DHYEYA IAS
most trusted since 2003

DAILY pre PARE
Current affairs summary for prelims

27 March, 2024

Usage of Embedded SIM for Machine-to-Machine Communications

Context: *The Telecom Regulatory Authority of India (TRAI) has issued guidelines regarding the utilization of Embedded SIM for Machine-to-Machine (M2M) Communications.*

➢ **Scope and Importance:**
- The advent of 5G services in the country has significantly expanded the potential of the M2M ecosystem.
- Diverse sectors such as agriculture, transportation, healthcare, and industrial automation stand to benefit from the advancements in M2M technology.
- The recommendations aim to establish a cohesive regulatory framework for M2M embedded SIM (eSIM) usage within India, aligning with the evolving telecommunications landscape.

➢ **Key Recommendations:**
- **Conversion Mandate:** M2M eSIMs during international roaming in India must switch to Indian TSP profiles within six months.
- **License Holder Permissions:** Specific license holders can manage SM-SR entities in India.
- **Profile Installation Flexibility:** OEMs and M2MSPs can choose profile download methods from Indian TSPs' SM-DP.
- **Integration Mandate:** SM-SRs must integrate with licensed telecom providers' SM-DPs within three months upon request.
- **SM-SR Switching Facilitation:** M2MSPs must facilitate SM-SR switching within six months upon request.
- **IMSI Series Prohibition:** Use of 901.XX IMSI series for M2M services in India is prohibited due to implementation challenges.

Embedded SIM (eSIM)

➢ **Overview of eSIM:**
- An eSIM, or embedded SIM, is a SIM card embedded directly into a device, consisting of software installed onto an eUICC chip.
- Unlike traditional SIM cards, eSIMs can be re-programmed with new SIM information if they are eUICC-compatible.

➢ **Development and Standardization:**
- The GSMA began discussing the concept of a software-based SIM in 2010, leading to the release of the eSIM standard in 2016.
- Two versions of the standard exist: one for consumer devices and another for machine-to-machine (M2M) devices.

➢ **Design and Usage:**
- A traditional SIM card is manually inserted into a device, while an eSIM is a virtualized SIM card profile installed onto an eUICC chip permanently surface-mounted to a device at the factory.
- Once an eSIM carrier profile is installed, it operates similarly to a physical SIM, complete with a unique ICCID and network authentication key.

➢ **Remote Provisioning and Connectivity:**
- eSIMs can be provisioned remotely, allowing users to add or remove operators without physically swapping SIM cards.
- All eSIMs are programmed with a permanent eSIM ID (EID) at the factory, facilitating provisioning and secure channel negotiation.

➢ **Applications and Implementations:**
- eSIM technology finds applications in various IoT scenarios, including connected cars, smart devices, GPS tracking units, and more.
- Common physical form factors of eUICC chips include MFF2, with implementations such as the European Commission's eCall service and Russia's ERA-GLONASS initiative.

➢ **Advantages:**
- Multiple SIMs can be stored simultaneously.
- Eliminates the need to obtain, store, and insert/eject physical SIM cards.
- Enables tracking of stolen phones through "find my phone" services.
- Eliminates the risk of damaging SIM socket contacts.
- Devices with eSIM-only capability do not require hardware SIM holders, ideal for compact devices like smartwatches.

➢ **Disadvantages:**
- Inaccessible network resources if the phone is broken, as calls cannot be received and paid-for resources cannot be used.
- Inability to remove the eSIM for repairs or when lending the phone to others.
- Continuous tracking of the phone's location when switched on.
- Need to delete or transfer eSIM accounts from sold or disposed phones.
- Compatibility issues with some phones, such as US devices not accepting eSIMs from other countries.

India Employment Report 2024

Context: *The India Employment Report 2024 was unveiled by the International Labour Organisation (ILO) and the Institute of Human Development (IHD) on Tuesday.*

➢ **Background to the India Employment Report 2024:**
- The report is the third in a series by the Institute for Human Development on labor and employment issues.
- Focuses on youth employment, education, and skills.
- Analyzes data from National Sample Surveys, Periodic Labor Force Surveys, and other sources from 2000 to 2023.
- Examines changes in economic, labor market, educational, and skills scenarios over two decades.

➢ **Employment Trends and Current Scenario:**
- Long-term deterioration in labor force participation and unemployment rates until 2019, followed by improvement.
- Female labor market participation rate showed significant improvement since 2019, especially in rural areas.

Face to Face Centres
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
dhyeyaias.com

- Overall improvements in employment conditions between 2005 and 2022, although halted and reversed after 2019 due to the COVID-19 pandemic.
- Slow transition from agriculture to non-farm employment reversed post-2019, with a rise in agricultural employment.
- Increase in self-employment and unpaid family work, predominantly among women.
- Dominance of poor-quality employment in the informal sector, with stagnant or declining wages and earnings.

Figure 2.1. Labour force participation rate, worker population ratio and unemployment rate (UPSS) among persons aged 15+ (rural and urban combined), 2000, 2012, 2019 and 2022 (%)

Note: LFPR=labour force participation rate; WPR=worker population ratio; UR=unemployment rate.
Source: Computed from various years of the Employment and Unemployment Survey data and the Periodic Labour Force Survey unit-level data.

➢ **Growth and Employment:**
- Stagnant employment growth until 2019, followed by an upward trend.
- Labor productivity increased alongside capital deepening, indicating a shift towards capital-intensive production.
- Shift in employment from low-productivity agriculture to higher-productivity non-agriculture sectors until 2019, with a reversal post-2019.
- Slow growth in manufacturing employment despite robust gross value added growth.
- Service sector as the primary driver of India's growth since 2000, generating highly paid formal job opportunities.

➢ **Challenge of Youth Employment:**
- India poised to reap demographic dividend, but youth population expected to decline by 2036.
- Youth labor force participation rate increased post-2019, particularly among rural women.
- Majority of youth engaged in informal and vulnerable occupations, with lower wages and earnings compared to adults.
- High levels of youth unemployment, especially among educated youths.
- Large proportion of highly educated youth not in education, employment, or training.
- Youth labor market indicators worsened during peak pandemic periods but recovered quickly thereafter.

➢ **Education and Youth Employment:**
- Significant improvements in educational attainment among youth, but disparities persist.
- Returns to education low at lower levels, higher for technical qualifications and graduate degrees.
- Declining worker population ratio among non-student youth, especially those with low education levels.
- Education correlates with better job opportunities, with highly educated youth predominantly employed in regular salaried jobs.

Box 2. Employment terminology used in the *India Employment Report 2024*

Activity status: It is the activity situation in which a person is found during a reference period, typically for a survey. A person can be in one or a combination of three broad activity statuses during this reference period: (a) working or engaged in economic activity (work); (b) not engaged in economic activity (work) but either making tangible efforts to seek work or available for work if work is available; and (c) not engaged in economic activity (work) and also not available for work.

Usual principal activity status (UPS): The usual principal activity status relates to the activity status of a person during the reference period of 365 days preceding the date of a survey interview. The activity status on which a person spent relatively long time (major time criterion) during the 365 days preceding the survey interview is considered the usual principal activity status of a person.

Subsidiary economic activity status (SS): Subsidiary status workers are engaged in an economic activity for a short duration of at least 30 days during the 365 days prior to a survey interview.

Usual principal and subsidiary status (UPSS): All persons engaged in usual principal activity and subsidiary activity are included in this employment status.

Employment by current weekly status (CWS): All persons who have performed any economic activity for at least one hour on any day of the reference week (the seven days preceding a survey interview) are included in this grouping.

Workforce (workers or employed persons): Persons who were engaged in any economic activity or who, despite their attachment to economic activity, abstained from work for reason of illness, injury or other physical disability, bad weather, festivals, social or religious functions or other contingencies necessitating temporary absence from work, constitute as workers or employed persons. Unpaid household members who assist in the operation of an economic activity in the household farm or non-farm activities are also considered as workers.

Labour force: Persons who are either "working or employed" or "seeking or available for work" or unemployed constitute the labour force.

Unemployed: Persons who, owing to lack of work, have not worked but sought work through employment exchanges, intermediaries, friends or relatives or by making applications to prospective employers and express their willingness or availability for work under the prevailing conditions of work and remuneration are considered as "seeking or available for work".

Labour force participation rate (LFPR): The rate is the percentage of the working-age population in the labour force.

Worker population ratio (WPR): The ratio is the percentage of employed persons in the population.

Unemployment rate (UR): This rate is defined as the percentage of persons unemployed as a percentage of the persons in the labour force.

Source: NSO 2023.

➢ **Skills and Active Labor Market Policies:**
- Skills training and ALMPs needed to bridge skills-supply and demand gaps.
- Challenges include limited uptake of training, spatial imbalances, and inadequate remuneration for training.

➢ **Emerging Policy Agenda:** Focus on entrepreneurship development, apprenticeship training, and job search assistance programs.

India applies to extract new Ocean Patches

Context: *India recently applied to the International Seabed Authority (ISBA) in Jamaica for permission to explore two large areas of the Indian Ocean seabed beyond its jurisdiction.*

➢ **Background:**
- India applied to the International Seabed Authority (ISBA) in Jamaica to explore two vast tracts in the Indian Ocean seabed outside its jurisdiction.
- Sri Lanka has already claimed rights to one of these regions, known as the Afanasy Nikitin Seamount (AN Seamount), under separate laws.
- India's application is partly motivated by reports of Chinese vessels conducting reconnaissance in the same region.

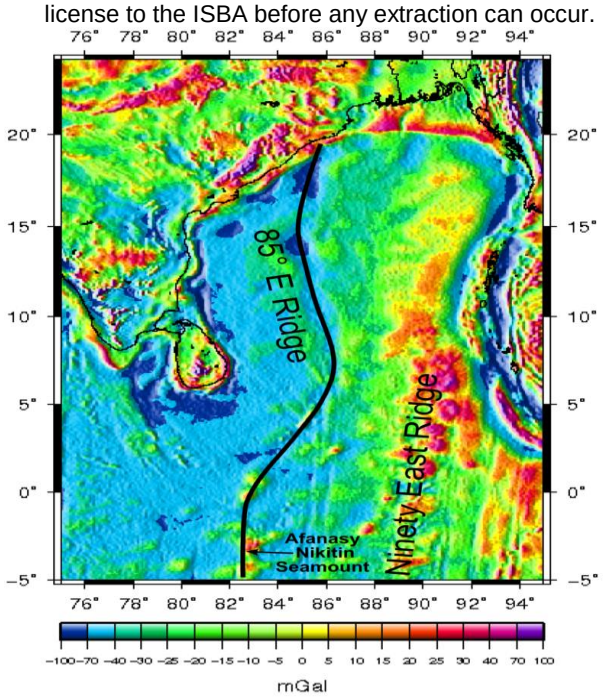
DHYEYA IAS
most trusted since 2003

DAILY pre PARE
Current affairs summary for prelims

27 March, 2024

AN Seamount Exploration:

- The AN Seamount is a structural feature located about 3,000 km away from India's coast in the Central Indian Basin.
- It is approximately 400 km long and 150 km wide and rises from an oceanic depth of about 4,800 km to about 1,200 meters.
- Surveys conducted over the past two decades indicate rich deposits of cobalt, nickel, manganese, and copper.
- Interested countries must apply for an exploration license to the ISBA before any extraction can occur.



Open Ocean Rights:

- Around 60% of the world's seas are open ocean, where no country can claim sovereignty.
- Countries have exclusive rights up to 200 nautical miles from their borders.
- The Commission on the Limits of the Continental Shelf decides on the extent of a country's continental shelf.

India's Claim:

- Sri Lanka has claimed up to 500 nautical miles under special criteria along the Bay of Bengal.
- India has staked a claim for exploration due to Chinese presence in the region.
- The ISBA has sought clarification from India regarding its application for exploration in an area submitted by Sri Lanka.

ISBA Proceedings:

- A high-level delegation from India presented scientific evidence to support its claims to exploration.
- The ISBA has requested clarification from India on multiple points, with a final decision expected later this year.
- India has also applied to explore the Carlsberg Ridge in the Central Indian Ocean for polymetallic sulphides.

Continental Shelf Claims:

- India has staked a claim for its continental shelf up to 350 nautical miles from its border.
- It has previously been awarded exploration rights to two other large basins in the Central Indian Ocean.

NEWS IN BETWEEN THE LINES

cVIGIL App

Recently the Election Commission of India has introduced a cVIGIL App to keep close eye on election process.

About cVIGIL App:

- cVIGIL app, "**Citizens' Vigilance"** is **an innovative mobile application** developed by the Election Commission of India.
- It serves as a platform for citizens to report and address violations of the model code of conduct during elections.
- Through this app, **users can submit complaints online, providing evidence** such as photos and videos of electoral malpractices directly to the Election Commission.
- This app aims to empower citizens by enabling them to actively participate in monitoring the electoral process and ensuring transparency and accountability in elections.
- The app connects vigilant citizens directly with District Control Rooms, Returning Officers and Flying Squads Teams for swift response to reported incidents.
- Citizens can **report incidents of political misconduct** within minutes through the app, eliminating the need for physical visits to authorities.
- Upon submitting a complaint, citizens receive a unique ID to track the status of their complaint in real-time on their mobile devices.
- It empowers citizens to report violations promptly, with assurances of action within 100 minutes.

Face to Face Centres

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

dhyeyaias.com

DHYEYA IAS
most trusted since 2003

DAILY pre PARE
Current affairs summary for prelims

27 March, 2024

The Abel Prize

Recently, the Abel Prize of 2024 has been awarded to French mathematician Michael Talagrand for his outstanding work in probability theory and functional analysis, with significant applications in mathematical physics and statistics.

About the Abel Prize:

- The Abel Prize is a prestigious **award for mathematics** that recognizes groundbreaking scientific achievements.
- It is **awarded annually** to one or more outstanding mathematicians **by the King of Norway**.
- It is named after Norwegian mathematician **Niels Henrik Abel** (1802–1829).
- It was **established in 2003** by the Government of **Norway** and modelled after the Nobel Prizes, in honor of Niels Hendrik Abel, a renowned Norwegian mathematician.
- Recipients receive a **cash prize of 9 million Norwegian** kroner (approximately Rs 7 crore), making it one of the most prestigious awards in mathematics.
- This Prize covers various mathematical disciplines, including but not limited to probability theory, functional analysis, mathematical physics and statistics.

The Sixth Schedule of the Constitution

Recently, the hunger strike initiated by the Kargil Democratic Alliance (KDA) in support of their four-point demands, including Statehood and Ladakh's inclusion in the Sixth Schedule of the Constitution, began in Kargil.

About the Sixth Schedule of the Constitution:

- The Sixth Schedule of the Constitution of India provides for the administration of tribal areas in the northeastern states of **Assam** (North Cachar Hills District, the Karbi Anglong District and the Bodoland Territorial Areas District), **Meghalaya** (Khasi Hills District, Jaintia Hills District, the Garo Hills District), **Tripura** (Tripura Tribal Areas District) and **Mizoram** (The Chakma District, the Mara District and the Lai District).
- It was passed by the Constituent Assembly in **1949**, and is provided under **Articles 244(2) and 275(1) of the Constitution**.
- It contains provisions for the creation of **Autonomous District Councils** (ADCs) and **Regional Councils** (ARCs).
- It seeks to **safeguard tribal land and resources**, prohibiting their transfer to non-tribal individuals or communities, ensuring the preservation and promotion of their cultural and social identities.
- The **Governor of the State has the authority** to determine the areas to be marked as administrative units of the Autonomous Districts and Autonomous Regions.

Chalukyas of Kalyani

Recently, a 900-year-old Kannada inscription from the Kalyana Chalukya dynasty has been found at Gangapuram, a temple Town in Telangana.

About the Chalukyas of Kalyani:

- The Chalukyas of Kalyani, also known as the **Western Chalukyas**, were a Kannadiga dynasty that ruled from the late 10th century to the end of the 12th century.
- The dynasty's capital was Kalyani, which is now known as **Basavakalyan**.
- The Chalukyas of Kalyani were descendants of the **Chalukyas of Badami,** who ruled the region centuries earlier.
- The dynasty's most **notable ruler was Vikramaditya VI**, who ruled from 1076–1126 CE.
- The Chalukyas of Kalyani were **known for their art and architecture**, including cave temples with mural paintings.
- The temples are an example of the **Vesara style**, which is a **combination of Dravida and Nagara styles.**

Staghorn Coral

Recently, Staghorn corals have been seen in the waters of Man Nai Island, near Rayong province, Thailand.

About Staghorn Coral:

- Staghorn coral (**Acropora cervicornis**) is a branching coral with antler-like branches that can **grow up to 6.5 feet (2 meters) long**.
- It's **found in the Indo-Pacific** and **Atlantic Oceans**, typically between 25^0 N to 25^0 S, in warm, clear, oxygenated waters.
- Staghorn coral **colonies are pale brown or golden** tan with **white tips**.
- It is found in **clear, shallow water** on coral reefs throughout the **Bahamas**, **Florida** and the **Caribbean**.
- It is **nocturnal** and uses stinging tentacles to eat small aquatic animals called **zooplankton**.
- The IUCN considers staghorn coral to be **near threatened.**

Face to Face Centres

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

dhyeyaias.com

Place in News

Tuvalu

Recently, a study revealed that Tuvalu is facing the threat of submergence and has articulated its concerns at international climate conferences.

Tuvalu (Capital: Funafuti)

Location: Tuvalu, an island nation in the **west-central Pacific Ocean**, is situated midway between Hawaii and Australia, forming part of the region known as Oceania.

Boundaries: Tuvalu is bordered by **Tokelau** (East), **the Santa Cruz Islands** which belong to the Solomon Islands (West), **Kiribati** (North), **Nauru** (Northwest), **Fiji** (South), **Samoa and Wallis and Futuna** (Southeast) and **Vanuatu** (Southwest).

Physical Features:

- This island consists of **three reef islands** (Nanumanga, Niutao and Niulakita) and **six true atolls** (Funafuti, Nanumea, Nui, Nukufetau, Nukulaelae and Vaitupu)
- **Funafuti** is the largest atoll and comprises numerous islets around a central lagoon.
- Tuvalu experiences a **tropical maritime climate** characterized by consistently warm temperatures, high humidity and relatively stable weather patterns throughout the year.

International Relations: Tuvalu is a member of various international organizations, including the **United Nations** and the **Pacific Islands Forum.**

POINTS TO PONDER

- In which state/UT is Dachigam National Park, recently making headlines, located? **– Jammu and Kashmir**
- Which city's traditional festival, known as Gulaal Gota, has been in the news recently? **– Jaipur, Rajasthan**
- Where did the inaugural Foreign Office Consultations between India and Mauritania take place? **– Nouakchott**
- Which countries recently entered into a new agreement to construct Australia's SSN-AUKUS Submarines? **– US, UK, and Australia**
- Which country recently achieved a milestone by conducting the first transplant of a genetically modified pig kidney into a living human? **– US**