largest trade partner, with bilateral trade valued at USD 42.8 billion in FY 2021-22.
 - India's imports from Saudi Arabia reached USD 34.01 billion, while exports to Saudi Arabia were worth USD 8.76 billion.
 - The Indian Diaspora in Saudi Arabia, numbering 2.6 million, is the largest expatriate community and is highly regarded for its expertise and law-abiding nature.
- **Cultural and Religious Ties:**
 - The annual Hajj pilgrimage is a significant component of bilateral relations, and India's Hajj quota was increased to accommodate more pilgrims.

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- An MoU on Yoga Cooperation was signed in 2021, promoting yoga standards and courses in Saudi Arabia.
- Cultural ties are strengthened by the presence of the Indian community and their contributions.
- **Naval Exercise:**
 - In 2021, India and Saudi Arabia initiated their first-ever joint naval exercise, known as the Al-Mohed Al-Hindi Exercise.
- **Investments:**
 - Major investments include the 'West Coast Refinery & Petrochemicals Project' in Maharashtra, renewable energy projects, and discussions about Saudi Aramco acquiring a stake in Reliance Industries' oil-to-chemicals business.
- **Collaboration During COVID-19:**
 - Both countries used the G20 platform to discuss strategies to combat the COVID-19 pandemic.
 - India provided 4.5 million COVISHIELD vaccines to Saudi Arabia, while Saudi Arabia reciprocated with COVID-relief materials, including liquid oxygen, during the second wave.

Call Money Market

Context: RBI is planning to introduce its wholesale Central Bank Digital Currency (CBDC), the digital rupee, in the interbank borrowing market within a month.

- RBI initiated the wholesale CBDC pilot in November 2022 with a focus on facilitating the settlement of secondary market transactions involving government securities.
- Initially, this pilot allowed for the use of wholesale CBDC in the secondary market for government bond transactions.
- The central bank later extended the CBDC pilot to the retail segment as well, with a target of achieving one million retail transactions per day by the end of 2023.
- There are concerns about the potential risks of disintermediation, where commercial bank money could shift to central bank money. The design features of CBDC, including whether it is interest-bearing or not, are important factors in addressing these concerns.
- CBDC is designed to mimic traditional currency and is not interest-bearing, similar to other currencies.

Terms related

- **Call Money:** 'Call Money' refers to the borrowing or lending of funds for a very short duration, typically for just 1 day.
- **Notice Money:** When money is borrowed or lent for a period ranging from 2 days to 14 days, it is known as 'Notice Money.'
- **Term Money:** 'Term Money' relates to the borrowing or lending of funds for a longer period, exceeding 14 days.

Key Interbank Lending Rates

- **Euribor:** The interbank lending rate in Europe, published on the euribor-ebf website.
- **SHIBOR:** The interbank lending rate in Shanghai, published on the SHIBOR website.
- **HIBOR:** The interbank lending rate in Hong Kong, published by the Hong Kong Association of Banks.
- **Cash Rate:** In Australia, the overnight interbank lending rate is referred to as the cash rate.
- **MIBOR (Mumbai Interbank Offer Rate):** In India, MIBOR is one of the iterations of the interbank rate, representing the rate of interest charged by a bank on a short-term loan to another bank.
- **USD LIBOR:** The US dollar Libor rate, an abbreviation for the London Interbank Offer Rate, signifies the interest rate at which banks express their readiness to lend funds to other banks for a predetermined period.

Central Bank Digital Currency

- Central Bank Digital Currencies (CBDCs) are digital forms of a country's fiat currency issued by the central bank.
- They are backed by the government, promoting financial inclusion and enhancing monetary and fiscal policy implementation.
- CBDCs aim to provide privacy, convenience, accessibility, and financial security for consumers and businesses.
- They can reduce costs associated with complex financial systems and cross-border transactions.
- CBDCs mitigate the risks and volatility associated with cryptocurrencies.
- Two types of CBDCs exist: wholesale for financial institutions and retail for consumers and businesses.
- Retail CBDCs can be token-based for anonymous transactions or account-based requiring digital identification.

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NEWS IN BETWEEN THE LINES

Standard Soil Moisture Index



What is Standard Soil Moisture Index?

The Standard Soil Moisture Index (SSI) is a measurement used to assess soil moisture levels in a given area. It provides insights into the availability of water in the soil for plant growth.

Drought Indicator: It helps monitor soil moisture drought, indicating regions with critical water shortages.

Severity Levels: SSI categorizes moisture levels from 'normal' to 'extremely dry,' aiding in assessing drought severity.

Geographic Scope: SSI can be calculated for specific areas, providing localized soil moisture information.

Data Sources: It relies on data from sources like satellites, weather stations and ground measurements.

Crop Impact: SSI predicts the impact of soil moisture deficits on crops, aiding farmers and policymakers.

Drought Management: Crucial for targeted drought relief efforts and agricultural planning.

Example: In India's 2023 drought, SSI showed extreme stress in Chhattisgarh, Bihar, Maharashtra and Karnataka, affecting agriculture.

Shanti Swarup Bhatnagar Prize



Establishment: The Shanti Swarup Bhatnagar Prize, initiated in 1958 by CSIR, is an annual recognition for exceptional scientists and researchers in various fields.

Founder: Named after Shanti Swarup Bhatnagar, a pioneer in Indian science and the first director of CSIR.

Award Categories: Awarded across diverse scientific disciplines including biology, chemistry, Earth sciences, engineering, mathematics, medicine and physics.

Gender Disparity: In 2022, only male scientists received the SSB award, highlighting a historical gender disparity issue, with only 19 women scientists honored since its inception.

Notable Awardees (2022 SSB Prize):

Biological Sciences: Ashwani Kumar and Maddika Subba Reddy

Chemical Sciences: Akkattu T Biju and Debabrata Maiti

Earth Sciences: Vimal Mishra

Engineering Sciences: Dipti Ranjan Sahoo and Rajnish Kumar

Mathematics: Apoorva Khare and Neeraj Kayal

Medical Sciences: Dipyaman Ganguli

Physical Sciences: Anindya Das and Basudeb Dasgupta

Achanakmar Tiger Reserve



About:

- Achanakmar Tiger Reserve is situated in the Bilaspur district of Chhattisgarh.
- It was declared a tiger reserve in 2009, primarily to protect the endangered tiger population.
- The Maniyari River, which originates within the reserve, serves as a lifeline for the forest ecosystem.
- The reserve features a corridor that connects it to Kanha and Bandhavgarh Tiger Reserves.
- This reserve is characterized by tropical deciduous forest cover.
- It has rich species like sal, bija, saja, haldu, teak, tinsa, dhawara, lendia, khamar and bamboo.
- It is home to over 600 species of medicinal plants.
- It hosts diverse wildlife, including the majestic tiger and leopard, bison, flying squirrel, Indian giant squirrel, chinkara, wild dog, hyena, sambar, chital (spotted deer) and an impressive array of over 150 species of birds.

Declining Tiger Population: Recent reports indicate a substantial decline in tiger numbers, with only 17 tigers in 2022 compared to 46 in 2014.

Tigress Release: In April 2023, a tigress was released into the reserve to bolster the tiger population.

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Reciprocity



What is Reciprocity?

Reciprocity is a fundamental principle in physics and mathematics that refers to a mutual relationship or interaction between two elements, where the same action or effect occurs in response to an action or effect from the other element.

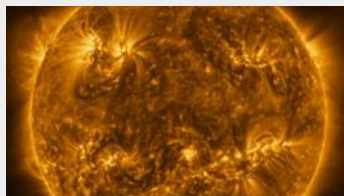
Applications: Engineers use reciprocity for testing and operating various devices like antennas, radars and medical scanners, simplifying testing processes.

Challenges of Reciprocity: Reciprocity can create problems in scenarios like spying and high-power lasers where back-reflection is undesirable.

Importance in Technology: It is crucial in technologies requiring signal amplification and is vital in quantum computing due to signal amplification needs.

Versatile Applications: Non-reciprocal devices have versatile applications in controlling wave transmission, including signal routing, communication, and quantum computing.

Picoflare Jets



About:

- Picoflare jets are small jets of charged particles detected in the sun's outer atmosphere during the Solar Orbiter mission by the European Space Agency (ESA) and the National Aeronautics and Space Administration (NASA).
- The term 'pico' denotes one trillionth of a unit, signifying that picoflare jets carry an extremely small fraction of the energy compared to the largest solar flares.
- These jets emerge at supersonic speeds from the outer regions of the sun's atmosphere.
- Picoflare jets last for a relatively short period, ranging from 20 to 100 seconds.
- Solar physicists have associated coronal holes, which are cooler and less dense areas in the sun's corona, with the source regions of the solar wind.
- Each streak of picoflare jets is a few hundred kilometers long and emits energy equivalent to the consumption of thousands of households over a year.

Significance: Understanding picoflare jets is essential as they may contribute to solar wind generation, which, in turn, impacts space weather and Earth's magnetic field.

Places in News

Timor-Leste

Recently, India's Prime Minister Narendra Modi announced a significant diplomatic move during the 20th ASEAN-India Summit in Jakarta.

Location of Timor-Leste:

- Timor-Leste is a Southeast Asian nation located on the eastern half of the island of Timor.
- It shares the island with Indonesia, which administers the western half.
- Timor-Leste also includes the exclave of Oecusse and the minor islands of Atauro and Jaco.
- It is situated to the south of Australia, separated by the Timor Sea.



Indian Embassy in Dili:

- India has decided to establish an embassy in Dili, the capital city of Timor-Leste.
- This decision reflects India's commitment to strengthening its diplomatic ties and engagement with Timor-Leste.

Historical Background:

- Timor-Leste was a Portuguese colony until 1975.
- After gaining independence from Portugal, it fell under Indonesian rule following a period of conflict.
- In 1999, with the support of the United Nations, Timor-Leste achieved independence, becoming the first sovereign state of the 21st century in 2002.

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Personality in News

Ian Wilmut

Ian Wilmut (7th July 1944- 10th September 2023)

Ian Wilmut, born in Hampton Lucy, England, holds degrees in Zoology and a Ph.D. in Developmental Biology from the University of Birmingham.

Contributions:

- In 1996, Wilmut led the team that successfully cloned Dolly the Sheep, marking the world's first cloned mammal.
- Dolly's creation involved transferring DNA from an adult sheep's mammary gland cell into an empty egg, leading to her birth.
- He stressed that his work aimed to find cures for diseases and not to clone humans.
- Wilmut advocated for using cloning to create embryonic stem cells for medical treatments.
- His work contributed to the development of Induced Pluripotent Stem Cells (IPS), an alternative to therapeutic cloning.



POINTS TO PONDER

- ❖ With which firm has Indian Navy signed an MoU for mobility of Naval personnel in India, South Asia and Egypt? - Uber
- ❖ Which institution launched 'Face Authentication system' at the Global Fintech Festival? - UIDAI
- ❖ Phanigiri, a site where buddhist iconography is found, is located in which state? - Telangana
- ❖ Grand Ethiopian Renaissance Dam (GERD) is built on which river? - Blue Nile
- ❖ Compact of Free Association is an international agreement between? - USA and Pacific Nations of Micronesia, Palau and Marshal Islands

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