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Time: 45 Min

Date: 09-07-2024

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SHARE OF WOMEN IN UNINCORPORATED SECTOR

In News

- According to the recently released Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2022-23, The share of women owners and workers in unincorporated enterprises was relatively high in the southern States,

Key Highlights

- Overview** : Annual Survey of Unincorporated Sector 2022-23 categorizes workers into manufacturing, trade, and other services, excluding agriculture and public sector entities.
- Data Analysis** : Proportion of female workers to total workers has marginally increased from 25.52% in ASUSE 2021-22 to 25.63% in ASUSE 2022-23.
 - About 54% of the proprietary establishments were observed to be headed by female proprietors in the Manufacturing sector
- Regional Distribution** : Southern states and some eastern states have a higher proportion of women owners and workers in unincorporated enterprises.
 - Share of women is lower in western, northern, and central states.
 - Telangana leads with 41%, followed closely by other southern states exceeding 30% like West Bengal and Odisha.

Nature of Unincorporated Sector

- The **unincorporated sector** includes jobs that require little to no capital and skills, such as street vending, as well as work that involves considerable investment and expertise, such as tailoring and car repair.
- The shop may be operated by an individual or a self-employed entrepreneur who may enlist unpaid family members or employ paid workers.
- They may work from a fixed location or in homes, small shops, and workshops.
- Within this sector, **women constitute a substantial workforce**, contributing to various industries and activities.

Challenges faced by women

- Unpaid family worker**: Women's share among unpaid family workers is significantly higher than in other job types across all states.
- Income**: Women engage in diverse occupations, from agriculture and handicrafts to informal services.

- Their income levels often remain low due to lack of skill development and bargaining power.
- Gender Pay Gap**: Women earn less than men for similar work, perpetuating economic inequality.
- Lack of Social Security**: Many women lack access to health insurance, pension schemes, and other safety nets.
- Informal Nature of Work**: The unorganized sector lacks formal contracts, leaving women vulnerable to exploitation.

Major Initiatives

- In order to enhance the employability of female workers, the Government is providing training to them through a network of **Women Industrial Training Institutes, National Vocational Training Institutes and Regional Vocational Training Institutes**.
- The Government has also introduced **Skill India Mission** to ensure economic independence of women through skill development and vocational training,
- The **National Skill Development Policy** focuses on inclusive skill development, with the objective of increased women participation for better economic productivity.
- Pradhan Mantri Kaushal Vikas Kendras** lay emphasis on creating additional infrastructure both for training and apprenticeship for women
- There are schemes like **Pradhan Mantri Mudra Yojana** and **Stand Up India, Prime Minister's Employment Generation Programme (PMEGP)**, for helping the women to set up their own enterprise.

Conclusion and Way Forward

- Women across different age groups contribute to the unincorporated sector therefore Empowering women is not only a matter of economic justice but also a step toward inclusive growth.
- There is a need to address issues like equal pay, safe working conditions, maternity leave and access to education is crucial.
- There is a need to Invest in training programs to enhance women's skills and empower them to access better-paying jobs.
- By recognizing Women's contributions and addressing their unique needs, we can create a more equitable and prosperous society.

Source: TH

PRIMARY AGRICULTURAL CREDIT SOCIETIES

Context

- The Union government will set up multi-purpose Primary Agricultural Credit Societies (PACs) in around two lakh gram panchayats of the country with no cooperative network within the next five years.

What are Cooperative societies?

- Cooperative societies is a **State Subject under Entry 32** of the State List of Seventh Schedule of the Constitution of India.
- While cooperative societies functioning within a single state are governed by the Cooperative Societies Act of their respective states, cooperative societies functioning in more than one state/UT are governed by the **Multi-State Cooperative Societies Act, 2002** under the purview of the Government of India (GoI).

Primary Agricultural Credit Societies (PACS)

- Primary Agricultural Credit Societies (PACS) are credit societies that are registered under the **Cooperative Societies Act of the State concerned**.
- They are **grassroots-level institutions** in villages with individual farmers, artisans, and other weaker sections as member shareholders.
- They form the **lowest tier of the federated short-term cooperative credit structure** with District Cooperative Banks (DCCBs) and/or State Cooperative Banks (StCBs) in their upper tiers.

Benefits of Primary Agricultural Credit Societies (PACS)

- Credit Provision**: PACs provide easy access to credit for farmers and rural residents. This includes short-term, medium-term, and long-term loans for agricultural and related activities.
- Financial Inclusion**: They promote financial inclusion by bringing banking services to remote rural areas, helping people who might not have access to traditional banking facilities.
- Agricultural Support**: PACs provide support services like the supply of seeds, fertilizers, and pesticides at reasonable rates, helping farmers increase productivity.
- Storage and Marketing**: They assist in the storage of agricultural produce and sometimes in marketing it, ensuring that farmers get fair prices for their products.

- Training and Education**: PACs organize training programs and workshops to educate farmers on modern farming techniques, financial literacy, and sustainable agricultural practices.
- Social and Economic Development**: By improving access to credit and financial services, PACs contribute to the overall social and economic development of rural communities, reducing poverty and improving living standards.
- Employment Generation**: Through their various activities, PACs contribute to employment generation in rural areas, both directly and indirectly.

Challenges faced by PACS

- Limited Resources**: Many PACs suffer from a lack of adequate financial and human resources, which limits their ability to provide comprehensive services to their members.
- Political Interference**: Political influence in the functioning of PACs can lead to favoritism, corruption, and misallocation of resources, undermining their purpose.
- High Overdue Loans**: A significant issue is the high level of non-performing assets (NPAs) due to overdue loans. Poor recovery mechanisms and lax lending practices contribute to this problem.
- Limited Credit Products**: PACs offer a narrow range of credit products, which may not meet the diverse needs of the rural population.
- Technological Backwardness**: Many PACs lag in adopting modern technology and digital banking solutions, which affects their efficiency and competitiveness.

Way Ahead

- Increased financial support from the government will help PACs improve their capital base. Also Forming partnerships with commercial banks and other financial institutions can help PACs access additional resources.
- There is a need for developing a wider range of credit products tailored to the diverse needs of the rural population, such as microloans, crop insurance, and savings products.
- Also strengthening internal controls and audit mechanisms is required to detect and prevent fraud and mismanagement.

Source: AIR

INDIA-RUSSIA STRATEGIC RELATIONSHIP

Context

- Prime Minister Modi is on a two-day visit to Russia.

Key Highlights

- India and Russia are working on the **Eastern Maritime Corridor** and the two countries were discovering each other through the **Ganga-Volga dialogue**.
 - The Eastern Maritime Corridor is a proposed sea route between Chennai, India, and Vladivostok, Russia, passing through the Sea of Japan, the South China Sea, and the Malacca Strait.
- India will set up two new consulates in the Russian cities of **Kazan and Yekaterinburg**.

India- Russia Relations

- Political Relations:** A watershed moment in relations between India and the Soviet Union was the signing of the **Treaty of Peace and Friendship** in 1971.
 - After the dissolution of the Soviet Union, India and Russia entered into a new **Treaty of Friendship and Cooperation in 1993**.
 - In 2000, during the visit of President Putin to India, the partnership acquired a new qualitative character, that of a **Strategic Partnership**.
 - In **2010** the relationship was elevated to the status of a **Special and Privileged Strategic Partnership**.
- Defense and Security Cooperation:** BrahMos Missile System as well as the licensed production in India of **SU-30 aircraft and T-90 tanks** are examples of such flagship cooperation.
 - Both sides concluded agreements on the supply of **S-400 air defense systems**, construction of frigates under Project 1135.6 and shareholders agreement on the formation of a joint venture to manufacture **Ka-226T** helicopters in India.
 - The two countries also hold exchanges and training exercises between their armed forces annually termed **INDRA**.
- Trade and Economic Relations:** Both sides revised targets of increasing bilateral investment to US \$50 billion and bilateral trade to **US \$30 billion by 2025**. However, bilateral trade reached an all-time high of \$65.70 billion in FY 2023-24.
 - Since the beginning of the war in Ukraine, India has been buying large amounts of Russian oil at a discount to cushion the inflationary impact of rising crude prices.
- Intergovernmental Commissions:** There is regular high-level interaction between the two countries.

- The IRIGC (India-Russia Intergovernmental Commission):** It is the main body that conducts affairs at the governmental level between both countries. Both countries are members of international bodies including the UN, BRICS, G20 and SCO.
- Two Inter-Governmental Commissions:** One on Trade, Economic, Scientific, Technological and Cultural Cooperation (IRIGC-TEC), co-chaired by EAM and the Russian DPM, and
- Another on **Military-Technical Cooperation (IRIGC- MTC)** co-chaired by Russian and Indian Defence Ministers, meet annually.
- Nuclear Energy:** Russia recognizes India as a country with advanced nuclear technology with an impeccable non-proliferation record.
 - Kudankulam Nuclear Power Plant (KKNPP)** is being built in India with Russian cooperation.

Way Ahead

- Over the years, as India has diversified its relationships in a **multi-polar world**, the India-Russia relationship has stagnated in some areas and atrophied in others.
- To further strengthen the relationship between Both the nations there is need for;
 - Providing a new basis for the existing defense cooperation;
 - The opportunity for Indian business conglomerates to explore the economic viability of the Siberian and Far East Region of Russia;
 - Strengthening geo-economic connectivity projects;
 - Enhancing technological cooperation between India and Russia.

Source: IE

UNESCO DESIGNATES 11 NEW BIOSPHERE RESERVES

In News

- The UN Educational, Scientific and Cultural Organisation (UNESCO) has designated 11 new biosphere reserves, recognising their importance for conserving biodiversity and cultural heritage.

More about the News

- The new designations are in Colombia, the Dominican Republic, Gambia, Italy, Mongolia, Philippines, South Korea and Spain.
- Additionally, and for the first time, the list includes two transboundary reserves, spanning Belgium and the Netherlands, and Italy and Slovenia.

- The 11 newly designated biosphere reserves are:
 - Kempen-Broek Transboundary Biosphere Reserve (Belgium, Netherlands)
 - Darien Norte Chocoano Biosphere Reserve (Colombia)
 - Madre de las Aguas Biosphere Reserve (Dominican Republic)
 - Niumi Biosphere Reserve (Gambia)
 - Colli Euganei Biosphere Reserve (Italy)
 - Julian Alps Transboundary Biosphere Reserve (Italy, Slovenia)
 - Khar Us Lake Biosphere Reserve (Mongolia)
 - Apayaos Biosphere Reserve (Philippines)
 - Changnyeong Biosphere Reserve (South Korea)
 - Val d'Aran Biosphere Reserve (Spain)
 - Irati Biosphere Reserve (Spain).

What are Biosphere Reserves?

- Biosphere reserves are designated under the **intergovernmental MAB Programme** by the Director-General of UNESCO following the decisions of the MAB International Coordinating Council (MAB ICC). Their status is internationally recognised.
- The Man and Biosphere (MAB) Programme, **launched in 1971**, is an international scientific initiative that aims to foster a harmonious relationship between humans and their environment.
- They integrate **three main functions:**
 - Conservation of biodiversity and cultural diversity.
 - Economic development that is socio-culturally and environmentally sustainable.
 - Logistic support, underpinning development through research, monitoring, education and training.
- Biosphere Reserves' three main zones:
 - Core Areas:** It comprises a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation
 - Buffer Zones:** It surrounds or adjoins the core area, and is used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education.
 - Transition Area:** It is where communities foster socio-culturally and ecologically sustainable economic and human activities.

- India has 18 biosphere reserves, 12 of which are recognized under this program, with the Nilgiri Biosphere Reserve being the first.

Significance of Biosphere Reserve

- Biosphere reserves play an important scientific role, serving as a site for research and monitoring, providing valuable data and insights that can inform environmental management and policy decisions.
- Furthermore, they help in achieving global development targets such as those set by the Kunming-Montreal Global Biodiversity Framework, inter alia, on protecting and restoring significant portions of the Earth's ecosystems by 2030.
- They also promote unique local sustainable development ideas, safeguard biodiversity, and combat climate change.

Source: IE

REGENERATIVE BRAKING AND ALTERNATIVE ENERGY RECOVERY METHODS

In News

Recently, applications of Regenerative braking and alternative energy recovery methods have been highlighted

What is braking?

- Braking is the mechanism by which an automotive vehicle in motion slows down.
 - A vehicle moving faster has more kinetic energy than a vehicle moving slower, so the process of braking removes (mostly) kinetic energy from the vehicle.
 - The law of energy conservation means this removed energy has to go somewhere

Regenerative Braking:

- Regenerative braking is a system in electric vehicles that converts kinetic energy from braking into electrical energy, which is stored in batteries or used immediately.
 - It involves the electric motor functioning as a generator to capture kinetic energy back into the vehicle's energy system.
- Mechanism :** The electric motor in the vehicle reverses its role during braking, turning mechanical energy from the wheels into electrical energy.

- This energy is either stored for later use or fed back into the vehicle's traction system.
- **Comparison** : Regenerative braking is part of dynamic braking, contrasting with rheostatic braking where excess energy is dissipated as heat.

Limitations:

- It is a simple energy recovery mechanism which has some downsides.
- It alone cannot fully halt a vehicle and is supplemented by traditional braking systems that dissipates some of the kinetic energy as heat.
- Efficiency drops at lower speeds, and it does not prevent vehicles from rolling back on inclines.

Solutions

- The design of a regenerative brake depends on the energy form to which the mechanical energy from the wheels is to be converted.
 - ♦ An electric vehicle funnels it into a generator and obtains a current, which is stored in a battery or a supercapacitor.
- Similarly, the mechanical energy can be used to increase the angular momentum of a rotating flywheel.
- Flywheels are especially useful because they can receive energy much faster than other such systems.
 - ♦ For every unit increase in speed, they also store exponentially more energy.
- The flywheel can be linked to a reciprocating engine to manage or augment its output, like in Formula One racing, or to a gyroscope to help submarines and satellites navigate.
- Recovered kinetic energy can also be fed to a pump that compresses air, which can be useful to start internal combustion engines.

Source:TH

JUMPING GENES AND RNA BRIDGES

Context

- Scientists at the Carnegie Institution found that some genes were able to move around within the genome. These genes were called **Jumping genes or transposons**.

About

- Transposons influence the effects of genes and are called the **tools of evolution**, for their ability to rearrange the genome and introduce changes.

- More than **45% of the human genome consists of transposable elements**.
 - ♦ They create mutations in genes and lead to diseases.
- However, most of the transposons have themselves inherited mutations and have become inactive, and thus can't move around within the genome.

Jumping genes (Transposons)

- The name of the jumping gene is **IS110**, which stands for **Insertion Sequence**, and such sequences are found in an array of life-forms, including bacteriophages, bacteria, plants, worms, fruit flies, mosquitos, mice, and humans.
- They roam around the body, cutting and pasting themselves, **repairing DNA and modifying it** daily.

What is Bridge RNA?

- **Bridge RNA** refers to a type of RNA (Ribonucleic Acid) molecule that plays a crucial role in the process of **DNA rearrangement in certain organisms**.
- Bridge RNAs act as **molecular bridges between different DNA segments** during this intricate process of DNA rearrangement.

Significance of Jumping genes

- The IS110 bridge recombination system **expands the diversity of nucleic-acid-guided systems** beyond **CRISPR and RNA interference**.
- It offers a unified mechanism for the three fundamental DNA rearrangements — insertion, excision and inversion — that are required for genome design.
 - ♦ **DNA insertion** is a genetic process in which a segment of DNA is added to a different DNA segment,
 - ♦ **Excision** is a mechanism in which a damaged DNA segment is removed, and
 - ♦ **Inversion** is a method in which a piece of DNA in a chromosome gets reversed.
- With **bridge RNA**, researchers can program both the target and the donor sequence of DNA so they can **mix and match any two that they want**, whereas the guide RNA in CRISPR-Cas9 systems can specify only the target DNA sequence to be cut, not the one to be added in.

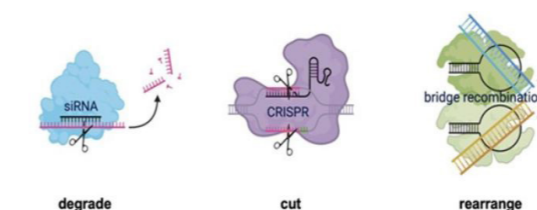
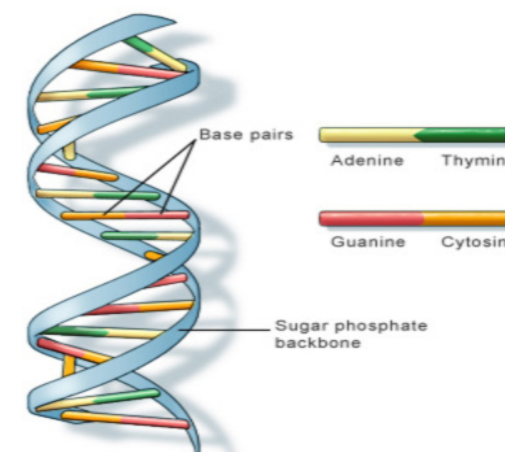


Fig 1. Programmable RNA-guided tools. Three generations of programmable RNA-guided tools—RNAi (left, blue); CRISPR-Cas (middle, purple); and bridge RNAs (right, green)—critical for the new frontier of genome design. (Credit: Durrant, Perry et al.)

What is DNA (Deoxyribonucleic Acid)?

- DNA,, is the **hereditary material** in humans. It is made up of four building blocks, or bases.
- These are called **adenine, cytosine, guanine and thymine** – usually shortened to A, C, G and T.
- A DNA molecule is made up of **two long strands of bases** that wind around each other into a spiral shape.
 - ♦ This is called the double helix and looks like a twisted ladder.
- The bases on one strand of the DNA molecule pair with bases on the opposite strand, coming together as a base pair.
 - ♦ Base pairs are complementary and always pair in the same way: **A with T, and C with G**.



Source: TH

NEWS IN SHORT

NATIONAL SECURITY COUNCIL

In News

- The Union government has recently restructured the reporting relationships within the **National Security Council Secretariat (NSCS)**. This is a significant development as the NSCS plays a crucial role in advising the government on matters of national security.

About the National Security Council (NSC)

- **Established:** 1998
- **Purpose:** The NSC is the apex body for considering political, economic, energy, and security issues of strategic concern. It formulates national security policies and advises the Prime Minister on their implementation.
- **Structure:** The NSC has a three-tiered structure:
 - ♦ **Strategic Policy Group:** This group is responsible for long-term strategic planning and policy formulation.
 - ♦ **National Security Advisory Board (NSAB):** The NSAB provides expert advice on national security matters.
 - ♦ **NSC Secretariat (NSCS):** The NSCS is responsible for coordinating the work of the NSC and its subsidiary bodies.
- **Leadership:** The National Security Advisor (NSA) presides over the NSC and is responsible for providing the Prime Minister with independent and objective assessments of national security threats and challenges.
- **Location:** The NSC operates within the executive office of the Prime Minister of India.
- **Agenda:** The NSC's agenda includes issues of external and internal security, military affairs, conventional and non-conventional defense, and other matters of strategic importance.

Significance of Restructuring the NSCS

- The restructuring of the NSCS is expected to improve the efficiency and effectiveness of the organization. It may also strengthen the NSA's role in national security decision-making.

Source: IE

PANGONG LAKE

In News

- In the satellite images. It is found that China's People's Liberation Army (PLA) has constructed underground bunkers in the area around Pangong Lake in eastern Ladakh.

About Pangong Lake

- Pangong Tso is a **high-altitude, endorheic (landlocked)** lake located in the Himalayas, spanning the disputed India-China border.
- Situated at 4,225 meters, and **predominantly saline**.
- The **lake's water changes colors**, appearing blue, green, or even red at different times, depending on sunlight and other factors.

- Pangong Tso is an essential **breeding ground for a wide variety of birds**, including several migratory species.
- **Home to nomadic tribes**, Pangong Tso also holds cultural significance, featuring in local folklore.

Source: TH

RIGHT TO REPAIR PORTAL

In News

- The Centre asked the automobile companies to join the unified **Right to Repair Portal India**.

About

- The portal was launched by the Department of Consumer Affairs to empower consumers by providing them with easy access to information on repairing their products, fostering a circular economy, and reducing e-waste.
- The portal provides consumers with manuals, repair guides, and videos for various products, enabling them to understand the repair process.
- It discloses information on the price and warranty of spare parts, allowing consumers to make informed decisions about repairs.
- The portal initially focuses on key sectors like farming equipment, electronic items, automobile items etc.

Source: IE

GROYNES

Context

- The irrigation department in Poonthura region, Kerala is set to construct eight groynes to resolve the challenge of coastal erosion.

Groynes

- A groyne is a **rigid hydraulic structure** built perpendicularly from an ocean shore or a river bank, interrupting water flow and limiting the movement of sediment.
- It is usually made out of **wood, concrete, or stone**.

Advantages

- Groynes are easy to construct. They have long term durability and are low maintenance.

- They reduce the need for the beach to be maintained through beach nourishment and the recycling of sand.

Source: TOI

LEBANON-ISRAEL 'BLUE LINE' FRONTIER

Context

- The UN voiced deep concern at the increase in the intensity of exchanges of fire across the Blue Line, which separates Lebanese and Israeli armed forces.

About

- The Blue Line is a demarcation line dividing Lebanon from Israel and the Golan Heights.
- It was marked by the **United Nations in 2000** for the purposes of determining whether Israel had fully withdrawn from Lebanon.

Source: AIR

'Naavu Manujaru' Programme

In News

- Karnataka government will start 'Naavu Manujaru' programme in schools.

About 'Naavu Manujaru' programme

- It is ordered to begin from the current academic year across all government, aided, and unaided primary and high schools.
- It involves two hours of weekly discussions and dialogues (three periods of 40 minutes each).
- It will cover discussions on social harmony, significance of local and national festivals, folk games, and sports.
- It will also focus on exploration of thoughts of social reformers, visits to local landmarks, and discussions on nuclear families, inequality elimination, and constitutional values like equality, liberty, and fraternity.
- District-level nodal officers appointed to oversee implementation and provide guidance
- **Objectives** : It is aimed at transforming all educational institutions into centers promoting social harmony, tolerance, and scientific temper.
 - ♦ It is Introduced to instill values enshrined in the Constitution among students.

Source:TH

