First Democracy Summit

Why in News

Recently, the **Summit for Democracy was hosted by the United States** "to renew democracy at home and confront autocracies abroad".

- The **US President also announced the establishment of the Presidential Initiative for Democratic Renewal** that will provide foreign assistance initiatives.

  - The initiative will be powered by $424.4 million and will be aimed to support free media, fight corruption, strengthen democratic reforms, for use of technology for democracy and for defence of free and fair elections.

Key Points

- **About:**

  - It aims **to show how open, rights-respecting societies can work together** to effectively tackle the challenges of present time, such as the **Covid-19 pandemic**, the **climate crisis**, **and** inequality.
  - The Summit was centered around three principal themes:

    - Defending against **authoritarianism**
    - Addressing and fighting **corruption**
    - Advancing respect for **human rights**
- **India's Stand:**

  - **Democracies should jointly deal with social media and** crypto currencies, so that they are used to empower democracy, not to undermine it.
  - India is the **largest democracy in the world** which has 2,500-year-old democratic traditions and **proposes to share India's democratic experience** through digital solutions.

    - Referred to the **civilisational tradition of democracy in India** citing the ancient city states under the Lichhavis and other people that flourished in India during the late Vedic and Buddhist period and continued to the early medieval period.
  - **Democracy has taken various shapes across the world** and there is a need to work on the **democratic practices and symptoms.**
  - It is needed to constantly **improve the democratic practices and systems** and to continuously enhance inclusion, transparency, human dignity, responsive grievance redressal and decentralisation of power.

Democracy

- **About:**

  - Democracy is a **system of government** in which the citizens exercise power directly or elect representatives from among themselves to form a governing body, such as a

parliament.
- It is also referred to as **"rule of the majority".** Here the power can't be inherited. People elect their leaders.
- Representatives stand in an election and the citizens vote for their representative. The representative with the most number of votes gets the power.

- **Brief History:**

  - **India is the world's largest democracy.** India became a democratic nation post its **independence in the year 1947.** Thereafter, the citizens of India were given the right to vote and elect their leaders.

[//](#)

THE 25 OLDEST DEMOCRACIES IN THE WORLD

OLDER ▬▬▬▬▬▬▬▬▬▬▬▬▬ YOUNGER

They define a country as democratic
if they meet the following conditions:

The executive is directly or
indirectly elected in popular
elections and is responsible
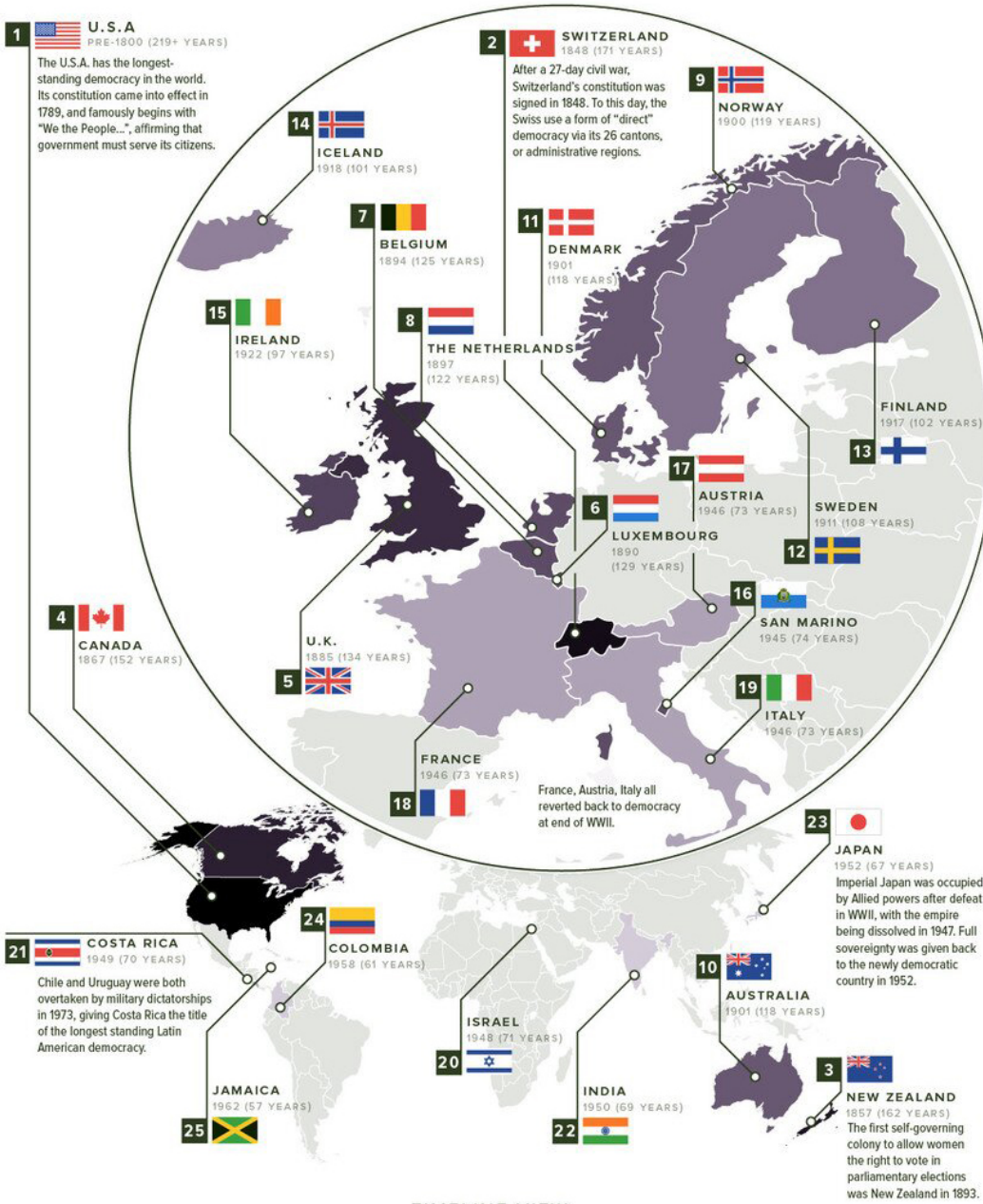either directly to voters or
to a legislature.

The legislature (or the
executive if elected
directly) is chosen in free
and fair elections.

A majority of adult men has
the right to vote.

*Universal suffrage came
later. In the U.S., for example,
all women could not vote
until 1920.*

1 U.S.A
PRE-1800 (219+ YEARS)
The U.S.A. has the longest-
standing democracy in the world.
Its constitution came into effect in
1789, and famously begins with
"We the People...", affirming that
government must serve its citizens.

2 SWITZERLAND
1848 (171 YEARS)
After a 27-day civil war,
Switzerland's constitution was
signed in 1848. To this day, the
Swiss use a form of "direct"
democracy via its 26 cantons,
or administrative regions.

9 NORWAY
1900 (119 YEARS)

14 ICELAND
1918 (101 YEARS)

7 BELGIUM
1894 (125 YEARS)

11 DENMARK
1901
(118 YEARS)

15 IRELAND
1922 (97 YEARS)

8 THE NETHERLANDS
1897
(122 YEARS)

FINLAND
1917 (102 YEARS)

17 AUSTRIA
1946 (73 YEARS)

13

SWEDEN
1911 (108 YEARS)

6 LUXEMBOURG
1890
(129 YEARS)

12

4 CANADA
1867 (152 YEARS)

16 SAN MARINO
1945 (74 YEARS)

U.K.
1885 (134 YEARS)

5

19 ITALY
1946 (73 YEARS)

FRANCE
1946 (73 YEARS)

18

France, Austria, Italy all
reverted back to democracy
at end of WWII.

23 JAPAN
1952 (67 YEARS)
Imperial Japan was occupied
by Allied powers after defeat
in WWII, with the empire
being dissolved in 1947. Full
sovereignty was given back
to the newly democratic
country in 1952.

21 COSTA RICA
1949 (70 YEARS)
Chile and Uruguay were both
overtaken by military dictatorships
in 1973, giving Costa Rica the title
of the longest standing Latin
American democracy.

24 COLOMBIA
1958 (61 YEARS)

10 AUSTRALIA
1901 (118 YEARS)

ISRAEL
1948 (71 YEARS)

20

3 NEW ZEALAND
1857 (162 YEARS)
The first self-governing
colony to allow women
the right to vote in
parliamentary elections
was New Zealand in 1893.

JAMAICA
1962 (57 YEARS)

25

INDIA
1950 (69 YEARS)

22

TIMELINE VIEW

In the grand scheme of human history, democracy is still a
relatively new concept. In fact, the vast majority of the world's
current democratic regimes are less than 50 years old.

PRE-1800
←

1800 1820 1840 1880 **1900** 1920 1940 1960 1970
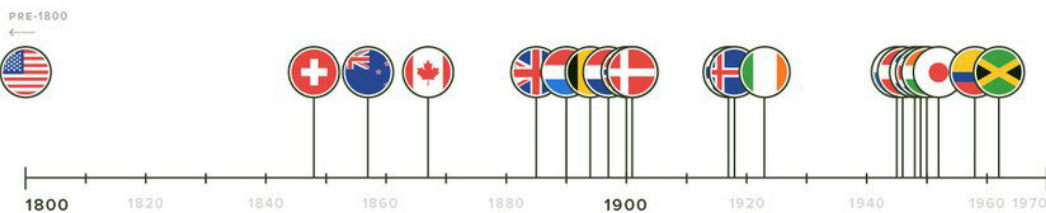
- **India's Role in Strengthening Democracy:**

  - **Around the World:**

    - **Capacity Building:**

      - Beyond demonstrating the **Election Commission** (EC)'s enviable record in conducting free and fair elections, India **has given training to the thousands of electoral officials** from Asia, Africa, and other regions of the world in election management and parliamentary affairs for several decades.
    - **Developmental Partnership Administration (DPA):**

      - India has created a Developmental Partnership Administration (DPA) within the Ministry of External Affairs (MEA) to **offer critical development assistance projects** for many developing and new democracies across geographies.
      - **Examples:** The building of the Afghan Parliament, providing support to Myanmar for upgrading its administrative and judicial capabilities, amongst others.
    - **Funding to Democracy Watch Dogs:**

      - Together with the US, India was instrumental in the creation of the UN Democracy Fund (UNDEF) and the Community of Democracies to support democracy at international levels.
      - Incidentally, **India is one of the largest contributors to UNDEF** that supports 66 NGO-led projects in South Asia.
    - **United Nations Democracy Caucus:**

      - India also helped to form the **United Nations Democracy Caucus**, the only body within the UN system to **convene democratic states** based on shared values.
  - **In India:**

    - **Breaking Racial Discrimination:**

      - India has **given representation to a Dalit woman** to rise to the highest office (as Chief Minister).
    - **Right to Information Act, 2005:**

      - The act, a **totally civil society driven grassroot movement** has truly democratised information spaces for ordinary citizens.
    - **Democratic Decentralisation:**

      - Twin **constitutional amendments (73rd and 74th) in 1992** to create third-tier governments (rural and urban local bodies), has taken deep ground in the last three decades.
      - With 3 million representatives at **various levels** (**Gram Sabha, Panchayat Samiti, and Zilla Parishad**), this is by far the largest democratic exercise anywhere in the world.
- **Concerns Related to Democracy:**

  - **World:**

    - **Decline in Political Rights and Civil Liberties:**

- Democracies across the world—rich and established, developing and newly established ones—are grappling with serious crises on many key parameters.
- According to the reports of leading democracy watchdogs, democracy is witnessing an alarming decline.
- According to **Democracy Index 2020**, as low as **9% of the world population live in a "full" democracy.**

    - The recent **military coups in Myanmar, Tunisia, and Sudan** are testimonies to the steady rise of anti-democratic forces and the failure of the global democracy collective to do anything meaningful to stem the rot.
  - **Rising Authoritarian:**

    - Rising threats stemming from the steady rise of **authoritarian powers, particularly China** is a major concern.
    - At a time when the West, particularly the US and rich European countries, have considerably ceded their global commitment to democratic values, **China has set its eyes on re-defining global human rights** and democracy norms.
    - **Examples:**

      - China has **marshalled the military and diplomatic means to threaten Taiwan,** forced territorial claims in the disputed **South China Sea**, thrown millions of **Uyghur Muslims** in internment camps, curbed political freedoms in **Hong Kong**, and launched influence operations across many geographies.
  - **India's:**

    - The **Freedom House 2021 report** put India as only **"partly free"**, the V-Dem report went a step ahead to call it an **"electoral autocracy"**.
    - According to the Global **State of Democracy 2021** report, India was amongst the **10 most backsliding democracies**—a more severe and deliberate kind of democratic erosion.

Way Forward

- The institutionalization of constitutional democracy has helped the people of India realize the importance of democracy and inculcate democratic sensibilities among them.
- At the same time, it is **important that all the government organs work in harmony** to uphold the trust people of the country have held in them and ensure objectives of true democracy.
- The Government **should hear criticism rather than rejecting it outrightly.** Suggestions on eroding democratic values need a thoughtful, and respectful response.
- The press and the judiciary, which are **considered the pillars of India's Democracy, require it to be independent of any executive interference** to enable auditing of the work of the executive.
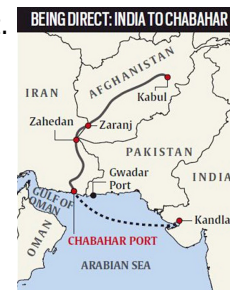
Source: TH

No US Sanctions on Chabahar Port

Why in News

Recently, the External Minister of India replied in the **Parliament** that the **US sanctions on Iran** have no bearing on **India's Chabahar port project** and the port is functioning well.

- The **US has given separate exceptions** for the strategic Chabahar port project.

Key Points

- **About Chabahar Port:**

  - It is located in the **Indian Ocean in the Sistan province of Iran.**
  - The Chabahar port is considered a **gateway to golden opportunities for trade by India, Iran and Afghanistan with central Asian countries.**
  - The port, which is easily accessible from India's western coast, is increasingly seen as a counter to **Pakistan's Gwadar Port** which is being developed with Chinese investment.
- **Importance of Chabahar Port for India:**

  - **Alternate Route:** Chabahar Port provides an option of alternate supply route to everyone, thus **reducing the importance of Pakistan** with respect to trade.
  - **Strategic Requirements:** It is **located on the Gulf of Oman** and is only 72 km away from the **Gwadar port** in Pakistan which has been developed by China.

    - China is aggressively pursuing its own **Belt and Road Initiative** (BRI) under the **One Belt One Road (OBOR) project.**
  - **Connectivity**: In future, the Chabahar project and the **International North South Transport Corridor** (INSTC) will complement each other by optimising Indian connectivity with Russia and Eurasia.

    - Also, it gives India direct access to Afghanistan and other Central Asian Republics
- **Reasons for Exception in US Sanctions:**

  - **In Interest of Afghanistan**: The US acknowledges that the Chabahar port project is not just only in India's or Iran's strategic interest but also **in Afghanistan's strategic interest.**

    - **Afghanistan** is a landlocked country which **depends on Pakistan for trade.** All its trade goes largely through the Pakistani ports.
    - **Pakistan denies transit to India** for trade with Afghanistan and Central Asia.
    - This project **provides Afghanistan a strategic alternative** and helps it to escape being landlocked in a sense.
  - **Bypassing Pakistan:** If in future, issues between America and Iran get resolved, then Chabahar Port **will enable America to bypass Pakistan.**

    - Pakistan still controls all the administrative routes by which Afghanistan can be supplied.
    - US has always remained hesitant to act on terrorists, specifically Afghan Talibans, due to that. **Chabahar Port gives an option to America to take action against such terrorists.**

Source: IE

Wildlife Conservation in India

Why in News

According to the recent data by the **Wildlife Crime Control Bureau (WCCB)** and **State Forest and Police Authorities**, in the past three years (2018-2020), about 2054 cases were registered for killing or illegal trafficking of wild animals in India.

- In order to control this, the WCCB has conducted a number of **species-specific enforcement operations** with coordination of State Enforcement Agencies.
- WCCB is a **statutory multi-disciplinary body** established by the Government of India under the Ministry of Environment and Forests, to combat organized wildlife crime in the country. It has its **headquarter in New Delhi.**

Key Points

- **Impact of Illegal Wildlife Trade:**

    - **Species face extinction** because of demands arising out of illegal wildlife trade.
    - **Overexploitation of the wildlife resources** due to its illegal trade creates imbalances in the ecosystem.
    - Illegal wildlife trade as part of the illegal trade syndicates **undermines the economy of the country** and thereby creates social insecurity.
    - Wild plants that provide **genetic variation for crops** (natural source for many medicines) are threatened by the illegal trade.
- **Various Species-Specific Enforcement Operations:**

    - **Operation Save Kurma:** To focus on the poaching, transportation and illegal trade of live **turtles and tortoises.**
    - **Operation Turtshield:** It was taken up to tackle the illegal trade of live **turtles.**
    - **Operation Lesknow:** To gain attention of enforcement agencies towards the illegal wildlife trade **in lesser-known species of wildlife.**
    - **Operation Clean Art:** To drag attention of enforcement agencies towards illegal wildlife trade **in Mongoose hair brushes.**
    - **Operation Softgold:** To tackle **Shahtoosh Shawl** (made from Chiru wool) illegal trade and to spread awareness among the weavers and traders engaged in this trade.
    - **Operation Birbil:** To curb illegal trade **in wild cat and wild bird species.**
    - **Operation Wildnet:** It was aimed to draw the attention of the enforcement agencies within the country to focus their attention on the **ever increasing illegal wildlife trade over the internet** using social media platforms.
    - **Operation Freefly:** To check illegal trade of **live birds.**
    - **Operation Wetmark**: To ensure **prohibition of sale of meat of wild animals** in wet markets across the country.
- **India's Domestic Legal Framework for Wildlife Conservation:**

    - **Constitutional Provisions for Wildlife:**

        - The **42nd Amendment Act**, **1976**, Forests and Protection of Wild Animals and Birds was transferred from State to **Concurrent List**.
        - **Article 51 A (g)** of the Constitution states that it shall be the **fundamental duty** of every citizen to protect and improve the natural environment including forests and Wildlife.
        - **Article 48 A** in the **Directive Principles of State policy**, mandates that the State shall endeavor to protect and improve the environment and to safeguard the

forests and wildlife of the country.
- **Legal Framework:**

  - **[Wildlife (Protection) Act, 1972](#)**
  - **[Environment Protection Act, 1986](#)**
  - **[The Biological Diversity Act, 2002](#)**
- **India's Collaboration With Global Wildlife Conservation Efforts:**

  - **[Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)](#)**
  - **[Convention on the Conservation of Migratory Species of Wild Animals (CMS)](#)**
  - **[Convention on Biological Diversity (CBD)](#)**
  - **[World Heritage Convention](#)**
  - **[Ramsar Convention](#)**
  - **[The Wildlife Trade Monitoring Network (TRAFFIC)](#)**
  - **[United Nations Forum on Forests (UNFF)](#)**
  - **[International Whaling Commission (IWC)](#)**
  - **[International Union for Conservation of Nature (IUCN)](#)**
  - **[Global Tiger Forum (GTF)](#)**

[Source: TH](#)

Radioactive Pollution in Water

Why in News

Recently, radioactive pollution in water and associated health impacts have been reported in many parts of the globe.

Key Points

- **About:**

  - Radioactivity is the **phenomenon of spontaneous emission of particles** or waves from the unstable nuclei of some elements. There are **three types of radioactive emissions: Alpha, Beta and Gamma.**

    - Alpha particles are positively charged He (Helium) atoms, beta particles are negatively charged electrons and gamma rays are neutral electromagnetic radiations.
  - Radioactive elements are naturally found in the earth's crust. **Uranium, thorium and actinium are three NORM (Naturally Occurring Radioactive Materials)** series that contaminate water resources.
  - A small amount of radiation is found in all types of water **but the extended amount of radiation is harmful to human health.** Radioactivity in drinking water **can be determined by a gross alpha test.**
  - Radioactivity **is measured in Becquerel (SI unit) or in Curie.** The **unit Sievert** measures the quantity of radiation absorbed by human tissues.
- **Sources:**

  - **Natural:**

    - **Radiotoxic Elements in Aquatic System: Radium,** a descendant of the NORM

series, is one of the radiotoxic elements found in aquatic systems and can be penetrated into groundwater via (i) aquifer rock dissolution (ii) decaying of 238U and 232Th, or (iii) desorption processes.

- Radium is a radionuclide formed by the decay of uranium (U) and thorium (Th) in the environment.
- **Magma:** Sometimes, magma also releases radioactive gases into the environment.
- **Soil Sediments:** Percolation of NORM from the soil sediments to the aquifer **causes groundwater contamination.**
  - **Anthropogenic:**

    - **Atmospheric Deposition of Cosmogenic Radionuclides:**

      - Atmospheric deposition (both dry and wet) of cosmogenic radionuclides add radioactive nuclei in the surface water.
      - Cosmogenic radionuclides are radioactive isotopes which are produced by natural processes and distributed within the Earth system.
    - **Nuclear Reactors and Warheads:**

      - Nuclear reactors and nuclear warhead experiments are the key sources of human-induced radionuclides discharge. Nuclear reactors produce radioisotopes (Cobalt-60, Iridium-192, etc) that hand out as sources of gamma radiation in radiotherapy and numerous industrial appliances.
      - Nuclear power plants placed at the coastal regions add to the radiological contaminants in the marine water by releasing atomic wastes. Water is also used as coolants in these powerhouses, which also get contaminated.
    - **Dumping of Radioactive Waste:**

      - The application of radioactive elements in **nuclear weapons, X-rays, MRI and other medical equipment causes their exposure to human beings.** Dumping of these radioactive **wastes in surface water bodies causes water pollution.**
    - **Mining:**

      - Mining activities of radioactive elements like uranium and thorium also pollute surface and groundwater.
    - **Nuclear Accidents:**

      - Radioactive pollution due to nuclear submarine accidents and sinking have been reported.
      - The Rocky Flats plant in Colorado, Fukushima and the Chernobyl nuclear disaster are some examples of such nuclear accidents.
- **Health Impacts:**

  - **Radiation Syndrome:**

    - Human tissues absorb radiation through polluted water and foodstuff, which can cause serious health risks. High doses of radiation can cause acute radiation syndrome or dermal radiation injury.
  - **Disorders in Human Physiology:**

    - Exposure to radiation causes various disorders in human physiology, including cancer, leukaemia, genetic mutations, cataracts, etc.
  - **Mutation and Structural Alteration:**

    - Genetic effects ionizing **radiation induces mutations in germ cells** (male sperm cells and female egg cells), resulting in **structural alteration in germ cell DNA** that are passed on to offsprings.
    - Hereditary disorders can lead to **premature death and severe mental illness.**

Way Forward

- Nowadays, proper analysis and monitoring of radioactive pollutants are also required for a safe water supply. Prevention and precaution measures can check the anthropogenic sources of radioactive contamination in water resources.
- Various treatment methods like aeration, reverse osmosis, ion exchange and granule carbon adsorption are effective remedial measures for treating the radioactive contaminated water.

Source: DTE

Beti Bachao Beti Padhao Scheme

Why in News

A **parliamentary committee on empowerment of women** has flagged under-utilisation of central funds for schemes related to programmes targeted at the girl child - particularly the flagship **Beti Bachao, Beti Padhao scheme** from 2014 to 2019.

Key Points

- **Findings of the Committee:**

  - **Poor Utilization of Funds:**

    - **Since the inception of BBBP in 2014-15** till 2019-20, the total Budgetary allocation under **the scheme was Rs. 848 crore**, excluding the Covid-stricken financial year of 2020-21.
    - During this period, **an amount of Rs. 622.48 crore was released** to the States but **only 25.13% of the funds** has been spent by the States and Union Territories.
  - **Improper Spending of Funds:**

    - A whopping **80% of funds** under the flagship BBBP scheme **was spent on media campaigns.**
    - The massive spend on advertisements was **despite the clearly laid down formula for utilisation of funds** – Rs. 50 lakh per year is earmarked for a district for utilisation under six different components.

      - Of the Rs 50 lakh, 16% of funds are for inter-sectoral consultation or capacity building, 50% for innovation or awareness generation activities, 6% for monitoring and evaluation, 10% for sectoral interventions in health, 10% for sectoral interventions in education and 8% as flexi funds.
  - **Recommendation:**

    - The government should **reconsider spending on advertisements** under the BBBP scheme and should **focus on planned expenditure allocation** for sectoral interventions in education and health.
- **BBBP Scheme:**

  - **About:**

    - It was **launched in January 2015** with the aim to address **sex selective abortion and the declining child sex ratio** which was at 918 girls for every 1,000 boys in 2011.

- This is a **joint initiative** of the Ministry of Women and Child Development, Ministry of Health and Family Welfare and Ministry of Human Resource Development.
- The programme is being **implemented across 405 districts in the country.**
  - **Main Objectives:**

    - Prevention of gender-biased sex-selective elimination.
    - Ensuring survival & protection of the girl child.
    - Ensuring education and participation of the girl child.
    - Protecting rights of Girl children.
  - **Performance Analysis:**

    - **Sex Ratio at Birth:**

      - **Sex Ratio at Birth (SRB)** has improved by **16 points from 918 (2014-15) to 934 (2019-20),** as per the **Health Management Information System (HMIS)** data.
      - **Notable Examples (Districts):**

        - Mau (Uttar Pradesh) from 694 (2014-15) to 951 (2019-20),
        - Karnal (Haryana) from 758 (2014-15) to 898 (2019-20),
        - Mahendergarh (Haryana) from 791 (2014-15) to 919 (2019-20), etc.
    - **Health:**

      - **ANC Registration**: Percentage of 1st Trimester ANC (AnteNatal Care) Registration has shown an improving trend from 61% in 2014-15 to 71% in 2019-20.
      - **Institutional Deliveries:** Percentage of Institutional Deliveries has shown an improving trend from 87% in 2014-15 to 94% in 2019-20.
    - **Education :**

      - **Gross Enrolment Ratio (GER)**: GER of girls in the schools at secondary level has **improved from 77.45 (2014-15) to 81.32 (2018-19)** as per Unified District Information System for Education (UDISE) provisional data.
      - **Toilet for girls**: Percentage of schools with functional separate toilets for girls has shown improvement from 92.1% in 2014-15 to 95.1% in 2018-19.
    - **Attitudinal Change:**

      - The BBBP scheme has been **able to bring the focus on important issue** of female infanticide, lack of education amongst girls and deprivation of their rights on a life cycle continuum.
      - BetiJanmotsav is one of the key programmes celebrated in each district.

Other Initiatives for Girl Children

- **UJJAWALA:** To tackle the problem of trafficking, it is a Comprehensive Scheme for Prevention of Trafficking and Rescue, Rehabilitation and Re-Integration of Victims of Trafficking for Commercial Sexual Exploitation.
- **Kishore Health Card:** To record the information about the weight, height, Body Mass Index (BMI) of Adolescent Girls (AGs). These health cards for AGs are maintained at the AnganWadi centres (AWCs).
- **Scheme for Adolescent Girls (SAG).**
- **Sukanya Samridhi Yojana,** etc.

Source: TH

Hunar Haats

Why in News

Recently, the **Ministry of Minority Affairs** has organised the **34th Edition of [Hunar Haat](#)** in Gujarat where Artisans from 30 states and union territories have participated.

Key Points

- **About:**

  - First **launched in 2016**, it is an exhibition of handicrafts and traditional products made by artisans from the **minority communities.**
  - Hunar Haat has been conceptualized **to protect and promote the country's ancestral legacy of arts and crafts** in the current global competition and to support the traditional artisans and craftsmen.
  - The **artisans selected in the Hunar Haat exhibition are those whose forefathers were involved in such traditional handmade work** and are still continuing the profession.
- **Theme:**

  - **Vocal for Local.**
- **Organizer:**

  - These are organised by the **Ministry of Minority Affairs** under **USTTAD (Upgrading the Skills & Training in Traditional Arts/Crafts for Development) scheme.**

    - The USTTAD scheme aims **to promote and preserve the rich heritage of the traditional arts & crafts** of the minority communities.
- **Aim:**

  - To **provide market exposure and employment opportunities** to artisans, craftsmen and traditional culinary experts.
  - **Boosting the skills** of craftsmen, weavers and artisans who are already engaged in the traditional ancestral work.
- **SIgnificance:**

  - 'Hunar Haat' has proved to be an **"Empowerment Exchange" for master artisans and craftsmen.**
  - It has proved to be immensely beneficial and encouraging for artisans and craftsmen as **lakhs of people visit the "Hunar Haat" and purchase indigenous handmade products** of artisans on a large scale.
  - It is **also providing employment opportunities to lakhs of artisans** and craftsmen from across the country.

    - Presently around 7 lakh people across the country are directly and indirectly associated with Hunar Haat, **About 40 % of them are women artisans**, and in the next couple of years, around 17 lakh families are expected to join Hunar Haat.

Other Schemes Related to Minorities

- **Pradhanmantri Jan Vikas Karyakram:**

  - The programme **aims to develop socio-economic and basic amenities** assets like school, college, polytechnic, girls hostel, ITI, skill development centre etc for the minority

communities.

- **Begum Hazrat Mahal Girls Scholarships:**

    - It provides **scholarships for economically backward girls** belonging to the six notified Minority communities.
- **Gharib Nawaz Employment Scheme:**

    - Was launched so that **short term job oriented skill development courses** may be provided to minorities' youth in order to enable them for skill based employment.
- **Seekho aur Kamao:**

    - This is a **placement linked skill development scheme** for minorities aiming to upgrade the skills of minority youth in various modern/traditional skills depending upon their qualification, present economic trends and market potential, which can earn them suitable employment or make them suitably skilled to go for self-employment.
- **Nai Manzil:**

    - It is a scheme for formal school education & skilling of school dropouts **launched in 2015.**
- **Usttad (Upgrading the Skills and Training in Traditional Arts/Crafts for Development):**

    - The scheme aims **to preserve the rich heritage of traditional arts/crafts** of minorities..
- **Nai Roshni:**

    - Launched for **leadership development of women** belonging to minority communities.

Source: PIB

James Webb Space Telescope

Why in News

The James Webb Space Telescope **(JWST)** is scheduled to be rocketed into orbit later this year (2021).

Key Points

- **About:**

    - It is the **most powerful infrared telescope** of **National Aeronautics and Space Administration (NASA).**
    - It is also considered a successor of the **Hubble Telescope** and will extend and complement its discoveries.

        - Launched into low Earth orbit **in 1990**, the Hubble Space Telescope has made more than 1.4 million observations, including tracking interstellar objects, capturing a comet colliding with Jupiter, and discovering moons around Pluto.
        - Hubble has **captured galaxies merging, probed** supermassive black holes and has helped us understand the history of our universe.
    - The telescope is the **result of an international collaboration** between NASA, the European Space Agency (ESA) and the Canadian Space Agency.

- Webb will **reveal new and unexpected discoveries**, and help humanity understand the origins of the universe and our place in it.
- The telescope will study the atmospheres of a **wide diversity of exoplanets**.
- It will **also search for atmospheres similar to Earth's,** and for the signatures of key substances such as methane, water, oxygen, carbon dioxide, and complex organic molecules, in hopes of finding the building blocks of life.
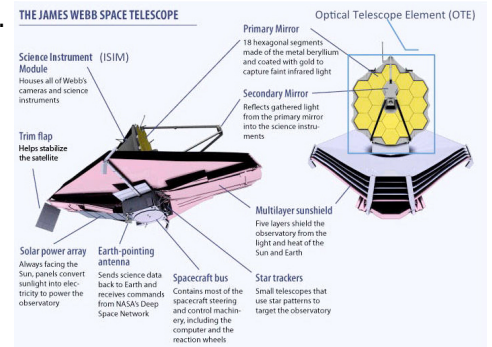
- **Launch:**

  - It will be launched on an **Ariane 5 ECA rocket** from French Guiana in South America.

    - The **Ariane 5** is believed to be **one of the most reliable launch vehicles.**
- **Goal:**

  - To **search for the first galaxies** that formed after the Big Bang.
  - To **determine how galaxies evolved** from their earlier formation until now.
  - To **observe the formation of stars** from the first stages to the formation of planetary systems.
  - To **measure the physical and chemical properties** of planetary systems and investigate the potential for life in such systems.
- **Webb Vs Hubble Telescope:**

  - **Wavelength:**

    - The JWST will **observe primarily in the infrared range** and provide coverage from 0.6 to 28 microns.
    - The instruments on **Hubble see mainly in the ultraviolet and visible part of the spectrum**. It could observe only a small range in the infrared from 0.8 to 2.5 microns.

      - The **infrared region of the electromagnetic spectrum** covers the wavelength range from approximately 0.7 to a few 100 microns.
  - **Size:**

    - Webb's primary mirror has a **diameter of 6.5 metres while** Hubble's mirror was much **smaller – 2.4 metres in diameter.**

      - So, Webb will have a **larger field of view compared to the camera on Hubble**.
    - Webb also **carries a large sun shield.**
  - **Distance:**

    - Webb's near- and mid-infrared instruments will **help study the first formed galaxies, exoplanets and birth of stars.**

      - Hubble can see the equivalent of **"toddler galaxies"** while Webb Telescope will be able to see **"baby galaxies".**
- **Other Major Infrared Telescope:**

- - **Herschel Space Observatory Telescope:** It is an **infrared telescope**, launched in **2009** by the European Space Agency.

    - It also **orbits the Sun similar to how Webb would. The primary difference between Webb and Herschel** is the **wavelength** range: Webb goes from 0.6 to 28 microns, while Herschel covers 60 to 500 microns.
    - Herschel's mirror is **smaller than Webb's.** It is 3.5 metres in diameter, while Webb's primary mirror has a diameter of 6.5 metres.

Source: IE

NASA's IXPE Mission

Why in News

Recently, **National Aeronautics and Space Administration (NASA)** launched a new mission named **Imaging X-ray Polarimetry Explorer (IXPE).**

Key Points

- **About:**

    - **IXPE observatory** is **a joint effort of NASA and the Italian Space Agency.**
    - It will study **"the most extreme and mysterious objects in the universe –** supernova remnants**, supermassive** black holes**, and dozens of other high-energy objects."**
    - Its primary length is **two years and the observatory will be at 600 kilometers altitude,** orbiting around Earth's equator.
    - It is expected to **study about 40 celestial objects** in its first year in space.
    - It will complement other X-ray telescopes such as the Chandra X-ray Observatory and the European Space Agency's X-ray observatory, XMM-Newton.
- **Significance:**

    - It will help observe **polarized X-rays from neutron stars and supermassive black holes**. By measuring the polarization of these X-rays, we can study where the light came from and understand the geometry and inner workings of the light source.
    - It will help scientists understand how black holes spin and their location in the past.
    - It will help unravel how **pulsars** shine so brightly in X-rays.
    - It will help learn what powers the jets of energetic particles that are ejected from the region around the supermassive black holes at the centers of galaxies.
- **NASA's Other Recent Missions:**

    - **Double Asteroid Redirection Test (DART).**
    - **Mission Lucy** (Jupiter Trojan Asteroids).
    - **Near-Earth Asteroid Scout**

Supernova

- A supernova is an extremely powerful explosion that accompanies the death of a massive star.

Black Hole

- A black hole is a **place in space where gravity pulls so much that even light can not get out.** The gravity is so strong because matter has been squeezed into a tiny space.

- **Gravitational waves** **are created** when two black holes orbit each other and merge.

Neutron Stars

- Neutron stars **comprise one of the possible evolutionary end-points of** high mass stars.
- Once the core of the star has completely burned to iron, energy production stops and the core rapidly collapses, squeezing electrons and protons together to form neutrons and neutrinos.
- A **star supported by neutron degeneracy pressure is known as a 'neutron star',** which may be seen as a pulsar if its magnetic field is favourably aligned with its spin axis.

Source: IE

NASA's New Communications System: LCRD

Why in News

Recently, **NASA (National Aeronautics and Space Administration)** has launched its new **Laser Communications Relay Demonstration (LCRD).**

Key Points

- **About:**

    - It is the **first-ever laser communications system** that will **pave the way for future optical communications missions.**

        - Currently, most NASA spacecraft use radio frequency communications to send data.
    - The **LCRD payload is hosted onboard the US Department of Defense's Space Test Program Satellite 6 (STPSat-6).** It will be **in a** geosynchronous orbit, over 35,000km above Earth.
    - It will be controlled by engineers at the **LCRD mission's ground stations in California and Hawaii.**
    - The team will send test data through radio frequency signals and the LCRD will reply using optical signals.
- **Features:**

    - It has **two optical terminals**. One to receive data from a user spacecraft, and the other to transmit data to ground stations.
    - The modems will **translate the digital data into laser signals**. This will then be transmitted via encoded beams of light.
    - These capabilities make **LCRD NASA's first two-way, end-to-end optical relay.**
- **Significance:**

    - Laser uses infrared light and has a shorter wavelength than radio waves. This will **help the transmission of more data in a short time.**

        - Using infrared lasers, LCRD will send data to Earth at 1.2 gigabits-per-second (Gbps). At this speed, it will take less than a minute to download a movie.
        - It takes roughly nine weeks to transmit a completed map of Mars back to Earth with current radio frequency systems. **With lasers, we can accelerate that to about**

nine days.
- Optical communications **will help increase the bandwidth 10 to 100 times more** than radio frequency systems.
- Optical communications systems are smaller in size, weight, and require less power compared with radio instruments.
- A smaller size means **more room for science instruments.**
- **Less weight means a less expensive launch.**
- Less power means **less drain on the spacecraft's batteries.**
- With optical communications supplementing radio, missions will have **unparalleled communications capabilities.**

Kashi Vishwanath Corridor

Why in News

Recently, the Prime Minister has **inaugurated Phase 1 of the Kashi Vishwanath Corridor Project in Uttar Pradesh's** [Varanasi.](#)

- 23 buildings – tourist facilitation centre, Vedic Kendra, Mumukshu Bhavan, Bhogshala, city museum, viewing gallery, food court among others — have been inaugurated as part of the project.

Key Points

- **About:**

  - It is the massive makeover and the **first after the 1780 AD when the Maratha queen Ahilyabai Holkar of Indore renovated the Kashi Vishwanath temple** and the area surrounding it.
  - The foundation was laid in March, 2019. The project was **conceptualised to create an easily accessible pathway for the pilgrims**, who had to meander through congested streets to take a dip in the Ganga and offering the water of the holy river at the temple.
  - More than 40 ancient temples were **rediscovered during the work on the project.** They were restored while ensuring there is no change in the original structure.
- **Significance:**

- It **connects the iconic Kashi Vishwanath temple and the ghats** along the river Ganga.

  - Kashi Vishwanath Temple is **one of the most famous Hindu temples dedicated to Lord Shiva.**
  - The temple stands on the western bank of the holy river Ganga, and is **one of the twelve Jyotirlingas, the holiest of Shiva temples.**
- It will help **boost tourism by providing the pilgrims and travellers with amenities such as wider** and cleaner roads and lanes, better lighting with bright street lights, and clean drinking water.

Source: IE

PDF Refernece URL: https://www.drishtiias.com/current-affairs-news-analysis-editorials/news-analysis/13-12-2021/print