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Monthly Compendium (MISCELLANEOUS TOPICS)

of Current Affairs by **SUCCESS MANTRA** (GTB Nagar)

MISCELLANEOUS TOPICS

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MISCELLANEOUS

#HUMAN DEVELOPMENT REPORT 2022

According to the **Human Development Report 2021-22**, India's rank on the **Human Development Index (HDI)** has slipped from 130 in 2020 to 132 in 2022, in line with a **global fall in HDI scores in the wake of the Covid-19 pandemic**.

What is Human Development Report?



- Human Development Reports (HDRs) have been released since 1990 and have explored different themes through the human development approach.
- It's **published by the Human Development Report Office for the United Nations Development Programme (UNDP)**.
- **Goal:** The goal is to contribute toward the expansion of opportunities, choice and freedom.
- **Theme:** The theme for Human Development Report 2021-22 is **Uncertain Times, Unsettled Lives: Shaping our Future in a World in Transformation**.

What is the Human Development Index?

- HDI is a **composite index that measures average achievement** in human development taking into account four indicators:
- Life expectancy at birth (Sustainable Development Goal 3),
- Expected years of schooling (Sustainable Development Goal 4.3),
- Mean years of schooling (Sustainable Development Goal 4.4),
- **Gross national income (GNI)** (Sustainable Development Goal 8.5).

What are the Key Highlights of the Report?

Global:

- Ninety percent of countries have registered a reduction in their **Human Development Index** value in 2020 or 2021, reversing much of the progress toward the **Sustainable Development Goals**.
- **Drop in Life Expectancy:** A large contributor to the Human Development Index's recent decline is a global drop in life expectancy, down from 72.8 years in 2019 to 71.4 years in 2021.

Indian Perspective:

- **Human Development Index:** India's HDI value stood at **0.633 in 2021**, which was lower than the world average of 0.732. In 2020, too, India recorded a decline in its HDI value (0.642) in comparison to the pre-Covid level of 2019 (0.645).
- **Life expectancy:** In 2021, India's **life expectancy at birth was recorded at 67.2 years**.
- **Schooling:** Expected years of schooling at 11.9 years; mean years of schooling at 6.7 years;
- **Gross National Income:** The gross national income per capita stood at USD 6,590.
- **Gender Inequality Index:** India has been ranked 122 on the **Gender Inequality Index**.

#INAUGURATION OF KARTAVYA PATH

The **Prime Minister** inaugurated the 'Kartavya Path' and unveiled the statue of **Netaji Subhas Chandra Bose** at India Gate.

What are Key Inaugurations?

- **Kartavya Path** symbolizes a shift from erstwhile Rajpath being an icon of power to Kartavya Path being an example of public ownership and empowerment.
- The statue of **Netaji Subhas Chandra Bose** made of granite, is a fitting tribute to the immense contribution of Netaji to our freedom struggle, and would be a **symbol of the country's indebtedness to him**. Crafted by **Shri Arun Yogiraj**, who was the main sculptor, the 28 feet tall statue has been carved from a monolithic granite stone and weighs 65 MT.
- These steps are in line with Prime Minister's second 'Panch Pran' pledged during 75th **Independence Day 2022**, for New India in **Amrit Kaal: 'remove any trace of colonial mindset'**.

What is the Need for Revamping Rajpath?

- Over the years, Rajpath and adjoining areas of the **Central Vista Avenue** had been witnessing pressure of increasing traffic of visitors, putting stress on its infrastructure.
- **Central Vista Avenue** is part of the government's ambitious Central Vista redevelopment project.
- It lacked basic amenities like public toilets, drinking water, street furniture and adequate parking space.
- Further, there was **inadequate signage, poor maintenance of water features and haphazard parking**.
- Also, a need was felt to organise the Republic Day parade and other National events in a less disruptive manner with minimal restrictions on public movement.
- The redevelopment has been done **bearing these concerns in mind while also ensuring the integrity and continuity of architectural character**.

What is the Brief History of Rajpath?

- Called Kingsway **during British rule**, the **three-km stretch** was built as a **ceremonial boulevard** by **Edwin Lutyens and Herbert Baker**, the architects of New Delhi, more than a hundred years ago.
- The capital of the Raj moved to **New Delhi from Calcutta in 1911**, and construction continued for several years thereafter. Lutyens **conceptualised the modern imperial city centred around a "ceremonial axis", which was named Kingsway in honour of the then Emperor of India, George V**, who visited Delhi during the **Durbar of 1911**, where he formally proclaimed the **decision to move the capital**.
- The nomenclature followed that of the Kingsway in London, an arterial road built in 1905, which was named in honour of King Edward VII, the father of George V.
- Following Independence in 1947, the road was **given its Hindi name, Rajpath**, on which the **Republic Day parades took place** over the decades that followed.

What are the Key Points Related to Subhash Chandra Bose?

- **Birth:** Subhas Chandra Bose was born on 23rd January 1897, in Cuttack, Orissa Division, Bengal Province, to Prabhavati Dutt Bose and Janakinath Bose. His Jayanti is celebrated as '**Parakram Diwas**' on **23rd January**.
- **Education and Early Life:** In 1919, he had cleared the **Indian Civil Services (ICS)** examination. Bose, however, resigned later. He was highly influenced by **Vivekananda's teachings** and considered him as his spiritual Guru. **His political mentor was Chittaranjan Das**. He worked as the editor for Das's newspaper-Forward, and later started his own newspaper, Swaraj.

Association with Congress:

- He stood for unqualified swaraj (independence), and opposed the Motilal Nehru Report which spoke for dominion status for India.
- He actively participated in the **Salt Satyagraha of 1930** and vehemently opposed the suspension of the Civil Disobedience Movement and signing of the Gandhi-Irwin Pact in 1931.
- In the 1930s, he was closely associated with left politics in Congress along with **Jawaharlal Nehru and M.N. Roy**.
- Bose won the congress presidential elections at Haripura in 1938. Again in 1939 at Tripuri, he won the presidential elections against Gandhi's candidate Pattabhi Sitarammaya. Due to ideological differences with Gandhi, Bose resigned and left congress. Rajendra Prasad was appointed in his place.
- He founded a new party, '**the Forward Bloc**'. The purpose was to consolidate the political left and major support base in his home state Bengal.

Indian National Army:

- He reached Japanese-controlled Singapore from Germany in July 1943, issued from there his famous call, '**Delhi Chalo**', and announced the formation of the **Azad Hind Government** and the Indian National Army on 21st October 1943.
- The **INA was first formed** under **Mohan Singh** and **Japanese Major Iwaichi Fujiwara** and comprised Indian prisoners of war of the British-Indian Army captured by Japan in the Malayan (present-day Malaysia) campaign and at Singapore.
- The INA included both the Indian prisoners of war from Singapore and Indian civilians in South-East Asia. Its strength grew to 50,000.
- The INA fought allied forces in 1944 inside the borders of India in Imphal and in Burma.
- In November 1945, a British move to put the INA men on trial immediately sparked massive demonstrations all over the country.

#AYURVEDA IN INDIA

Ayurveda, India's traditional medicine **has been in practice for close to 3,000 years** and has been serving the health-care needs of millions of Indians.

Ayurveda, for long, has been facing challenges to address a few areas, which need to be discussed.

What is Ayurveda?

- The **word Ayurveda derived from** AYU and VEDA.
- **AYU** means life, **VEDA** means science or knowledge, **Ayurveda means the science of life**.
- Ayurveda embraces all living things, human and non-human.
- It is divided into three main branches
- **Nara Ayurveda**: dealing with human life.
- **Satva Ayurveda**: dealing with animal life and its diseases.
- **Vriksha Ayurveda**: dealing with plant life, its growth and diseases.
- Ayurveda is **not only a system of medicine** but also a **way of life** for complete positive health and spiritual attainments.

Practice of Ayurveda:

- **The Indian Medical Council** which was set up in 1971 establishes **suitable qualifications** in Indian medicine and recognizes various forms of traditional practice including **Ayurveda, Unani, and Siddha**.
- Ayurveda has both preventive and curative aspects.
- **The preventive component** emphasizes the **need for a strict code of personal and social hygiene**, the details of which depend upon individual, climatic, and environmental needs.
- The curative aspects of Ayurveda involve the use of herbal medicines, external preparations, physiotherapy, and diet. **It is a principle of Ayurveda** that the preventive and therapeutic measures be

adapted to the personal requirements of each patient.

Significance:

- In Ayurveda it is believed **living man is a conglomeration of three humors (Vata, Pitta & Kapha)**, seven basic tissues (**Rasa, Rakta, Mansa, Meda, Asthi, Majja & Shukra**) and the waste products of the body i.e., **mala, mutra and sweda**.
- The growth and decay of this body matrix and its constituents **revolve psychological mechanisms of these elements and its balance** is the main reason for the state of one's health.
- The treatment approach in the Ayurveda system is holistic and individualized, having **preventive, curative, mitigative, recuperative and rehabilitative aspects**.
- The principal objectives of Ayurveda are **maintenance and promotion of health, prevention of disease and cure of sickness**.

What are the Key Challenges faced by Ayurveda in the Modern World?

- **Outdated Ideas:**
- **What Initiatives has the Government taken for Development of Ayurveda?**
- **National Ayush Mission**
- **Aahaar Kranti Mission**
- **New Portals on Ayush Sector**
- **ACCR Portal and Ayush Sanjivani App**

#MOHENJO DARO: UNESCO'S WORLD HERITAGE SITES

Pakistan's Department of Archaeology warned that **heavy rainfall in the Sindh province** threatened the **World Heritage status of Mohenjo Daro**.

What threatens the Heritage Site?

- Between August 16 and 26, 2022, the **archaeological ruins of Mohenjo Daro received a record 779.5 mm of rain**, which had resulted in "considerable damage to the site and partial falling of several walls, including the protection wall of the stupa dome".
- Muneer Area, Stupa, Great Bath and other important sites of these ruins have been badly affected by the natural disaster. It is feared that the ruins of Mohenjo Daro might be removed from the World Heritage list, therefore the authorities of Sindh have called for **urgent attention towards conservation and restoration work at the site**.

What are the Key Points of Mohenjo Daro?

- The site of Mohenjo Daro, literally meaning 'Mound of the Dead' is one of the important sites of **Indus Valley Civilization (IVC)**.
- Sites of the **Indus Valley Civilisation** have been found in a **large area extending from Sutkagen Dor in Balochistan near the Pakistan-Iran border to Alamgirpur in Meerut district of Uttar Pradesh**, and from Manda in Jammu to Daimabad in Maharashtra.
- Other important sites of the Harappan civilization in India are at **Lothal and Dholavira in Gujarat**, and **Kalibangan in Rajasthan**.
- Along with Harappa, Mohenjo Daro is the **best-known site of the Bronze Age (3300 BC to 1200 BC) urban civilization**.
- It flourished in the Indus Valley between roughly **3,300 BC and 1,300 BC**, with its 'mature' phase **spanning the period 2,600 BC to 1,900 BC**.
- Civilization went into decline in the middle of the second millennium BC for reasons that are believed to include **catastrophic climate change**.

- Excavation of Mohenjo Daro was started in 1920 and continued in phases until 1964-65, even now **only a small part of the site has been excavated.**
- The prehistoric antiquity of Mohenjo Daro was established by **Rakhal Das Banerji of the Archaeological Survey of India in 1922.**
- The site is **famous for its elaborate town planning with street grids** with brick pavements, developed water supply, drainage, and covered sewerage systems, homes with toilets, and monumental buildings such as the **Great Granary and the Great Bath.**
- At its peak, it was estimated to have between 30,000 and 60,000 residents with **a highly evolved social organization.** The ruins of the sprawling city of unbaked brick 510 km northeast of Karachi and 28 km from Larkana in Sindh were recognised as a **UNESCO World Heritage site in 1980.**

What are UNESCO's World Heritage Sites?

- A **World Heritage Site** is a place that is listed by **UNESCO for its special cultural or physical significance.**
- The list of World Heritage Sites is **maintained by the international 'World Heritage Programme',** administered by the UNESCO World Heritage Committee.
- This is embodied in an international treaty called the **Convention concerning the Protection of the World Cultural and Natural Heritage,** adopted by UNESCO in 1972.
- **Sites:**
- There are around **1,100 UNESCO listed sites across its 167 member countries.**
- **In 2021,** 'Liverpool — Maritime Mercantile City' in the United Kingdom was deleted from the World Heritage List due to "the **irreversible loss of attributes** conveying the outstanding universal value of the property". In 2007, the UNESCO panel **delisted the Arabian Oryx Sanctuary in Oman** after concerns over poaching and habitat degradation, and the Elbe Valley in Dresden, Germany, in 2009 after the construction of the Waldschloesschen road bridge across the Elbe River.

Sites in India:

- India is home to a total of **3691 monuments and sites.** Of these 40 are designated as **UNESCO World Heritage Sites.**
- Including places like the Taj Mahal, **Ajanta Caves and Ellora Caves.** **World Heritage Sites also include natural sites like the Kaziranga National Park in Assam.**
- Harappan city of **Dholavira** in Gujarat as India's **40th world heritage site.**
- **Ramappa Temple (Telangana)** was India's 39th World Heritage Site. **Khangchendzonga National Park,** Sikkim has been inscribed as India's first and the only "Mixed World Heritage Site". In 2022, the Union Ministry of Culture nominated **Sacred Ensembles of the Hoysalas temples** for consideration as a World Heritage site for the year 2022-2023.

#WHAT IS CRISPR TECHNOLOGY?

India approved a 5-year project to develop Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) to cure sickle cell anaemia in 2021.

Sickle cell anaemia is the **first disease that is being targeted for CRISPR-based therapy in India**. The pre-clinical phase (trials on animal subjects) is about to begin.

What is CRISPR Technology?

Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) is a gene editing technology, which **replicates natural defence mechanism in bacteria to fight virus attacks, using a special protein called Cas9**.

- It usually involves the **introduction of a new gene, or suppression of an existing gene**, through a process described as **genetic engineering**.
- CRISPR technology **does not involve the introduction of any new gene from the outside**.
- **CRISPR-Cas9 technology** is often described as 'Genetic Scissors'. Its mechanism is often compared to the 'cut-copy-paste', or 'find-replace' functionalities in common computer programmes.
- A **bad stretch** in the DNA sequence, which is the cause of disease or disorder, is **located, cut, and removed and then replaced with a 'correct' sequence**.
- The tools used to achieve this are biochemical i.e., specific protein and RNA molecules.
- The technology **replicates a natural defence mechanism in some bacteria** that uses a similar method to **protect itself from virus attacks**.

What is the Related Ethical Dilemma?

- CRISPR's power to **induce dramatic changes in an individual** which **can be potentially misused**.
- In 2018, a **Chinese researcher** disclosed that he had CRISPR aids in the disease treatment by **correcting the underlying genetic problem**.
- This was the **first documented case of creating a 'designer baby'**, and it **caused widespread concern in the scientific community**.
- Preventive interventions to **obtain special traits** are not something that scientists currently **want** the technology to be used for.
- Also, because the changes were made in the embryo itself, the **new acquired traits were likely to be passed on to future generations**.
- Though the technology is fairly accurate, it is **not 100% precise**, and could induce a few errors as well, **making changes in other genes**. This has the **possibility of being inherited by successive generations**.

What is Sickle Cell Anaemia?

- It is an **inherited blood disease** which is most common among people of African, Arabian and Indian origin.
- It is a group of disorders that **affects hemoglobin, the molecule in red blood cells that delivers oxygen to cells throughout the body**.
- People with this disease have **atypical hemoglobin molecules called hemoglobin S**, which can **distort red blood cells into a sickle, or crescent shape**.
- This **blocks blood flow and oxygen** from reaching all parts of the body.

#NATIONAL LIST OF ESSENTIAL MEDICINES (NLEM)

Recently, The Union Health Ministry launched the new **National List of Essential Medicines (NLEM)**, where 384 drugs have been included in this list with addition of 34 drugs, while 26 from the previous list have been dropped.

As per the **World Health Organisation (WHO)**, Essential Medicines are those that satisfy the priority health care needs of the population.



What is the National List of Essential Medicines (NLEM)?

- The **National List of Essential Medicines (NLEM)** is a list released by the **Ministry of Health and Family Welfare**.
- The medicines listed in the NLEM are sold below a price ceiling fixed by the **National Pharmaceutical Pricing Authority (NPPA)**.
- In India, it was framed on the lines of the **Essential Medicines List (EML)** released by the WHO.
- **History:** The **Ministry of Health and Family Welfare** prepared and released the first National List of Essential Medicines of India in 1996 consisting of 279 medicines. This list was subsequently revised in 2003, 2011, 2015 and 2022.

Purpose:

- Guide safe and effective treatment of priority disease conditions of a population.
- Promote the rational use of medicines.
- Optimize the available health resources of a country. It can also be a guiding document for:
- State governments to prepare their list of essential medicines
- Procurement and supply of medicines in the public sector.

What are the Criteria for a Medicine to be Included in NLEM?

- Several factors are looked at before including a drug in the NLEM. These are:
- **Essentiality:** A medicine may be essential considering the population at large and should fit into the definition mentioned earlier.
- **Changing disease burden:** With time, the disease burden keeps changing in the country. At one point, TB might be more important to tackle. At the next moment, another disease like Covid-19 may become more important. So, the prevalent disease is considered while preparing the list.
- **Efficacy and Safety:** The medicine must have "unequivocal" evidence of efficacy and wider acceptance based on its safety to be included in the list.
- **Cost-Effectiveness:** The total price of the treatment must be considered while including the drug in NLEM. Only unit price may not be the best benchmark for this.
- **Fixed Dose Combinations (FDCs):** The single-dose medicines are considered for inclusion in NLEM. FDCs are only included if they have a proven advantage concerning the therapeutic effect.
- **Turnover:** High sales turnover alone is not considered a good benchmark for inclusion in the NLEM. Other factors are also required to be essentially considered for it.

When is a Medicine Deleted from NLEM?

- A drug is deleted from the list if it gets banned in India. Also, it is removed if reports of concerns about drug safety emerge.
- If medicine with better efficacy or favourable safety profile and better cost-effectiveness is now available, then it is removed from NLEM.

What is an Essential Medicine List (EML)?

- **About:** The list is made with consideration of disease **prevalence, efficacy, safety and comparative cost-effectiveness** of the medicines.
- Such medicines should be available in such a way that an individual or community can afford them.
- The WHO EML is updated every two years by the Expert Committee on Selection and Use of Essential Medicines.

History:

- The first country in the world to compose its EML was Tanzania in 1970. Then in 1975, the **World Health Assembly (WHA)** requested WHO to assist member states in selecting and procuring essential medicines, assuring good quality at a reasonable cost.
- Subsequently, the **first WHO model list of essential medicines was published in the year 1977 which contained 186 medicines.**
- It stated that essential medicines were “of **utmost importance, basic, indispensable and necessary for the health and needs of the population**” and the criteria for selection were based on efficacy, safety, quality and total cost.

#BREAKTHROUGH AGENDA REPORT 2022

Recently, **The Breakthrough Agenda Report 2022** was released by the **International Energy Agency (IEA)**, the **International Renewable Energy Agency (IRENA)** and the UN Climate Change High-Level Champions, focusing on international collaboration to drive faster reductions in **greenhouse gas emissions**.

What are the Key Points of the Report?

- It assesses **progress on reducing emissions** in five key sectors – power, hydrogen, road transport, steel and agriculture. It is a first-of-its-kind **annual progress report**, requested by world leaders at the UN Climate Change Conference **COP26 in November 2021** as part of the launch of the Breakthrough Agenda.
- The Breakthrough Agenda currently covers more than two-thirds of the global economy, with endorsement from 45 world leaders, including those of the **G7, China and India**.

Findings:

- There is an increase in **practical international cooperation** in recent years, and progress in **deploying the technologies needed**, including a forecast increase in global renewable capacity of 8% in 2022 – pushing through the 300GW mark for the first time and equivalent to **powering approximately 225 million homes**.
- The five sectors analyzed in the report together account for nearly **60% of global greenhouse gas (GHG) emissions**, and may deliver the bulk of the **emission reductions needed by 2030** in a pathway that would make a significant contribution to limiting global **warming to a maximum of 1.5°C**, in line with the **Paris Agreement** goals.
- World is in the midst of the **first truly global energy crisis**, with devastating knock-on consequences across the world economy, especially in developing countries.
- The energy crisis has emerged in oil, gas and electricity markets and aggravated by **Pandemic, Oil Prices and Russia-Ukraine conflict**.
- The energy and climate crisis has **exposed the weaknesses and vulnerabilities of a system** heavily reliant on fuels of the 20th century.

#WHAT IS DVORAK TECHNIQUE?

Recently, the American **meteorologist Vernon Dvorak** passed away, on whom **Dvorak Technique** was named to forecast Weather.

Dvorak was an American meteorologist best **credited for developing the Dvorak (read as Do-rak) technique** in the early 1970s.

What is the Dvorak technique?

- The Dvorak technique is a **Cloud Pattern Recognition Technique (CPRT)** based on a concept model of the **development and decay** of the **tropical cyclone**.
- It was first developed in 1969 and tested for **observing storms in the northwest Pacific Ocean**.
- In this methodology, available satellite images obtained from **polar orbiting satellites** are used to **examine the features of the developing tropical storms** (hurricanes, cyclones and typhoons).
- During day time, images in the visible spectrum are used while at night, the **ocean is observed using infrared images**.
- From the satellite images the technique **helps forecasters do a pattern recognition** from the observed structure of the **storm, locate its eye and estimate the intensity** of the storm.
- Although it cannot help make any predictions, measure wind or pressure or any other meteorological parameters associated with the cyclone, it is a **guide to estimate the storm's intensity and possible intensification** — which is **crucial for local administration in planning evacuation measures** of coastal or other nearby residents.

Why is Technique still widely in Use?

- Even having an improved network of land-based meteorological observations, ocean **observations still remain limited**. There are many regions across the four oceans that have not been **fully examined with meteorological instruments**.
- Ocean observations are mostly taken by deploying buoys or dedicated ships, but the number of observations from the seas is **still not sufficient across the world**.
- That is why meteorologists have had to **depend more on satellite-based imageries, and combine it with the available ocean-data** at the time of forecasting the intensity and wind speed of the tropical cyclones.
- The **Dvorak technique has undergone several advancements** since its inception. Even in the present day, when forecasters have access to several state-of-the-art tools like model guidance, animations, artificial intelligence, machine learning and satellite technology, it is the advanced versions of the Dvorak technique that continues to be widely used.

#INTERNATIONAL YEAR OF MILLET

- A series of pre-launch events and initiatives have been organized by the Ministry of Agriculture and Farmers Welfare as a run-up to the **International Year of Millets 2023** to create awareness and a sense of participation in the country around the ancient and forgotten golden grains.
- Many events were launched such as '**India's Wealth, Millets for Health**', **Millet Startup Innovation Challenge**, **Mighty Millets Quiz**, Logo and slogan contest etc.

What is IYM?

- India's proposal to observe an International Year of Millets in 2023 was approved by the **Food and Agriculture Organisation (FAO)** in 2018 and the **United Nations General Assembly** has declared the year 2023 as the International Year of Millets.
- This was adopted by a **United Nations Resolution for which India took the lead** and was supported by over 70 nations.

Objectives:

- Awareness of the **contribution of millet to Food Security** and nutrition.
- Inspire stakeholders to improve sustainable production and quality of millets.
- Focus on **enhanced investment in research and development** and extension services to achieve the other two aims.

What is Millet?

- Millet is a **collective term referring to a number of small-seeded annual grasses** that are cultivated as grain crops, primarily on **marginal lands in dry areas in temperate, subtropical and tropical regions**.
- Some of the common millets available in India are Ragi (Finger millet), Jowar (Sorghum), Sama (Little millet), Bajra (Pearl millet), and Variga (Proso millet).
- The earliest evidence for these grains has been found in **Indus civilization and were one of the first plants domesticated** for food.
- It is grown in about 131 countries and is the traditional food for around 60 crore people in Asia & Africa.
- India is **the largest producer** of millet in the world.
- It Accounts for 20 % of global production and **80% of Asia's production**.

Initiatives Taken by Government:

- **Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)**
- **Increase in Minimum Support Price (MSP):** The government has hiked the Minimum Support Price of Millets, which came as a big price incentive for farmers.
- Further, to provide a steady market for the produce, the government has included millets in the public distribution system.

#ONE WATER APPROACH

The **United Nations** has estimated that by the year 2050, four billion people will be seriously affected by water shortages, pushing the **One Water approach** towards all sources of water.

What is the One Water approach?

- **One Water Approach**, also referred to as **Integrated Water Resources Management (IWRM)**, is the recognition that **all water has value, regardless of its source**.
- It includes **managing that source in an integrated, inclusive and sustainable manner** by including the community, business leaders, industries, farmers, conservationists, policymakers, academics and others for ecological and economic benefits.
- It is an **“integrated planning and implementation approach** to managing **finite water resources** for long-term resilience and reliability meeting both community and ecosystem needs. One Water is the future of the water industry when the barriers conventionally separating wastewater, stormwater, drinking water, groundwater and the reuse and re-utilisation are broken down, many benefits realised.

Characteristics:

- **All Water has Value:** The mindset that all water has value — from the water resources in our ecosystems to our drinking water, wastewater and stormwater.
- **A Multi-faceted Approach:** Our water-related investments should provide economic, environmental, and societal returns.
- **Utilising Watershed-Scale Thinking and Action:** It should respect and respond to the natural ecosystem, geology, and hydrology of an area.
- **Partnerships and Inclusion:** Real progress and achievements will only be made when all stakeholders come forward and together will take a decision.

Objectives:

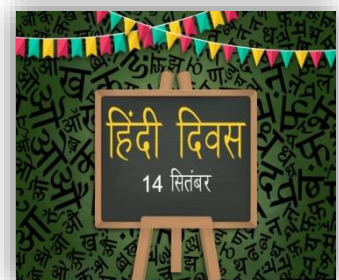
- Reliable, secure, clean water supplies
- **Aquifer** recharge
- **Flood** protection
- Minimising environmental **pollution**
- Efficient use and reuse of natural resources
- Resiliency to climate
- Long-term sustainability
- Equity, affordability and accessibility to safe drinking water
- Economic growth and prosperity

#HINDI DIWAS: SEPTEMBER 14TH

On the occasion of **Hindi Diwas**, **Prime Minister of India** has said that the Hindi language has brought India special honour globally and its simplicity and sensitivity always attracts people.

What is the History behind Hindi Diwas?

- Hindi Diwas or the National Hindi Day is **celebrated** every year in India on **September 14** to mark the **day of adoption of Hindi as the official language by the Constituent Assembly of India** in 1949.
- The decision of using Hindi as an official language of India was **legalised by the Constitution of India on January 26, 1950**. India's first Prime Minister Jawaharlal Nehru decided to celebrate Hindi Diwas on this day.



- Hindi is also an **eighth schedule language**.
- Hindi is **not a classical language**.
- **Article 351** pertains to the 'Directive for development of the Hindi language'.

What are the Government Initiatives to Promote Hindi?

- The **Central Hindi Directorate** was established in **1960** by the Government of India under the Ministry of Education to promote and propagate Hindi. **Indian Council for Cultural Relations (ICCR)** has established '**Hindi Chairs**' in various foreign universities/institutions abroad to promote Hindi language in foreign countries.
- **LILA-Rajbhasha** (Learn Indian Languages through Artificial Intelligence) is a multimedia based intelligent self-tutoring application for learning Hindi.
- **E-Saral Hindi Vakya Kosh and E-Mahashabdkosh Mobile App**, both initiatives of the Department of Official Language, aim to harness information technology for the growth of Hindi.
- **Rajbhasha Gaurav Puraskar and Rajbhasha Kirti Puraskar** recognise contributions to Hindi.

Hindi Language

- Hindi is the **fourth most spoken language in the world**, and is written in Devanagari script. The language got its name from the Persian word 'Hind' - meaning 'land of the Indus River', and is a descendant of Sanskrit.
- Turk invaders in the early 11th century named the language of the region Hindi, 'language of the land of the Indus River'.
- It is the **official language of India, English being the other official language**.
- Hindi is also spoken in some countries outside India, such as in Mauritius, Fiji, Suriname, Guyana, Trinidad & Tobago and Nepal.
- Hindi in its present form emerged through different stages, during which it was known by other names. The earliest form of old Hindi was Apabhramsa. In 400 AD Kalidas wrote a romantic play in Apabhramsa called Vikramorvashiyam. The modern Devanagari script came into existence in the 11th century.

#WORLD OZONE DAY: 16TH SEPT.

Recently, India observed 28th World Ozone Day.

Every year, **16th September** is observed as the **International Day for the Preservation of the Ozone layer (World Ozone Day)** to commemorate the signing of the **Montreal Protocol**.

The theme of World Ozone Day 2022 is "**Montreal Protocol@35: global cooperation protecting life on earth**".

What were the Key Highlights of World Ozone Day?

The 23rd edition of "**The Montreal Protocol: India's Success Story**" was released.

The other publications of the Ozone Cell of the Ministry of Environment, Forests and Climate Change released on the occasion include:



- **Action Plan** for implementing the recommendations of the **India Cooling Action Plan (ICAP)** for the thematic area space cooling in buildings.
- **Study Report on Cold Chain sector in India** for promoting **non-ODS and Low-Global Warming Potential (GWP) Refrigerants**.
- Booklet on **Good Servicing Practices for Energy Efficient operation of Room Air conditioners**.
- The winning entries for a **national level poster making and slogan writing competition for school children on 'Save Our Ozone Layer'** were announced.
- **Call for adoption for Lifestyle for the Environment (LiFE)** that's in line with the concept of sustainable

lifestyle, encouraging us to adopt mindful and not mindless consumption and utilization of resources.

- **Collaboration with eight Indian Institutes of Technology** (Bombay, Roorkee, Hyderabad, Kanpur, Guwahati, Banaras, Madras and Delhi) to promote research and development of chemicals with low global warming potential, including blends. These can be used as **alternatives to substances controlled under the Montreal Protocol**.
- It will also help promote the **Make in India** initiative of the Government.

What is India Cooling Action Plan (ICAP)?

The **Indian Cooling Action Plan (ICAP)** was launched in March 2019 by the **Ministry of Environment, Forests and Climate Change**.

The ICAP provides a **20-year perspective and outlines actions** needed to provide access to sustainable cooling.

The plan seeks to:

- **Reduce cooling demand** across sectors by 20% to 25% by 2037-38
- **Reduce refrigerant demand** by 25% to 30% by 2037-38
- **Reduce cooling energy requirements** by 25% to 40% by 2037-38
- **Recognise "cooling and related areas"** as a thrust area of research under National Science and Technology Programme
- **Training and certification of 100,000 servicing sector technicians** by 2022-23, synergizing with **Skill India Mission**.

What is Montreal Protocol?

- The **Montreal Protocol** is a worldwide **agreement to stop the production of substances causing ozone-depletion**.
- Adopted on 16 September 1987, the Protocol is to date the **only UN treaty ever that has been ratified by every country on Earth - all UN Member States**.
- It has led to the **phase-out of 99% of ozone-depleting chemicals** in refrigerators, air-conditioners and many other products.
- **India** is a party to the Montreal Protocol since **June 1992**.

What are India's Achievements in Implementation of the Montreal Protocol?

- India **phased out Chlorofluorocarbons (CFCs)**, Carbon tetrachloride, Halons, Methyl Bromide and Methyl Chloroform **for controlled uses** as on 1 January 2010, **in line with the Montreal Protocol schedule**.
- Currently, **Hydrochlorofluorocarbons (HCFCs) are being phased out** as per the accelerated schedule of the Montreal Protocol.
- Hydrochlorofluorocarbons Phase-out Management Plan (HPMP) Stage-I has been successfully implemented from 2012 to 2016.
- **HPMP Stage-II** is under implementation since 2017 and will be completed by 2023.
- **HPMP Stage-III**, the last of the HPMPs to phase out remaining HCFCs, will be implemented from 2023 - 2030.
- The **phase-out of HCFCs in all manufacturing sectors**, comprising refrigeration and air-conditioning manufacturing sectors, **will be completed by 1st January 2025 and the activities relating to the servicing sector will be continued till 2030**.

What is Ozone Layer?

- **Ozone is a special form of oxygen** with the chemical formula **O₃**. The oxygen we breathe and that is so vital to life on earth is O₂.
- About **90% of ozone occurs naturally** in the Earth's upper atmosphere (Stratosphere) **between 10 and**

40km above Earth's surface, where it forms a protective layer that **shields us from the sun's harmful ultraviolet rays**.

- This “good” ozone is gradually being destroyed by **man-made chemicals referred to as Ozone-Depleting Substances (ODS)**, including CFCs, HCFCs, halons, methyl bromide, carbon tetrachloride, and methyl chloroform.
- When chlorine and bromine atoms come into contact with ozone in the stratosphere, **they destroy ozone molecules**.
- One chlorine atom can destroy over 100,000 ozone molecules before it is removed from the stratosphere.
- Ozone can be destroyed more quickly than it is naturally created.
- **Ozone layer depletion** leads to an **uptick in the incidence of skin cancer and cataracts in humans**.

#WORLD HEALTH ENVIRONMENT DAY

World Environmental Health Day 2022 is observed annually on September 26 to spread awareness globally regarding the health of the environment.

The central idea behind celebrating this day is that the health of the human race is irrevocably intertwined with the health of the environment.

What are the Key Highlights of World Environmental Health Day?

- **History:** The day was first observed by the **International Federation of Environmental Health (IFEH)** in the year 2011.
- The main aim is the well-being of people across the globe. The IFEH is wholly dedicated to the development and dissemination of knowledge on the protection and subsequent improvement of environmental health.
- **Theme:** The theme for this year is ***‘Strengthening Environmental Health Systems for the implementation of the Sustainable Development Goals.’***

What do we know about India's Environmental Health?

- **Present status:** India was ranked at the **bottom of the list of 180 countries with a paltry score of 18.9** on the **Environmental Performance Index 2022**.
- India ranked behind Myanmar at 179, Vietnam (178), Bangladesh (177) and Pakistan (176).

Related Initiatives:

- **Nagar Vana Udyan Scheme:** This scheme aims to **develop at least one city forest in each city having Municipal Corporation or Class 1 Cities (over 200)** to accommodate a wholesome healthy environment.
- **National Wetland Conservation Programme (NWCP):** The initiative was launched to **conserve and make use of wetlands in the country**.
- **Green Skill Development Programme :** The Ministry of Environment, Forest and Climate launched the **Green Skill Development Programme** in June 2017 to teach skills required for conserving and protecting the environment among the youth.

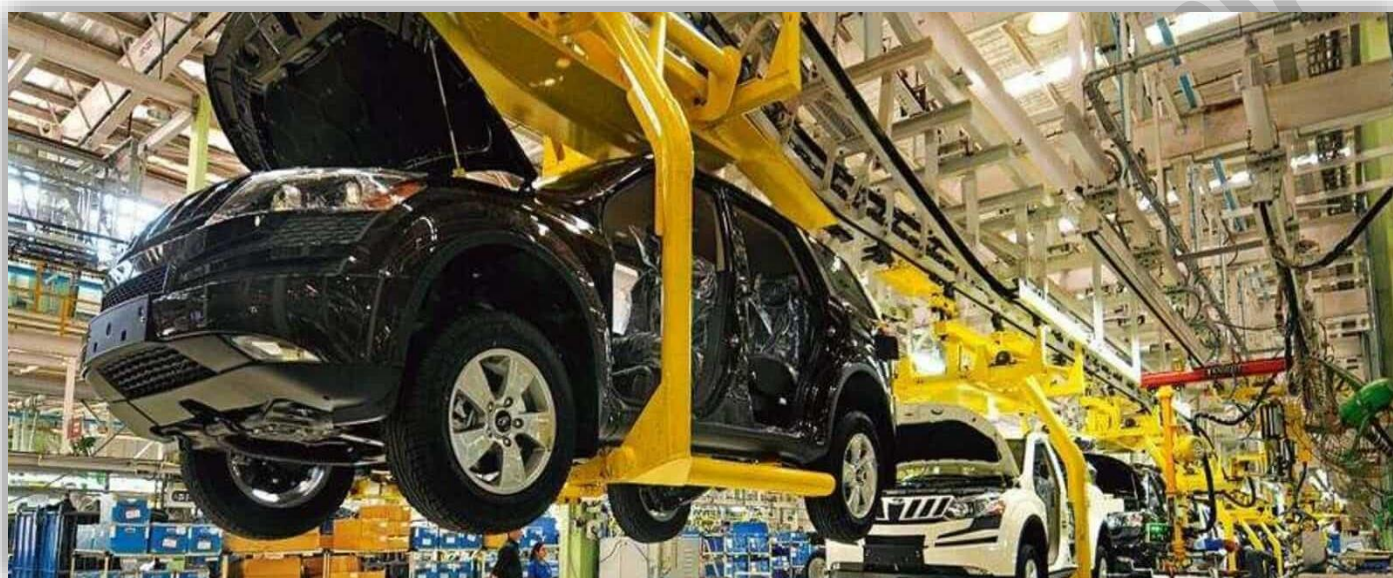
Save Soil Movement:

- On World Environment Day 2022, the Prime Minister launched the **'Save Soil Movement'**. The initiative focuses on five things making the **soil chemical-free, saving organisms that live in the soil, maintaining soil moisture, increasing the availability of water**, and stopping the continuous erosion of soil due to the reduction of forests.
- India has set a **goal of making 26 million hectares of barren land fertile by 2030** and aims to be **Net-Zero in emissions by 2070**.

#STATUS OF AUTOMOBILE INDUSTRIES IN INDIA

Recently, the **Union Minister of Commerce and Industry** addressed the **62nd Automotive Component Manufacturers Association (ACMA) Annual Session**.

- The **Theme** of the session was '**Future of Mobility - Transforming to be Ahead of Opportunity**'.
- The **ACMA** is the **apex body representing the interest of the Indian Auto Component Industry**. Its membership of over 850 manufacturers contributes to more than 85% of the auto component industry's turnover in the organized sector.



What are the Key Highlights of the Session?

The 5-point action agenda was given for the Automobile Industry:

- To **Focus on Quality** in order to become globally competitive and reduce dependence on imports. To **Think holistically** and have a larger vision to engage with others in the spirit of openness and competitiveness.
- To give **emphasis on Value Addition**.
- Exit the Uncompetitive market and **explore new market opportunities** in the sectors where we can be competitive. To think big and **set aggressive targets** and ambitions for the industry. Further, the government emphasize that future of the Automotive Component Industry rests on being more **Connected, focusing on Convenience, orienting towards Clean Energy** and clean mobility and using Cutting-edge technology.

What is the Status of Automobile industry in India?

- **Automobile Industry** comprises all the automobile vehicles including Passenger Vehicles, Commercial Vehicles, Three Wheelers, Two Wheelers and Quadricycles.
- India's Automotive Market was valued at **USD 100 billion in 2021** and is expected to reach **USD 160 billion in 2027**, registering a **compounded annual growth rate (CAGR) of 8.1%** over the forecast period (2022-2027).
- India is the **4th largest producer** of Automobiles in the world, with an average annual production of more than 4 million motor vehicles.
- India is the **largest tractor manufacturer**, second-largest bus manufacturer, and third largest heavy trucks manufacturer in the world.
- The **Electric Vehicle (EV)** market is estimated to reach Rs. 50,000 crore (USD 7.09 billion) in India by 2025.

- Share in Gross Domestic Product (GDP): 7.1%.
- Share in India's exports: 4.7%.

Initiatives:

Production-Linked Incentive (PLI):

- The Union Cabinet announced the **Production-Linked Incentive (PLI) Scheme** in the Automobile and Auto Components sectors.
- The PLI scheme (**outlay of USD 3.5 Billion**) for the automobile sector proposes **financial incentives of up to 18% to boost domestic manufacturing** of advanced automotive technology products and attract investments in the automotive manufacturing value chain.

Foreign Direct Investment (FDI):

- Under the automatic route, **100% Foreign Direct Investment (FDI) is permitted along with full delicensing.**
- Hence, making it easy for investors to set up their manufacturing plant/shop in India.
- Automotive Mission Plan 2016-26 (AMP 2026): The **Automotive Mission Plan 2016-26 (AMP 2026)** outlines the **trajectory of growth of the automotive ecosystem in India**, including the glide path of definite regulations and policies that govern research, design, technology, testing, manufacturing, import/ export, sale, use, repair, and recycling of automotive vehicles, components and services.
- **National Electric Mobility Mission Plan 2020 (NEMMP):** The NEMMP initiative has been taken up to **encourage consistent, affordable and competent xEVs (hybrid and electric vehicles)** that meet consumer performance and price expectations through government-industry collaboration.

#INDIA DISCRIMINATION REPORT

- The India Discrimination Report which is released by **Oxfam India** highlighted that women and marginalized communities suffered discrimination in the job market.

What are the Key Highlights of the Report?

- The **dataset was taken from the 61st round** of the **National Sample Survey on employment unemployment (2004-05)**, the **Periodic Labour Force Survey (PLFS)** in 2018-19 and 2019-20, and the **All-India Debt and Investment Survey by the Centre.**
- **Schedule caste/Schedule tribe:** There has been a **decline in discrimination in urban areas** due to education and supportive government policies.
- **Difference in Earning:** The average earning of self-employed workers in 2019-20 was Rs 15,878 for people from non-SCs/ST categories, while it is Rs 10,533 for those from SC or ST backgrounds.
- Self-employed **non-SC/ST workers earn a third more than** their counterparts from **SC or ST backgrounds.**
- **Rise in discrimination in rural areas:** The SC and ST communities in rural India are facing an increase in discrimination in casual employment.
- **Women:** Discrimination against women is so high that there is **hardly any difference across religion or caste-based sub-groups**, or the rural-urban divide.
- The discrimination increased for women in this period — **from 67.2% in 2004-05 to 75.7% in 2019-20.**
- **Earning Gap between Males & Females:** The earning gaps are large, both in rural and urban areas for casual workers ranging between 50% and 70%. The range is low for regular workers, **with earnings of men exceeding those of women by 20 and 60%.**
- In the case of the self-employed, the disparity is much higher, with men earning 4 to 5 times that of women.
- Gender discrimination in India is structural which results in great disparities between earnings of men and women under 'normal circumstances.

What are the Constitutional Provisions against Discrimination?

Right to Equality (Article 14, 15, 16):

- **Equality before Law: Article 14** says that no person shall be denied treatment of equality before the law or the equal protection of the laws within the territory of India.
- The right is extended to all persons whether citizens or foreigners, statutory corporations, companies, registered societies or any other type of legal person.
- **Prohibition of Discrimination: Article 15** provides that **no citizen shall be discriminated on grounds only of religion, race, caste, sex or place of birth.**
- **Equality of Opportunity in Public Employment: Article 16** of the Indian constitution provides for equality of opportunity for all citizens in matters of employment or appointment to any public office.

What is the Government Initiatives Related to Women Empowerment?

- Beti Bachao Beti Padhao Scheme
- Ujjawala Yojna
- Swadhar Greh
- Pradhan Mantri Matru Vandana Yojana
- Pradhan Mantri Mahila Shakti Kendra Scheme
- One Stop Centre

What do we know about the Periodic Labour Force Survey (PLFS)?

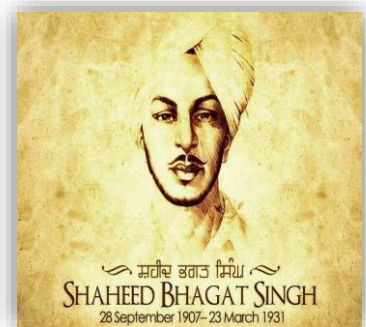
- The **National Statistical Office (NSO)** launched the Periodic Labour Force Survey (PLFS) in April 2017.
- The objective of PLFS is primarily twofold:
- To estimate the key employment and unemployment indicators (viz. **Worker Population Ratio, Labour Force Participation Rate, Unemployment Rate**) in the short time interval of three months for the urban areas only in the CWS.
- To **estimate employment and unemployment indicators** in both usual Status and CWS in both rural and urban areas annually.

#BIRTH ANNIVERSARY OF BHAGAT SINGH

Recently, PM paid tribute to India's charismatic revolutionary **Bhagat Singh** on his birth anniversary, and **announced that the Chandigarh airport will be renamed after Bhagat Singh** as a tribute to the great freedom fighter.

Who was Bhagat Singh?

Early Life: Born as Bhaganwala on the **26th September 1907**, Bhagat Singh grew up in a petty-bourgeois family of Sandhu Jats settled in the Jullundur Doab district of Punjab.



Role in Freedom Struggle:

- In 1923, Bhagat Singh **joined the National College, Lahore** which was founded and managed by **Lala Lajpat Rai and Bhai Parmanand**. The **College was set up as an alternative to the institutions** run by the Government, bringing to the field of education the idea of Swadeshi.
- The main organiser of the Association was **Chandra Shekhar Azad** and **Bhagat Singh** became very close to him.
- It was as a member of the HRA that Bhagat Singh began to take seriously the Philosophy of the Bomb.

- **Revolutionary Bhagwati Charan Vohra** wrote the famous article *Philosophy of the Bomb*. Including the philosophy of the bomb, he authored three important political documents; the other two were the **Manifesto of Naujawan Sabha** and the **Manifesto of HSRA**.
- **Armed revolution** was understood to be the only weapon with which to fight British imperialism.
- In 1925, **Bhagat Singh returned to Lahore** and within the next year he and his colleagues started a militant youth organisation called the **Naujawan Bharat Sabha**.
- In April 1926, **Bhagat Singh established contact with Sohan Singh Josh** and through him the '**Workers and Peasants Party**' which brought out the monthly magazine **Kirti in Punjabi**.
- For the next year **Bhagat Singh worked with Josh** and joined the editorial board of *Kirti*.
- In 1927, **he was first arrested on charges of association with the Kakori Case**, accused for an article written under the pseudonym *Vidrohi* (Rebel).
- In 1928, Bhagat Singh **changed the name of the Hindustan Republican Association to the Hindustan Socialist Republican Association (HSRA)**.
- In 1930, when Azad was shot, the HSRA collapsed.
- **Naujawan Bharat Sabha replaced HSRA in Punjab**.
- To take **revenge for the death of Lala Lajpat Rai**, Bhagat Singh and his associates plotted the assassination of James A. Scott, the Superintendent of Police. However, the revolutionaries **mistakenly killed J.P. Saunders**. The incident is famously known as **Lahore Conspiracy case (1929)**.
- In 1928, Lala Lajpat Rai had led a procession to protest against the arrival of the Simon Commission. The police resorted to a brutal lathi charge, in which Lala Lajpat Rai was severely injured and later succumbed to his injuries.
- Bhagat Singh and B.K. Dutt **threw a bomb** on 8th April, 1929 in the **Central Legislative Assembly**, in protest against the passing of two repressive bills, the Public Safety Bill and the Trade Dispute Bill.
- The aim, as their leaflet explained, was not to kill but to make the deaf hear, and to remind the foreign government of its callous exploitation.
- Both Bhagat Singh and B.K. Dutt surrendered thereafter and faced trial so they could further promote their cause. They were awarded life imprisonment for this incident.
- However, Bhagat Singh was **re-arrested for the murder of J.P. Saunders** and bomb manufacturing in the Lahore Conspiracy case. He was found guilty in this case and was hanged on **23rd March, 1931** in Lahore along with Sukhdev and Rajguru.
- Every year, **23rd March is observed as Martyrs' Day** as a tribute to freedom fighters Bhagat Singh, Sukhdev, and Rajguru.

#BANDHAVGARH TIGER RESERVE

The **Archaeological Survey of India (ASI)** discovered Buddhist caves and stupas at Bandhavgarh Tiger Reserve in Madhya Pradesh.

What are the Findings?

- **Buddhist Caves:** 26 Buddhist Caves were discovered dating back to the 2nd and 5th centuries, pertaining to the **Mahayana sect** of Buddhism. The caves and some of their remains had '**Chaitya**' (**rounded doors**) and stone beds typical of Mahayana Buddhism sites.
- 24 inscriptions in Brahmi text were, all dating back to the 2nd-5th centuries. The inscriptions mention sites such as Mathura and Kaushambi, and Pavata, Vejabharada and Sapatanaairikaa.
- The kings they mention include **Bhimsena, Pothasiri and Bhattadeva**.
- **Remains of the Gupta Period:** Some remains of the Gupta period, such as door jambs and carvings in caves, have been found.

What are the Key Points of Bandhavgarh Tiger Reserve?

- In 1968, it was notified as a national park and in **1993 was declared a tiger reserve- under the Project Tiger** Network at the neighbouring Panpatha Sanctuary.

- **Historical Significance:** Its mention can be found in the ancient books of the 'Narad Pancharatra' and the 'Shiv Purana' that this place is being associated with Ramayana.
- The Bandhavgarh Fort is a **great masterpiece of "Treta Yuga"** (one of the ages of mankind in Hinduism).
- It was ruled by major dynasties including Sengars, the Kalchuris, and the Baghels (believed to rule the regions for the longer period).
- **Geographical Aspect:** It resides on the extreme **north eastern border of Madhya Pradesh and the northern edges of the Satpura** mountain ranges.
- **Climate:** Tropical monsoon climatic zone.
- **Streams:** The whole park is filled with more than 20 streams out of which some of the most important streams are Johilla, Janadh, Charanganga, Damnar, Banbei, Ambanala and Andhiyari Jhiria. These streams then merge into the Son River (an important southern tributary to the river Ganga).
- **Biodiversity:** There are a large number of tigers in the core zone.
- There are more than 22 species of mammals and 250 species of birds.

What is the Archaeological Survey of India?

- ASI, under the Ministry of Culture, is the **premier organization for the archaeological research and protection of the cultural heritage** of the nation.
- It administers more than 3650 ancient monuments, archaeological sites and remains of national importance. Its activities include carrying out surveys of antiquarian remains, exploration and excavation of archaeological sites, conservation and maintenance of protected monuments etc.
- It was founded in 1861 by Alexander Cunningham- the first Director-General of ASI. Alexander Cunningham is also known as the "Father of Indian Archaeology".

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