

DAILY CURRENT AFFAIRS (DCA)

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AI DESIGNED BACTERIOPHAGES

Context

- Researchers at Stanford University and the Arc Institute used **artificial intelligence (AI)** to **design complete genomes of bacteriophages** - **viruses that infect bacteria**.

Bacteriophages

- Bacteriophages (phages)** are **viruses** that **selectively target and kill bacteria**.
 - They are the **most abundant commonly occurring natural entities**, playing crucial roles in **regulating bacterial populations** and influencing **microbial ecosystems**.
- Phages are useful as **they can destroy bacteria resistant to drugs** such as antibiotics.
 - Phages infect their bacterial hosts with great specificity. **They do not infect human cells**.
- Antimicrobial resistance (AMR)** poses a serious global threat to our ability to treat bacterial infections, this has led to an interest in **an older approach to treating microbial infections by using phages**.
 - Phage therapy** can be a promising tool for controlling AMR, which is one of the top global public health and development threats.

AI Designed Phage

- An AI-designed phage** successfully combined a viral protein with other genetic changes in a way that conventional engineering had struggled to achieve.
 - Some were able to **overcome bacterial resistance** that **defeated the original virus**, for medicine, that creates remarkable opportunities.
- The significance is not simply that AI can propose individual mutations; it can **explore combinations that would be extremely difficult for humans to test one by one**.

Applications

- Phage Therapy:** Antibiotic resistance is steadily eroding conventional treatment options, while bacteriophages offer another way of killing bacteria.
- Assistive Role:** AI can assist the design of vaccine antigens, antibodies, therapeutic proteins and viral vectors used to deliver genetic treatments.

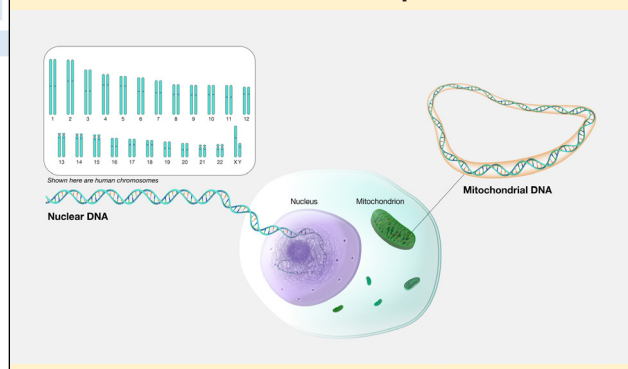
- Cancer Therapy:** It may eventually help optimize oncolytic viruses that selectively attack cancer cells.

What is Virus?

- A virus is an **infectious microbe** consisting of a segment of nucleic acid (either DNA or RNA) surrounded by a **protein coat called capsid**.
- Viruses are **not considered living organisms** because they cannot carry out metabolic processes on their own.
- A virus cannot replicate alone; instead, it must infect cells and use components of the host cell to make copies of itself.
- Often, a **virus ends up killing the host cell** in the process, causing damage to the host organism.
- Well-known examples of **viruses causing human disease** include AIDS, COVID-19, measles and smallpox.

Genome

- The genome is the **entire set of DNA instructions found in a cell**.
- In humans, the genome consists of **23 pairs of chromosomes** located in the cell's nucleus, as well as a small chromosome in the cell's mitochondria.
- A genome contains **all the information needed for an individual to develop and function**.



Way Ahead

- The Stanford experiment shows that **AI can move from analysing biological information towards proposing biological designs** that scientists can physically build.
 - That capability could **transform antimicrobial resistance research, vaccines and therapeutics**.
- India must be capable not only of regulating and consuming this revolution, but of **participating in its science and helping shape its safeguards**.

Source: TH

INDIA'S PRIVATE SPACE ECOSYSTEM

Context

- PM Modi interacted with founders and CEOs of over **20 space start-ups** and highlighted the potential of India's private space ecosystem to attract global scientific and technological talent.

India's Emerging Private Space Ecosystem

- India's space economy currently stands at \$8.4 billion, accounting for 2–3% of the global space economy. It is expected to be **\$40–45 billion by 2030**.
- The Indian Space Policy 2023** led to the entry of private players to space-related activities in India.
- Companies such as **Pixxel, Dhruva Space, Skyroot Aerospace, Agnikul Cosmos, and Bellatrix Aerospace** have emerged as **pioneers of a new space era**.

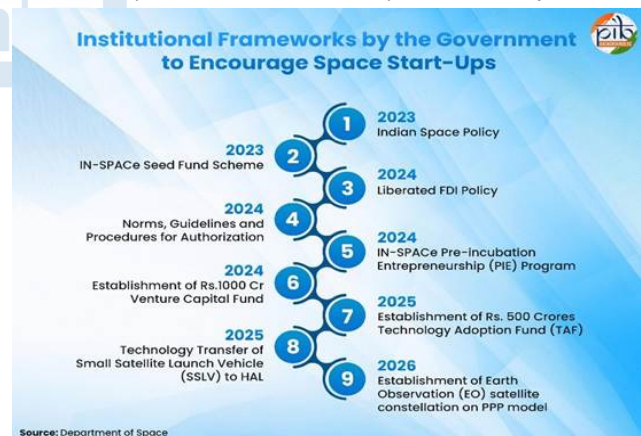


- Skyroot Aerospace became **India's first space-tech unicorn**. Its **Vikram-1** became the **first privately developed Indian orbital-class rocket** to successfully place a payload into **Low Earth Orbit (LEO)**.
- Pixxel Space** is building **hyperspectral imaging satellites** that provide Earth observation data to commercial customers and government agencies in India, Europe and the United States.

Major Reforms in the Space Sector of India

- Establishment of IN-SPACe (Indian National Space Promotion and Authorisation Centre, 2020)**: Acts as a **single-window regulator** and facilitator for private companies, authorising and promoting their participation in space activities.

- Corporatisation via NewSpace India Limited (2019)**: It was set up as ISRO's commercial arm to transfer technology, manufacture satellites/launch vehicles through industry, and provide commercial satellite services.
- Schemes to encourage the private sector have been implemented by IN-SPACe**: Seed Fund Scheme, Pricing Support Policy, Mentorship Support, Design Lab for NGEs, Skill Development in Space Sector, ISRO facility utilisation support and technology transfer to non-governmental entities (NGEs).
 - The ₹1,000 crore Venture Capital (VC) Fund under IN-SPACe** aims to accelerate private participation in the space sector.
 - IN-SPACe also introduced the **₹500 crore Technology Adoption Fund (TAF)**.
- Liberalised FDI Policy for Space**: The revised policy permits up to **74% automatic FDI** in satellite manufacturing and operations, **49% automatic FDI** in launch vehicles and spaceports, and **100% automatic FDI** in the manufacturing of satellite components and subsystems.
- SpaceTech Innovation Network (SpIN)**: SpIN is a one-of-its-kind public-private collaboration for start-ups and SMEs in the space industry.



Significance of the Privatisation of the Space Sector

- Private companies operate with a profit motive, which drives them to **reduced costs** in space missions and satellite launches.
- Privatisation introduces **competition into the space industry**, which can drive both efficiency and innovation.
- Private players facilitate the **commercialisation of space applications** and services in agriculture, disaster management, urban planning, navigation, and communication, as well as in other sectors.

- Private companies have a **greater degree of autonomy** in making decisions, which enables them to take up new projects.
- It helps to **generate employment**, enable modern technology absorption and make the sector self-reliant.

Challenges

- Space technology is expensive and needs heavy investment. This kind of lucrative power is available only to selected rich corporates, which can lead to **monopolisation of the sector**.
- Building and operating space technology and infrastructure **requires specialised technical expertise** and resources.
- **Protecting intellectual property rights (IPR)** is crucial for incentivising innovation and investment in the space sector.
- Indian private companies in the space sector have to face stiff **competition from the established players** such as **SpaceX, Blue Origin**, etc. in the international market.

Way Ahead

- Private entities are now actively involved in crucial aspects of research, manufacturing, and fabrication of rockets and satellites, fostering a vibrant ecosystem of innovation. It is expected to integrate Indian companies into global value chains.
- With this, companies will be able to set up their manufacturing facilities within the country, duly encouraging 'Make In India (MII)' and 'Atmanirbhar Bharat' initiatives of the Government.

National Space Day

- **August 23rd** was declared as "**National Space Day**" to honour the success of the Chandrayaan-3 mission.
- It achieved a **safe and soft landing** of the Vikram Lander at the '**Shiv Shakti**' point and deployed the **Pragyaan Rover** on the lunar surface.

Source: **AIR**

REGENERATIVE AGRICULTURE FOR A RESILIENT INDIA

In News

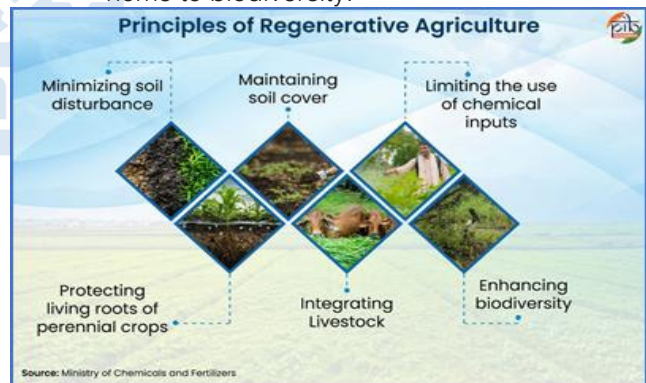
- Regenerative Agriculture is supporting long-term agricultural production, environmental sustainability and farm profitability.

About

- India's agriculture and allied industries have shown a **decadal increase of 4.45% over FY16-FY25**.
- To support this expansion the **ecological roots of farming must be restored**.
- **Intensive farming** causes abuse of chemicals, poor soil health and irregular rainfall that lead to increasing cost of inputs, aggravating climate shocks and making small and marginal farmers more vulnerable.
- **However, regenerative agriculture** can help restore soil health, ecosystem services, boost climate resilience and minimise dependency on external inputs.

Regenerative agriculture

- It is a **holistic strategy** to farming that seeks to restore soil health and improve biodiversity.
 - ♦ Its aim is to **guarantee the long-term productivity and resilience of farming systems**. Healthy soils yield more food and nutrition, sequester more carbon, and are home to biodiversity.



Practices come under regenerative agriculture

- **Micro-irrigation systems:** It delivers water to the roots of plants including foggers, sprinklers and drippers. This indicates low wasting of water and excellent water use efficiency.
- **Farm Mechanisation:** It is the use of machines and equipment to ease and automate some farm operations in agriculture.
 - ♦ It helps to optimise the critical inputs like water, fuel and fertilisers thereby lowering waste and carbon footprint.
- **Managing Nitrogen Fertiliser:** The secret is to select the suitable fertiliser and to use it at the right time in the right amount.

- **Natural farming:** An agricultural approach based on indigenous knowledge systems of India and free from chemicals.
 - ♦ The technique is based on utilisation of **biological inputs** like **Beejamrut, Jeevamrut, GhanJeevamrut, Neemastra and Dashparni** created from the inputs of native cattle.
- **Integrated Farming System (IFS):** It is a broad approach to farm production systems, in which more than one farm firm is integrated in a single system.
 - ♦ It encourages strategies like intercropping, crop rotation, multi-cropping and mixed farming that make the best use of resources.
- **Agroforestry:** It is the amalgamation of fruit and plantation crops with perennial tree systems to evolve a more sustainable and profitable farming method.
- **Climate-Resilient Agriculture (CRA):** Refers to practices and technology that enhance the capacity of agricultural systems to cope with climate change-related stresses and shocks.

Benefits of Regenerative Farming

- **Environmental Impacts**
 - ♦ **Soil restoration:** Regenerative approaches restore soil organic matter, soil structure and long term soil fertility resulting in sustained agricultural productivity.
 - ♦ **Improved biodiversity:** Regenerative practices provide a higher diversity of pollinators, beneficial insects and soil microbes. And so the whole ecology is in sync.
 - ♦ **Climate change mitigation:** These technologies take more carbon out of the environment than they put in, effectively cancelling emissions from farming.
 - Regenerative agriculture is highly aligned with SDG 13 (Climate Action).
 - ♦ **Water efficiency :** Healthy soil holds more water, which means less run-off.
 - It also benefits aquatic systems by reducing erosion of soil and transporting sediments and toxins to streams and lakes.
- **Economic and Social Outcomes**
 - ♦ **Profitability:** Healthier soils imply less synthetic fertilizer, pesticide and irrigation.

- It reduces input costs, stabilises yields and increases farmers' net revenues.
- ♦ **Job creation:** Regenerative agriculture creates new jobs in farming, advice services, technology and ecological management.
- ♦ **More resilient:** Regenerative farms are more resilient to changes in climate and market conditions.

Challenges

- **Transition Lag and Temporary Yield Losses:** Soils take 3 to 5 years to rebuild naturally occurring microbial activity; hence yields may decrease somewhat before rebounding and exceeding input costs.
- **High Upfront Capital:** Specialised equipment such as no-till seed drills or rotational livestock fence requires a substantial initial outlay.
- **Knowledge and Labour Deficit:** The generic chemical schedules are not suited for the diversity of crops and rotational grazing needs, which require wide regional agronomic knowledge.
- **Policy and Certification Gaps:** Many areas still sustain conventional chemical-intensive commercial crops and official regeneration certifications are in process.

Targeted Interventions

- **National Mission for Natural Farming:** It was announced in 2024 develops an enabling support ecosystem to assist farmers to steadily shift to natural farming.
 - ♦ It gives an output based incentive of ₹4,000 per acre each year for two years for a maximum of one acre per farmer.
 - ♦ It envisages establishment of 10,000 need-based Bio-input Resource Centers to ensure simple access for farmers to bio-inputs like Jeevamrit and Beejamrit.
- **Paramparagat Krishi Vikas Yojana (PKVY),** launched in 2015, has become a key pillar of India's organic agriculture movement.
- **More Crop Per Drop :** The country has been implementing Per Drop More Crop (PDMC) since 2015-16.
 - ♦ It promotes the increase in the efficiency of the use of water in fields through micro-irrigation systems, especially drip and spray irrigation.

- **Rainfed Area Development Project (RADP):** It has been implemented through area based cluster technique for support of Integrated Farming System (IFS) since 2014-15.
 - ♦ It involves a more robust use of existing methodologies and a greater engagement with the community. Farmers are motivated Rs 30000/- per family for adoption of IFS System.
 - Each cluster will also get a stipend of 10,000 to aid in training and capacity building activities.
- **Sub-Mission on Agroforestry:** The previous Sub-Mission on Agroforestry (SMAF) has been reformed as Agroforestry Component under Pradhan Mantri Rashtriya Krishi Vikas Yojana (PM-RKVY) w.e.f. 2023-24.
 - ♦ It encourages the setting up of agroforestry nurseries for Quality Planting Material (QPM) for farmers.
- **Soil Health Card Scheme:** The Soil Health Card Scheme (SHC) was launched in 2015 and delivers plot-wise soil test findings, through scientific testing, to farmers for each landholding.
 - ♦ Present holders of **constitutional posts**.
 - ♦ **Present ministers and ministers of state;** members of Lok Sabha and Rajya Sabha, members of State Legislative Assemblies/ Councils, mayors of municipal corporations and chairpersons of district panchayats.
 - ♦ **Serving employees of Central/State Government ministries/departments, PSUs, autonomous bodies and local bodies,** except MTS/Class-IV/Group D employees. Superannuated/retired pensioners receiving a monthly pension of ₹10,000 or more, except MTS/Class-IV/Group D pensioners.
 - ♦ Group of Farmers
 - ♦ Family members of persons falling in the above categories may, however, avail one-time assistance, subject to the applicable provisions of the revised definition of family.
- **One Family–One Subsidy Principle:** Only one member of a family can avail financial assistance under NHB schemes.
 - ♦ Assistance received by any family member will be **treated as assistance received by the entire family**.
 - ♦ The restriction applies across all **NHB schemes and components**, including assistance obtained through HUFs, partnership/proprietorship firms or companies.

Source : PIB

NATIONAL HORTICULTURE BOARD REVISES SUBSIDY GUIDELINES FOR COMMERCIAL HORTICULTURE

Context

- The National Horticulture Board (NHB) has amended the guidelines for the development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops scheme to ensure equitable distribution of government assistance.

Key Amendments by the National Horticulture Board (NHB)

- **Expanded definition of 'family':** The revised definition of family brings within its ambit the **subsidy applicant's spouse, father, mother, sons and daughters**.
 - ♦ As per the old guidelines, the term 'family' was defined as "the husband, wife, and dependent minor children."
- **Exclusion of public officials:** Under the new guidelines, the government has made clear that **five categories of people shall not be eligible for financial assistance** under NHB Schemes. These comprise of:

- **Reduction in subsidy:** The Centre has also reduced the subsidy component from **50 per cent to 35 per cent** for beneficiaries in general category states and **45 per cent** in North Eastern or Himalayan states.
- **Voluntary exit mechanism:** Beneficiaries can voluntarily exit the scheme during the lock-in period by refunding the subsidy along with applicable interest, subject to prescribed conditions.

Horticulture Sector in India

- **Horticulture** is the branch of agriculture that deals with the cultivation, production, management and post-harvest handling of **fruits, vegetables, flowers, spices, plantation crops and ornamental plants**.
- India is the **second largest producer** of fruits and vegetables in the world. It continues to hold a strong position in the production of **spices, coconut and cashew nuts**.

- India's horticulture production reached **367.72 million tonnes in 2024-25**, driven by **114.51 million tonnes** of fruits and **219.67 million tonnes** of vegetables.
- The horticulture area in the country is expected to be about **301.51 Lakh Ha** in 2025-26.
- The horticulture sector accounts for approximately **37 per cent of the Gross Value Output (GVO)** within the agricultural crops sub-sector of Agriculture and Allied sectors.

About the Scheme

- The **Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops** is a flagship credit-linked subsidy scheme run by the **National Horticulture Board (NHB)** under the **Mission for Integrated Development of Horticulture (MIDH)**.
- It promotes high-tech commercial farming, protected cultivation, and robust cold-chain infrastructure, which reduce crop waste and maximise **profits**.
- It covers crops such as capsicum, cucumber and tomato, along with flowers such as **rose, liliun and chrysanthemum**.

Key Initiatives Under Mission for Integrated Development of Horticulture (MIDH)



Under MIDH, a total of **58 Centres** of Excellence have been approved across various States in the country.



MoA&FW has identified **55 Clusters** under Horticulture Cluster Development Programme (HCDDP).



The government is setting up **9 Centres** for Clean Plant Programme (CPP) and **4 Post-Entry Quarantine (PEQ)** facilities.



In the past five years, a total of **55,748 Post-harvest management** facilities have been established under the MIDH scheme. These include cold storages, controlled atmosphere storages, pack houses, ripening chambers, refrigerated vehicles, processing units, preservation units, and food processing facilities.



During the same period, **11,140 marketing infrastructures** have also been set up. These comprise static and mobile vending carts, retail outlets, rural and primary markets, Apni Mandis, direct markets, as well as wholesale and terminal markets.

As of July 2025

Source: Ministry of Agriculture and farmers Welfare

About the National Horticulture Board (NHB)

- The National Horticulture Board was established by the Government of India in **1984** as an **autonomous organisation** under the administrative control of the **Ministry of Agriculture and Farmers Welfare**.
- The Board aims to **develop production clusters or hubs** for integrated high-tech commercial horticulture, create post-harvest and cold chain infrastructure, ensure the availability of quality planting material, and promote the adoption of advanced technologies for high-tech commercial horticulture.

Source: IE

RISE IN FEMALE LABOUR FORCE PARTICIPATION RATE (FLFPR)

Context

- The Periodic Labour Force Survey (PLFS) 2025 reveals a **significant increase in the Female Labour Force Participation rate (FLFPR) since 2020**, following the COVID-19 pandemic.

About

- The overall FLFPR for those aged 15 years and above **increased from 30% in 2019-20 to 40% in 2025**.
 - The increase was **more pronounced in rural areas**, where the FLFPR rose **from 33% to 45.9%**, compared with an increase **from 23.3% to 27.7% in urban areas**.
- Average Annual Percentage Point (AAPP) change in rural:** West Bengal, Uttar Pradesh, Gujarat, Odisha, Bihar, Rajasthan and Haryana recorded AAPP **above the all-India rural average**.
- AAPP changes for urban areas:** Rajasthan and Gujarat recorded particularly sturdy improvements, Uttarakhand, Kerala, Chhattisgarh, Karnataka, Odisha, Bihar and Andhra Pradesh also recorded AAPP above the all-India urban average.
- The **pace of improvement** in female labour force participation **differs substantially across States and between rural and urban areas**.
 - AAPP measures the **pace of improvement in FLFPR**, but does not indicate the absolute level of participation.

- ♦ A State may have a low AAPP because it already has a high FLFPR, while another may show a high AAPP but still have low overall female participation.

Factors Responsible for Rise in FLFPR in India

- **Expansion of self-employment and rural livelihoods:** A significant part of the rise is associated with increased participation in self-employment, family enterprises and agricultural activities, particularly in rural India.
- **Growth of women's Self-Help Groups (SHGs):** Programmes such as DAY-NRLM have expanded women's access to credit, skills, entrepreneurship and diversified livelihoods.
- **Expansion of employment opportunities:** Growth in sectors such as manufacturing, services, retail, education, healthcare and other non-farm activities has gradually created more avenues for women's employment.
- **Improvement in women's education and skills:** Rising educational attainment and greater participation in skill-development programmes have increased women's employability and aspirations to enter the labour market.
- **Changing social attitudes and aspirations:** Increasing awareness of women's economic independence, financial autonomy and entrepreneurship has gradually challenged traditional gender roles.
- **Greater economic need in rural households:** For poorer households, women's participation can provide an important additional source of income and livelihood security.
- **Government policies supporting women's employment:** Initiatives involving SHGs, skilling, entrepreneurship, financial inclusion and rural livelihoods have lowered some of the barriers to women's economic participation.

Barriers to Women Led Development

- **Gender Bias:** Despite progress, many women encounter stereotypes that question their competence and leadership abilities.
- **Work-Life Balance:** Balancing professional responsibilities with traditional family roles can be particularly demanding, often leading to burnout.
- **Harassment and Discrimination:** Workplace harassment remains a significant issue, creating hostile environments that discourage women from asserting themselves.

- **Lack of Access to Education:** Limited access to quality education, especially in rural areas, affecting girls' future opportunities.
- **Economic Inequality:** Women often face wage gaps, limited job opportunities, and unequal financial independence.
- **Child Marriage:** Prevalence of child marriage, particularly in rural areas, which affects women's health, education, and autonomy.

Government Initiatives to Increase Women Participation in Labour Force:

- **Pradhan Mantri Mudra Yojana (PMMY):** Under PMMY, women can avail of micro-credit loans without collateral to set up small enterprises, helping women overcome barriers related to accessing capital.
- **Beti Bachao Beti Padhao Scheme:** The scheme works to prevent gender-based discrimination and violence, focusing on changing societal attitudes towards girls.
 - ♦ It promotes education, health, and empowerment, which indirectly increases women's participation in the labor force.
- **Maternity Benefit (Amendment) Act, 2017:** The Act extended the maternity leave from 12 weeks to 26 weeks for women working in establishments with more than 10 employees.
- **Women Entrepreneurship Platform (WEP) by NITI Aayog:** The platform offers mentorship, networking, funding, and skill development opportunities for women in business.
- **Self-Help Groups (SHGs) and National Rural Livelihood Mission (NRLM):** The NRLM, through its SHG component, encourages women in rural areas to form collectives that can access credit, entrepreneurship training, and marketing opportunities.
- **National Creche Scheme:** This scheme supports working mothers, especially those in the unorganized sector, by setting up daycares in nearby locations where they can leave their children while they work.
- **Mission Shakti** is a women empowerment programme launched by the Ministry of Women and Child Development (MWCD) for the period 2021-2025.
 - ♦ It aims to strengthen interventions for women's welfare, safety, and empowerment, making women equal partners in nation-building.

Conclusion

- India's rising Female Labour Force Participation Rate (FLFPR) marks an important shift towards greater economic empowerment and more inclusive growth.
- However, sustaining this momentum requires moving beyond participation to quality, remunerative and secure employment.
- Addressing gender gaps in wages, skilling, childcare, workplace safety and access to formal jobs can help convert the rise in FLFPR into a durable demographic and economic dividend.

Source: TH

COMPASSION & CONTENTMENT: STRENGTHENING BONDS OF COOPERATION & HARMONY IN SOCIETY

Context

- The Prime Minister of India recently shared Sanskrit Subhashitam stressing the virtues of **Compassion (Karuna)** and **Contentment (Santosh)**. He said that this ethos further strengthens the links of collaboration and peace in society.

About Compassion and Contentment

- Compassion and contentment are mutually enriching virtues, strengthening individual character and public morals alike.
- Compassion** is the awareness of the pain of others with the desire to relieve it; **contentment** is a condition of inner adequacy and happiness, without overwhelming yearning.
- Together they advocate a life of empathy not ego, moderation not consumerism.

Core Concepts

- Compassion (Karuna):** An active care for the well-being of others. It creates emotional resilience, strengthens interpersonal connection and gives a natural sense of dignity.
- Contentment (Santosh):** It is a state of inner satisfaction with what we have. It soothes greed, reduces anxiety, and ends the never-ending quest for external recognition.

COMPASSION (KARUNA)	CONTENTMENT (SANTOSHA)
 EMPATHY Feeling with others; understanding their pain.	 INNER PEACE Brings calmness, reduces anxiety and restlessness.
 KINDNESS Acting to help and support others.	 FREEDOM FROM GREED Satisfaction with what is enough; resists excess.
 NON-VIOLENCE Promotes Ahimsa, respect for all beings.	 JUST USE OF RESOURCES Encourages simplicity, sustainability and balance.
 SOCIAL HARMONY Builds trust, inclusion and solidarity.	 EMOTIONAL RESILIENCE Less comparison, more gratitude.
 GLOBAL CITIZENSHIP Extends care beyond family, community and borders.	 SELF-MASTERY Controls desires; strengthens character.

Compassion and Contentment as Foundations of Morality

- Rules alone do not preserve morality; it requires the proper frame of mind in human beings.
- Compassion** enlarges the moral circle beyond self-interest, and it inspires caring for the weak.
- Contentment** restrains greed, envy, ceaseless pursuit of self-interest. Compassion pushes us to **give**, while contentment teaches us when to **stop taking**.
- These attributes have been extolled in Indian intellectual systems since ages:
 - ◆ 'सन्तोषः परमं सुखम्' (Santoshah paramam sukham): Highest happiness is contentment.
- Likewise, the **Sanskrit ideal of दया (dayā)** places compassion at the heart of moral conduct.
- In the spirit of '**Vasudhaiva Kutumbakam**' the world is one family extending compassion beyond restricted identities.

Importance of Compassion and Contentment

- Human Well-being:** Compassion enhances social cohesion and diminishes alienation. Contentment fosters thankfulness, mental calm and resilience.
- Social Harmony:** Compassion is the cure for prejudice and apathy toward the downtrodden. Contentment diminishes vicious competition, envy and materialism.
- Moral Decision-making:** These attributes collectively serve to balance ambition with accountability. They promote the advancement of humanity without sacrificing the dignity of the human being or ecological sustainability.



Role in Civil Services

- For a government worker, compassion is **citizen-centric governance** and sensitivity for the poor, aged, women and other vulnerable groups.
- It prevents administration from being hampered by mechanical rules. Contentment is, nevertheless, an ethical bulwark against corruption, avarice and misuse of position.
- A compassionate and content public servant can exert authority with **empathy, integrity and prudence**.
- In the end these values turn governance from simply providing services into an instrument for human dignity and social justice.

Conclusion

- The **essence of morality is compassion, its balance is contentment**.
- In an age of inequality and excessive materialism, it is necessary to cultivate these virtues for the sake of personal happiness, as well as for the sake of ethical and humane public governance.

Source: PIB

NEWS IN SHORT

RAJGHAT EXCAVATIONS

Context

- Banaras Hindu University (BHU) recently opened 22 boxes containing over 10,000 artefacts excavated from Rajghat, Varanasi, in 1957 under the supervision of archaeologist **T.N. Roy**.

Key Discoveries from the 1957 Excavation

- The boxes contained more than **10,000 archaeological artefacts**, including:
 - Painted black pottery**, nearly 3,000 years old.
 - Ancient sculptures, coins, tools and stamp seals.
 - Objects made of copper, ivory and bone.
 - Several inscribed seals, including those bearing the **Brahmi script**.

Archaeological Significance of Rajghat

- Rajghat lies on the north-eastern edge of Varanasi, near the confluence of the **Ganga and Varuna rivers**.
- It is an important archaeological site of the **Middle Ganga Valley** and formed an important settlement of ancient Varanasi, associated with the **Kashi Mahajanapada**.
- Seals and sealings** bearing the name '**Varanasi**' helped establish the site's connection with ancient Varanasi.
- The earliest archaeological remains at Rajghat were identified in **1939** during the expansion of Kashi railway station.

Source: IE

LIBERIA

Context

- A 12-member delegation of Liberian lawmakers visited India to study women's political participation and gender-responsive governance under the framework of **South-South cooperation**.

About Liberia (Capital: Monrovia)

- **Location:** Liberia is a sovereign country on the **west coast of Africa** bordered by **Sierra Leone** to the west, **Guinea** to the north and **Côte d'Ivoire** to the east, while the **Atlantic Ocean** lies to the south and southwest.
- **History:** Liberia is one of Africa's two countries that were not formally colonised by a European power; the other is Ethiopia.
- **Climate:** The country has a tropical, humid climate with high temperatures, humidity and heavy seasonal rainfall.
- **Biodiversity:** Liberia has approximately **35–40%** of the remaining **Upper Guinean rainforest**, making it a critical ecological zone for West African biodiversity conservation.
 - ♦ Protected areas such as **Sapo National Park** and **Gola Forest National Park** safeguard endangered species like the **pygmy hippopotamus** and the **Diana monkey**.
- **International Role:**
 - ♦ Liberia was a **founding member of the United Nations in 1945**.
 - ♦ It was also a **founding member of the Organization of African Unity (OAU)** in 1963, which was later transformed into the **African Union (AU)**.
- **India's Contribution to Liberia:** In 2007, India deployed the **first-ever all-female police unit in Liberia**, which served until 2016, promoting women's participation in peacekeeping and inspiring more Liberian women to join uniformed services.



Source: IE

BARREN-LAND FALLACY**In News**

- Recently, it has been observed that Barren-Land Fallacy can lead to incorrect afforestation and disrupt local ecological balance.

Barren-land Fallacy

- It is the concept that land which is not a forest is barren, degraded or biologically insufficient and therefore should be transformed into a forest.
- It can lead to inappropriate tree-planting drives including planting trees in environments where they do not naturally belong.
 - ♦ For example, growing water-thirsty eucalyptus in water-stressed regions can upset the local ecological equilibrium.

Correct Approach

- Grasslands, savannas, scrublands, marshes and deserts are valuable natural ecosystems, some of which are dependent on low tree cover.
- Therefore, the aim of ecological restoration should be to restore the naturally suited environment, not just to increase the tree cover.

Source: TH

GLYPHOSATE HERBICIDE**In News**

- Recently, environmentalists have raised concern over the alleged spraying of **glyphosate** on forest department land in parts of Himachal Pradesh.

Glyphosate

- It is a **herbicide** used to **manage grasses**, broadleaf and invasive weeds in a wide variety of agricultural and non-agricultural contexts.
- It is crucial for growing crops such as corn, soybean, cotton, canola, fruits, vegetables, nuts and sugarcane, especially glyphosate-resistant crops.
- Glyphosate is approved in India under the Insecticides Act, 1968 mostly for **weed control in tea plantations**, but its usage has apparently been spread illegally to a variety of edible/non-edible crops, houses and institutions.

Source :DTE

NATIONAL TEACHERS AWARDS

Context

- The President of India will confer National Teachers Awards on 48 school teachers at Vigyan Bhawan, New Delhi.

About National Teachers Awards

- The awards are conferred every year on **Teachers' Day (5th September)**, which commemorates the **birth anniversary of Dr. Sarvepalli Radhakrishnan**, former President of India and a renowned philosopher-educationist.
- Teachers are chosen through a **three-stage transparent, online process** at the District, State, and National levels, coordinated by the **Department of School Education & Literacy**.

- **Exclusion:** Retired teachers who have not served at least a part of the calendar year - at least for four months i.e. up to 30th April in the year to which the National Award relates. Teacher/Headmasters who have indulged in tuitions.
- ♦ Contractual Teachers and Shiksha Mitras are also not eligible.

Do you know?

- **National Education Day** is observed on **11th November** in honour of **Maulana Abul Kalam Azad**, India's first Education Minister.

Source: **PIB**

