



22 March, 2024

Regulated Entities of RBI

Context: On Thursday, the Reserve Bank of India (RBI) announced the completion of the Omnibus Framework for acknowledging Self-Regulatory Organizations (SROs) for its Regulated Entities (REs).

1. Each sector of regulated entities (RE), such as fin-techs, will have separate SROs.
2. The RBI will accept applications from entities seeking SRO status following the finalization of the framework.
3. The growth of REs, along with increased adoption of innovative technologies and enhanced customer outreach, prompted the need for better industry standards for self-regulation.
4. The omnibus framework outlines objectives, responsibilities, eligibility criteria, governance standards, and the application process for SRO recognition.
5. Sector-specific guidelines, like the number of SROs and membership criteria, will be issued separately by the relevant departments of the Reserve Bank for each sector.
6. An SRO is expected to operate with credibility, objectivity, and responsibility under regulatory oversight to enhance regulatory compliance and foster sustainable sectoral development.

Regulations by RBI

➤ Regulatory Evolution:

- The Banking Regulation Act, 1949 grants the RBI authority to inspect and supervise commercial banks.
- Initially, the Department of Banking Operations and Development (DBOD) handled both regulatory and supervisory functions.
- In 1993, the Department of Banking Supervision (DBS) was established to oversee commercial bank supervision, leading to the creation of the Board for Financial Supervision (BFS) in 1994.
- In August 1997, the Department of Supervision split into DBS and Department of Non-Banking Supervision (DNBS) for focused oversight.

➤ On-Site Inspection:

- Annual on-site inspections of banks cover head offices, controlling offices, and specific branches to ensure adequate coverage of advances.
- The inspection focuses on solvency, liquidity, and operational health based on the CAMELS model (capital adequacy, asset quality, management, earning, liquidity, and system and control).

➤ Off-Site Monitoring:

- Introduced in 1995, off-site surveillance monitors banks' financial health between on-site inspections, identifying potential supervisory concerns.
- Periodic off-site returns track asset-liability management, liquidity, and interest rate risk.

➤ Corporate Governance:

- Various measures, including concurrent audit systems, independent audit committees, and RBI

nominee appointments on bank boards, aim to strengthen corporate governance.

- Implementation of Jilani Committee recommendations on internal control systems is monitored during annual financial inspections.

➤ Supervisory Initiatives:

- Quarterly monitoring visits, appointment of monitoring officers, and direct monitoring of problem areas enhance supervisory effectiveness.
- The department provides secretarial support to BFS, attends to auditor appointments, handles complaints, and monitors fraud cases.

➤ Core Principles Implementation

- Efforts are underway to align regulatory and supervisory practices with the 25 core principles of effective banking supervision outlined by the Bank for International Settlements (BIS).

➤ Supervision over Financial Institutions (FIs):

- FIs were brought under prudential regulation by the RBI in 1994.
- The CAMELS approach is applied to regulate FIs, considering their developmental and supervisory roles.
- A dedicated division supervises ten all-India financial institutions, implementing an off-site surveillance system for continuous monitoring.

Juvenile Idiopathic Arthritis

Context: During Another World Young Rheumatic Disease Day (WORD Day) on March 18th, experts emphasized the need to raise awareness for early diagnosis of rheumatic diseases in young individuals.

➤ Understanding JIA:

- JIA types are autoimmune or autoinflammatory diseases where the immune system attacks the body's cells and tissues, particularly the synovium around joints.
- Symptoms include joint pain, stiffness, redness, swelling, fatigue, blurry vision, rash, and high fever.
- Researchers believe genetics and external factors like viruses or bacteria may trigger JIA, with no evidence linking foods, toxins, allergies, or vitamin deficiencies to the disease.

➤ Types of JIA and Symptoms:

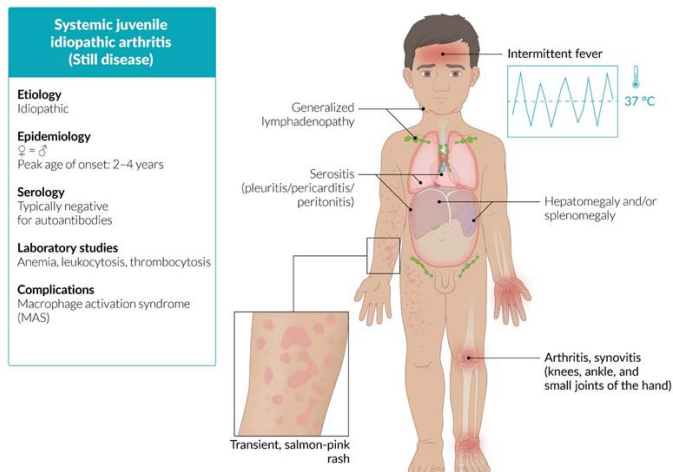
- Oligoarthritis: Affects four or fewer joints, commonly large ones like knees and ankles.
- Polyarthritis: Affects five or more joints, often on both sides of the body.
- Systemic: Affects the entire body, characterized by high spiking fever and rash.
- Psoriatic arthritis (PsA): Joint symptoms accompanied by a scaly rash.
- Enthesitis-related: Affects where muscles, ligaments, or tendons attach to bone, more common in boys.

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- Undifferentiated: Symptoms don't align perfectly with any subtype, but joint inflammation is present.
- **Impact on the Body:**
 - Eyes, bones, mouth/jaw, neck, ankles/feet, skin, lungs, heart, digestive tract, reproductive organs, and weight may be affected by JIA.
 - Controlling inflammation is crucial to prevent damage and complications from these health effects.
- **Diagnosis:**
 - Diagnosis requires joint inflammation lasting at least six weeks in a child under 16 years old, with other conditions ruled out.
 - A pediatrician may refer parents to a rheumatologist for specialized evaluation, including medical history, physical examination, and blood tests.
- **Medical Evaluation:**
 - Medical history helps rule out other causes, while physical examination checks for joint tenderness, swelling, and limited movement.
 - Blood tests like ESR, CRP, ANA, RF, HLA-B27 typing, and CBC, along with imaging tests like X-rays, ultrasound, MRI, or CT scans, aid in diagnosis.
- **Treatment Goals:**
 - Treatment aims to slow or stop inflammation, relieve symptoms, prevent joint and organ damage, preserve joint function and mobility, reduce long-term health effects, and achieve remission.
- **Treatment Approach:**
 - Treatment varies based on disease type and severity, including medication, complementary therapies, and healthy lifestyle habits. Early aggressive treatment is crucial for disease control.



Carbon Capture Plants

Context: The IPCC observed that CCS exhibits the highest cost and the least potential for net emission reduction in both the energy and industry sectors.

- **CCS Overview and Climate Targets:**
 - CCS technology, aimed at mitigating climate change, is gaining prominence worldwide.
 - Countries are incorporating CCS into their climate targets, as evidenced by the European Union's recent

inclusion of CCS as a dependency to achieve its 2040 goals.

- **Challenges and Failures in CCS Projects:**
 - Recent analyses reveal significant challenges and failures in many CCS projects.
 - Despite widespread advocacy, CCS projects often underperform or fail to meet expectations.
 - This discrepancy between anticipated effectiveness and actual performance highlights the complexity and uncertainties surrounding CCS implementation.
- **Technical and Financial Hurdles of CCS:**
 - Technical hurdles, such as achieving desired CO₂ capture rates, present significant challenges for CCS.
 - Financially, CCS demands substantial capital investment and increases electricity costs.
 - The International Energy Agency (IEA) projects the total annual capital needed for CCS to range between \$655-1,280 billion.
- **IPCC Assessment of CCS:**
 - The Intergovernmental Panel on Climate Change (IPCC) recognizes CCS as a potential solution for climate mitigation.
 - However, IPCC also notes CCS's high cost and limited contribution to net emission reduction,

Carbon Capture and Storage (CCS) projects' poor report card

Project	Capacity (Mtpa)	Performance
Natural Gas processing		
1986 Shute Creek	7	Lifetime under-performance of 36%
1996 Sleipner	0.9	Performing close to the capture capacity
2004 In Salah	1.1	Failed after 7 years of operation
2007 Snøhvit	0.7	Performing close to the capture capacity
2019 Ogoni	4	Lifetime under-performance of ~50%
Industrial sector		
2000 Great Plains	3	Lifetime under-performance of 20-30%
2013 Coffeyville	0.9	No public data was found on the lifetime performance.
2015 Quest	1.1	Performing close to the capture capacity
2016 Abu Dhabi	0.8	No public data was found on the lifetime performance.
2017 Illinois Industrial (IL-CCS)	1	Lifetime under-performance of 45-50%
Power sector		
2014 Kemper	3	Failed to be started
2014 Boundary Dam	1	Lifetime under-performance of ~50%
2017 Petra Nova	1.4	Suspended after 4 years of operation

particularly in the energy and industry sectors.

- Geological storage availability, along with technological, economic, institutional, and socio-cultural barriers, further complicate CCS implementation.
- **Role of Oil and Gas Industries in CCS:**
 - The oil and gas industry, despite historically lacking a business case for CCS, has shown support.

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- Government subsidies, like the US Inflation Reduction Act of 2022, incentivize CCS projects, particularly for enhanced oil recovery (EOR).
- Around 73% of captured CO₂ is used for EOR, demonstrating the industry's profit-driven approach to CCS implementation.

➤ **Viability in Hard-to-Abate Sectors:**

- CCS may find justification in hard-to-abate sectors like steel and cement, which heavily rely on fossil fuels.
- The Global Cement and Concrete Association projects that 36% of emission reduction in the cement sector could come from CCS by 2050.
- Despite potential benefits, current uptake of CCS in these sectors remains minimal due to affordability and exploration of alternative solutions.

➤ **Current State and Future Outlook of CCS:**

- Existing CCS plants often underperform and are costlier than alternative mitigation strategies.
- Despite challenges, CCS continues to be included in climate mitigation plans by both countries and companies.
- However, there is a risk that bullish projections for CCS could divert investments from more affordable and effective decarbonization technologies.

➤ **Implications and Re-evaluation of CCS:**

- The persistence of CCS in climate plans warrants a serious re-evaluation of its role in climate action.
- It is crucial to assess whether the benefits of CCS justify the significant investments and potential drawbacks associated with its implementation.
- A careful consideration of alternative, more effective decarbonization technologies is necessary to ensure efficient and sustainable climate mitigation efforts.

NEWS IN BETWEEN THE LINES

Shanghai Cooperation Organization



Recently, the fourth edition of the Shanghai Cooperation Organisation (SCO) Startup Forum was organized in New Delhi.

About the Shanghai Cooperation Organization:

- The Shanghai Cooperation Organization (SCO) is an intergovernmental organization that promotes regional cooperation among member states.
- It aims to tackle terrorism, promote economic development, foster cultural exchange and advance towards a more democratic and fair global order.
- It was established in 2001 and comprises eight member states: China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, India and Pakistan while Iran joined the group in July 2023.
- It has three councils including the Council of Heads of Government, the Council of Heads of State and the Council of Ministers of Foreign Affairs.
- It has signed cooperation agreements with various UN bodies, including UNESCO, UNWTO, IOM, UNODC, ESCAP and UNOCT.

International Monetary Fund



Recently, the International Monetary Fund (IMF) has reached a staff-level agreement with Sri Lanka for a USD 337 million bailout package.

About the International Monetary Fund:

- The International Monetary Fund (IMF) is an international organization founded in 1944 at the Bretton Woods Conference.
- It currently consists of 190 member countries.
- It provides financial assistance to member countries facing balance of payments problems, typically with conditions for economic reform.
- It played a crucial role in responding to various global economic crises, including the 1997 Asian financial crisis and the global economic crisis of 2008.
- Its headquarter is in Washington, D.C.
- India is a founding member of the International Monetary Fund.

Aralam Wildlife Sanctuary



Recently, a team of 60 personnel from the Kannur forest division, Aralam Wildlife Sanctuary captured the approximately two-year-old tiger, which had left residents near the forest fringes at Adakkathodu at Kelakam in Kannur panic-stricken.

About Aralam Wildlife Sanctuary:

- Aralam Wildlife Sanctuary is a sanctuary in Kerala, located on the western slope of the Western Ghats.
- It was established in 1984 and is the northernmost wildlife sanctuary in the state.
- It borders the Brahmagiri Wildlife Sanctuary in Karnataka, the forests of Coorg, Wayanad's northern slopes and the Cheenkanni River.
- The sanctuary's highest peak is Katti Betta.
- Flora: Cinnamomum Zeylanicum, Hopea parviflora, Largestroemia lanceolata, Xylia xylocarpa, Mallotus, and Philippinensis are found here.
- Fauna: Common fauna include deer, boar, elephant, bison, leopard, jungle cat, and various squirrels..

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The Great Indian Bustard



Recently, the Supreme Court constituted an expert committee to balance the conservation and protection of Great Indian Bustard bird population with the country's international commitments to promote renewable sources of energy.

About the Great Indian Bustard:

- The Great Indian Bustard (*Ardeotis nigriceps*) is a large, terrestrial bird native to the Indian subcontinent.
- It is one of the heaviest flying birds in the world and is known by many names, including Maldhok, Yerbhoot, Ghorad and Godawan.
- It primarily inhabits dry grasslands and semi-arid regions, particularly in states like Rajasthan, Gujarat, Maharashtra and Andhra Pradesh.
- They have brownish-grey plumage and distinctive black crown feathers on their heads.
- The frequent collision with high-power overhead electric lines, particularly in its core habitats in Gujarat and Rajasthan, is a significant cause of mortality.
- India is a signatory to international agreements such as the Convention on Biological Diversity (CBD) and the Convention on Migratory Species (CMS), which include commitments to conserve endangered species like the Great Indian Bustard.
- The Great Indian Bustard is critically endangered according to the IUCN and is protected under Schedule I of the Wildlife (Protection) Act, 1972.

Sound Laser



Recently, the scientists in China have created an unprecedentedly bright sound laser that shoots particles of sound instead of light.

About Sound Laser:

- The sound laser is analogous to a traditional light laser, utilizing the principles of Sound Amplification by Stimulated Emission of Radiation (SASER), similar to the amplification of light in lasers.
- SASER technology was first developed in 2009, marking a significant milestone in the field of acoustics and sound manipulation.
- It is a new laser technology that uses two light beams to levitate a silica bead and create phonons, which are particle-like chunks of sound.
- This levitation leads to the production of amplified phonons, forming the sound laser beam.

Place in News

Mozambique

Recently, it was announced that INS Tir and INS Sujata will participate in the second edition of the India Mozambique Tanzania (IMT) Tri Lateral (TRILAT) Exercise from March 21 to March 29, 2024.

Mozambique (Capital: Maputo)

Location: Mozambique is located in southeastern Africa, on the east coast of southern Africa and along the Mozambique Channel.

Boundaries:

- Mozambique shares its borders with the Indian Ocean (East), Zimbabwe (West), Tanzania (North), Malawi and Zambia (Northwest) and Eswatini and South Africa (Southwest).

Physical Features:

- The highest point in Mozambique is Mount Binga, located in the Chimanimani Mountains along the border with Zimbabwe.
- The major rivers of Mozambique include the Zambezi, Limpopo, Save and Rovuma rivers.
- The country features several mountain ranges, including the Chimanimani Mountains in the east and the Chimoio Plateau in the central region.
- The country is rich in natural resources including coal, natural gas, titanium and hydroelectric power potential.
- Colonial History: Mozambique was colonized by Portugal in the late 15th century and gained independence in 1975.



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Current affairs summary for prelims

22 March, 2024

POINTS TO PONDER

- Which organization was recently honoured by researchers with the naming of a new species of deep-sea isopod off the Kerala coast?
– **Indian Space Research Organisation (ISRO)**
- Which country has claimed the title of the world's happiest country for the seventh consecutive year, according to the recent UN-sponsored World Happiness Report? – **Finland**
- According to a recent study by scientists in Portugal, what geological event is predicted to occur beneath the Gibraltar Strait in approximately 20 million years? – **Subduction Zone of the Ring of Fire**
- Under which section of the Representation of the People Act, 1951, are nominations filed for the Lok Sabha polls? – **Section 33**
- What initiative has Nvidia recently announced, aimed at revolutionizing the evolution of humanoid robots? – **Project GR00T**

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