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Trade in Services for Development

Context: The World Bank and World Trade Organization (WTO) have published a report “Trade in services for development”.

- The joint publication by the World Bank and WTO underscores the importance of advancing trade negotiations in services.
- It highlights the opportunity costs associated with not pursuing these negotiations.
- The report aims to stimulate reflection on mobilizing additional support and better assistance for developing and least-developed economies in implementing services sector reforms.
- It emphasizes the potential development gains that can be achieved through expanded trade and investment in services.
- The publication intends to foster a proactive approach towards reaping these benefits.

Key Highlights

- Services trade offers opportunities for developing economies, promoting inclusiveness for female and young workers, entrepreneurs, and MSMEs.
 - In 2021, 59 percent of employed women worked in the services sector.
 - 9 out of 10 services firms were MSMEs.
- The services sector generates half of global employment and two-thirds of global GDP, surpassing agriculture and industry combined.
- Policy reforms and technological advancements have contributed to the growth of the services sector.
 - Policy reform efforts have focused on enhancing domestic service market competitiveness.
 - Technological advancements, particularly in ICT, have fueled the digitalization of trade in services.
- Digital exports of commercial services have almost tripled between 2005 and 2022, with digitally delivered services experiencing the fastest growth.
- Services trade is crucial for addressing global challenges:
 - It reduces trade costs and improves service performance.
 - It attracts foreign direct investment (FDI) and enhances supply-chain resilience.
 - It boosts manufacturing productivity and exports.
- Binding commitments in trade agreements complement domestic services sector reforms.
- The Trade in Services for Development initiative aims to address key challenges and mobilize Aid for Trade in services:
 - Addressing data gaps in services trade.
 - Promoting the participation of developing and least-developed economies in policy discussions.
 - Strengthening regulatory frameworks and institutions.
 - Promoting diversification, particularly in digital services trade.
 - Addressing supply-side constraints and improving services-related skills.

Scenario in India

- India, South Africa, and Türkiye have over 10% of their services sector jobs directly linked to cross-border exports.
- India's global commercial services exports share doubled from 2% in 2005 to 4.4% in 2022.
- Leading services exporters and importers: China, Hong Kong, Singapore, and India.
- India and the Philippines lead in computer services and business process outsourcing.
- India became a favoured destination for labour-intensive software and BPO services outsourcing in the 1990s.
- Export of computer-related services significantly contributed to India's economic growth.
- India is a popular destination for medical tourism, attracting 3.5 million foreign patients from 2009 to 2019.
- The Pan African e-Network Project connects African universities, excellence centres, and hospitals with Indian counterparts.

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- India's service trade growth is driven by policy changes, improved regulation, and openness to FDI in services in the 1990s.
- Access to reliable business services enabled manufacturing firms to invest, adopt technology, and achieve economies of scale.

Digital Data Protection Bill

Context: The Union Cabinet cleared the Digital Personal Data Protection (DPDP) Bill, allowing its introduction in Parliament during the Monsoon Session.

Key features

- **Applicability:**
 - The bill covers digital personal data processed within India, collected online or offline and digitized.
 - It also applies to personal data processed outside India if it relates to offering goods or services or profiling individuals in India.
- **Consent:**
 - Personal data can only be processed with lawful consent.
 - Prior notice must be given before seeking consent, including details of data collection and processing.
 - Consent can be withdrawn at any time.
 - Consent is deemed given in specific situations, such as for legal functions, state-provided services, medical emergencies, employment purposes, and specified public interest purposes.
- **Rights and Duties of Data Principal:**
 - Data principals have rights to information, correction, erasure, and the ability to nominate representatives.
 - Duties include not filing false complaints or furnishing false information, punishable by a penalty of up to Rs 10,000.
- **Obligations of Data Fiduciaries:**
 - Data fiduciaries must ensure data accuracy, implement security safeguards, and inform the Data Protection Board and affected persons in case of data breaches.
 - Personal data should be retained only as long as necessary for legal or business purposes.
- **Transfer of Personal Data Outside India:**
 - The central government will notify countries where data fiduciaries can transfer personal data.
 - Transfers will be subject to prescribed terms and conditions.
- **Exemptions:**
 - Certain cases, including prevention of offences and research purposes, are exempted from rights and obligations under the bill.
 - The central government can exempt specific activities by notification.
- **Data Protection Board of India:**
 - The Board will monitor compliance, impose penalties, address data breaches, and handle grievances.
 - Composition, selection process, terms, and conditions will be prescribed by the central government.
- **Penalties:**
 - The bill specifies penalties for non-compliance, with amounts up to Rs 150 crore for obligations concerning children and up to Rs 250 crore for failing to implement security measures.
 - Penalties will be imposed by the Board following an inquiry.

Right to Data Portability

- Allows data principals to obtain and transfer their data from a data fiduciary in a structured, machine-readable format.
- Enhances individual control over personal data and facilitates data migration between data fiduciaries.

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- Concerns exist about trade secrets but the right must be guaranteed without revealing such secrets.
- Denial of data portability should be based only on technical feasibility, not trade secrets.

Right to be Forgotten:

- Gives individuals the right to limit disclosure of personal data on the internet.
- Balancing act between limiting memory in the digital sphere and competing rights and interests.
- Interference with others' right to free speech and expression and the right to receive information must be considered.

Applicability depends on factors like sensitivity of personal data, relevance to the public, and the data principal's role in public life.

Methyl (CH_3^+) molecule in space

Context: The James Webb Space Telescope (JWST) has successfully detected the CH_3^+ molecule, also known as the methyl cation, in space for the first time.

- The James Webb Space Telescope (JWST) detected CH_3^+ (methyl cation) in a protoplanetary disk system called d203-506.
- The system is located in the Orion Nebula, approximately 1,350 light-years away from Earth.
- The central star in the system is a red dwarf, about 10% the mass of our Sun.
- The system is subjected to strong ultraviolet radiation from nearby hot, young, massive stars.
- The presence of CH_3^+ was identified in the light emitted by the swirling disk of gas and dust surrounding the young star.

CH_3^+ Molecule

- CH_3^+ is known as the methyl cation, a simple organic molecule consisting of one carbon atom and three hydrogen atoms.
- It has the ability to react with other molecules, leading to the formation of more complex compounds.
- The presence of CH_3^+ in space suggests the existence of basic building blocks for life beyond Earth.
- CH_3^+ plays a crucial role in initiating various complex reactions.
- Organic molecules, like CH_3^+ , are carbon-based and are fundamental to the formation of life as we know it on Earth.

Significance

- The discovery of the methyl cation in regions where life-supporting planets are forming provides valuable insights into the origins of life in the universe and enhances our understanding of potential habitats for life.

James Web Telescope

- The telescope was built in collaboration between NASA, ESA, and CSA.
- It was launched in December 2021.
- The telescope is located at the Sun-Earth L2 Lagrange point, 1.5 million km beyond Earth's orbit.
- Lagrange Point 2 is one of the five points in the Earth-Sun orbital plane.
- It is the largest and most powerful infrared space telescope ever built.
- The telescope's objectives include studying cosmic history from the Big Bang to the formation of galaxies, stars, and planets, as well as the evolution of our Solar System.
- Led by NASA, it is a premier space science observatory with ESA and CSA as partners.
- The mission aims to significantly advance our understanding of the Universe and our origins.

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NEWS IN BETWEEN THE LINES

Chinkara



Recently, a Sessions Court in Hanumangarh district of Rajasthan ordered the payment of half of the fine amount imposed on a convict in a chinkara killing case.

Chinkara: Chinkara, scientifically known as *Gazella bennettii*, is a medium-sized antelope species commonly referred to as the Indian Gazelle.

Scientific Name: *Gazella Bennettii*

Habitat: Chinkaras are found in the dry and arid regions of the Indian subcontinent, including India, Pakistan, and Iran.

Endangered Status: Chinkaras are listed as "Least Concern" on the IUCN Red List of Threatened Species.

Chandrayaan-3



Recently, ISRO integrated Chandrayaan-3 spacecraft with LVM3, marking progress towards the upcoming moon mission.

Mission Objective: Chandrayaan-3 is India's third lunar exploration mission and aims to further enhance the country's understanding of the Moon's surface and its composition.

Launch Vehicle: The mission will utilize the Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk III), a powerful launch vehicle developed by the Indian Space Research Organisation (ISRO).

Lunar Rover: Chandrayaan-3 will carry a lunar rover, similar to its predecessor Chandrayaan-2. The rover is designed to traverse the lunar surface, collect data and transmit it back to Earth.

Payloads and Instruments: The mission will carry a suite of scientific payloads and instruments onboard the lunar rover. These instruments will help study the Moon's geology, mineralogy and the presence of water ice.

Smart Bandage



Recently, researchers at the California Institute of Technology (Caltech) developed a wearable "smart bandage" to speed up healing of chronic wounds.

The Smart Bandage: The smart bandage is a miniaturized wearable platform with biosensors, drug-loaded hydrogels, electrical stimulation modules and wireless communication. It adheres to the skin and monitors wound biomarkers, infection, inflammation and other wound parameters.

Monitoring and Treatment: The bandage's biosensors track chemical changes, pH, and temperature in the wound, while delivering drugs, stimulating tissue regeneration and wirelessly transmitting data for analysis.

Clinical Trials: The smart bandage will undergo clinical trials to assess efficacy and integration into healthcare settings after obtaining human research protocol approval.

Human research protocols: Human research protocols are standardized guidelines and procedures designed to ensure ethical and responsible conduct of research involving human participants.

Mosaic Virus



Recently, tomato growers in Maharashtra and Karnataka report yield losses due to different viruses—CMV in Maharashtra and ToMV in Karnataka and other South Indian states.

CMV and ToMV: CMV (Cucumber Mosaic Virus) and ToMV (Tomato Mosaic Virus) are two different plant pathogens that cause similar damage to crops.

Hosts: ToMV belongs to the Virgaviridae family and infects tomato, tobacco, peppers and certain ornamental plants. CMV has a larger host pool including cucumber, melon, eggplant, tomato, carrot, lettuce, celery, cucurbits (gourd family) and some ornamentals.

Spread of ToMV and CMV: ToMV spreads through infected seeds, saplings, tools and inadequate nursery sanitation, while CMV spreads primarily through aphids. High temperature and intermittent rain create favorable conditions for aphid multiplication and CMV spread.

Crop Impact: Both viruses can cause nearly total crop loss if untreated. ToMV shows yellowish-green foliage, leaf distortion, necrotic spots on fruits, while CMV causes leaf distortion, mosaic patterns on cucumber leaves and stunted growth in tomatoes.

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Place in News

Bogibeel in Dibrugarh

Recently, the Union Minister of Ports, Shipping & Waterways and Ayush, laid the foundation stone for an Inland Waterways Transport (IWT) terminal at Bogibeel in Dibrugarh, Assam.



Location: The Inland Waterways Transport (IWT) terminal is being established at Bogibeel in Dibrugarh, Assam, along the bank of the river Brahmaputra (National Waterways 2).

Objectives: The government aims to increase the share of Inland Water Transport (IWT) to 5% as part of the Maritime India Vision (MIV)-2030.

Bogibeel Bridge: Bogibeel is known for its Bogibeel Bridge, which is the longest rail-cum-road bridge in India, spanning 4.94 kilometers over the Brahmaputra River.

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DELHI MUKHERJEE NAGAR: 9205274741, 42 | **LAXMI NAGAR :** 9205212500, 9205962002 | **RAJENDRA NAGAR:** 9205274743 | **UTTAR PRADESH PRAYAGRAJ:** 0532-2260189, 8853467068 | **LUCKNOW (ALIGANJ):** 0522-4025825, 9506256789 | **LUCKNOW (GOMTI NAGAR):** 7234000501, 7234000502 | **GREATER NOIDA:** 9205336037, 38 | **KANPUR:** 7887003962, 7897003962 | **GORAKHPUR :** 7080847474, 9161947474 | **ODISHA BHUBANESWAR:** 9818244644/7656949029



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