

Weekly Current Affairs

Sources: The Hindu+IndianExpress+PIB etc

11 July 2021 to 17 July 2021

Contents

- 1. Himalayan yaks
- 2. UV-C Disinfection Technology
- 3. Avicennia marina
- 4. India Industrial Land Bank System (IILBS)
- 5. Organisation of Islamic Cooperation(OIC)
- 6. African Swine Fever (ASF)
- 7. Kesaria Buddha stupa
- 8. Kanchanjunga Biosphere reserve
- 9. Portals in AYUSH Sector
- **10. VIPER MISSION**
- 11. RBI Retail Direct Scheme
- 12. St Queen Ketevan
- 13. Soil-less Agriculture
- 14. Cryptogamic Garden
- 15. KanwarYatras
- 16. BHIM-UPI in Bhutan
- 17. Green Hydrogen Mobility Project
- 18. Food Security and Nutrition in the World 2021 report
- 19. Drone rules 2021
- 20. Conjugate Vaccine
- 21. PRASHAD Scheme
- 22. Terms in news

Himalayan yaks

In news

National Research Centre on Yak in West Kameng district, Arunachal Pradesh has tied up with the National Insurance Company Ltd. for insuring Himalayan Yak.

About Himalayan Yak:

- Himalayan Yak is a long-haired domesticated cattle found throughout the Himalayan region of the Indian
 - subcontinent, Tibetan Plateau, Myanmar and as far north as Mongolia and Siberia.
- They are accustomed to very cold temperatures and can survive up to -40 degrees but find it difficult when the temperature crosses 13 degrees.
- The total yak population in India is about 58,000. The Highest Yak Population is in **Union Territories of Ladakh and Jammu and Kashmir**. It is **followed by Arunachal Pradesh**, **Sikkim**, **Himachal Pradesh and West Bengal and Uttarakhand**.

Significance:

- Himalayan Yak is a lifeline for pastoral nomads living in the higher reaches of the Himalayas as it provides them milk, fiber, and meat.
- The long hair of yak has water-resistant properties and can be a good packing material.

 Nomads also use yak hair to weave material for making tents.

Concern:

- According to a report, the number of yaks across the country has **declined by almost**24.7% between 2012 and 2019.
- The reasons include climate change, heat, diseases, surgical operations among others.

Source:-> The Hindu

UV-C disinfection technology

In news

UV-C Disinfection Technology will soon be installed in Parliament for mitigating the airborne transmission of SARS-CoV-2.

Key takeaways

- UV-C Disinfection Technology is **developed by the CSIO under the CSIR**, affiliated with the Union Ministry of Science and Technology.
- It disinfects indoors by **neutralizing fungus**, **bacteria**, **and other bio-aerosols with 254nm UV light**. It is capable to mitigate the fungal infections caused during the second wave of pandemic.
- UVC light, is efficient at killing airborne coronaviruses, including Alpha HCoV-229E and Beta HCoV-OC43 (different from the variants of the SARS-CoV-2 virus).

- UV-C radiation with a wavelength of approximately 254 nm has been in use to disinfect the air across hospitals, laboratories, and water treatments for decades.
- Studies by radiological researchers have shown that 207-222nm UV-C light does not pose harm to human skin.
- However, few researchers have noted that UV-C radiation can be harmful to the eyes and skin if exposed directly for a longer duration.

Source->Indian Express

Avicennia marina

In news

Scientists have completed the **genome sequencing of one of the highly salt-tolerant mangrove** species, named Avicennia marina.

About Avicennia marina:

- It is also called **Banhi in Odia**. It is one of the most prominent mangroves species found in all mangrove formations in India.
- It is a **salt-secreting and extraordinarily salt-tolerant mangrove species** that grows optimally in 75% seawater and tolerates >250% seawater.
- It is among the rare plant species which can excrete 40% of the salt through the salt glands in the leaves, besides its extraordinary capacity to exclude salt entry to the roots.
- The genomic sequencing of Avicennia marina will help researchers in developing drought and salinity tolerant crop varieties of the coastal region of the country.

About Mangroves

- Mangroves are a unique group of species found in marshy intertidal estuaries regions and survive a high degree of salinity through several adaptive mechanisms.
- They are important resources for the coastal region and are of great ecological and economic value.
- They form a link between marine and terrestrial ecosystems, protect shorelines and provide habitat for a diverse array of terrestrial organisms.

Source:-> PIB

India Industrial Land Bank System (IILBS)

In news

GIS Enabled Land Bank has been gaining popularity. The website has seen a 30% increase in page views each month since April 2021.

About India Industrial Land Bank System (IILBS)

• It is a GIS-based portal and acts as a **one-stop repository of all industrial infrastructure-related information** — connectivity, infra, natural resources & terrain, plot-level information on vacant plots, line of activity, and contact details.

- It was launched by the Department for Promotion of Industry and Internal Trade(DPIIT), Ministry of Commerce and Industry in 2020.
- The Land Bank system has been developed by the Integration of Industrial Information System (IIS) with state GIS (Geographic Information System).
- It has adopted a committed approach towards industrial upgrading, resource optimization, and sustainability.
- This portal serves as a decision support system for investors who scout for land remotely.

Source:-> PIB

Organisation of Islamic Cooperation (OIC)

In news

In news Recently, the Ministry of External Affairs rejected the OIC proposal to assist a dialogue between India and Pakistan.

Key takeaways

- OIC offered to arrange a meeting between India and Pakistan and proposed to send a delegation to Jammu & Kashmir.
- Pakistan has repeatedly sought to raise the Kashmir issue at the OIC.
- According to India: The OIC should be watchful that their platform is not subverted by "vested interests" such as Pakistan to interfere in internal affairs of India.

AboutOIC

- It is the second largest intergovernmental organization after the UN with a membership of 57 states.
- It is the collective voice of the Muslim world.
- It endeavors to safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world.
- India is not a member of the OIC.
- It was established upon a decision of the historical summit which took place in Rabat, Kingdom of Morocco in September 1969.
- Headquarters: Jeddah, Saudi Arabia.

Source:-> TH

African Swine Fever (ASF)

In News

ASF continues to impact livestock in Mizoram killing 10,621 pigs since March 2021.

About African Swine Fever

- It is a **highly contagious hemorrhagic viral disease** of domestic and wild pigs.
- It is **caused by a large DNA virus of the Asfarviridae family**, which also infects ticks of the genus Ornithodoros.
- It is transmitted among pigs through direct, indirect contact or contaminated material such as food waste, feed, or garbage or through biological vectors such as ticks.
- It is not a threat to human beings, since it only spreads from animals to other animals.

- It is a disease **listed in the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code** and must be reported to the OIE.
- The mortality is close to 100% and since the fever has no cure, the only way to stop its spread is by culling the pigs.
- The mass culling of pigs due to African Swine Fever has not only disrupted the domestic as well the global pork trade. But it has also impacted the international market of animal feed.

Note: Pork accounts for 35-40% of the global meat production. It is also a major source of protein, with an annual consumption of more than 110,000 tonnes. **China is the world's largest producer, consumer, and importer of pork**. It is also the largest importer of soybean, which is used as feed.

Source:-> **Down To Earth**

Kesaria Buddha stupa

In news

The world-famous Kesaria Buddha stupa in east Champaran district of Bihar is waterlogged following floods in some parts of the district.

About Kesaria Buddha stupa

- The stupa is said to be the tallest and the largest Buddhist stupa in the world.
- It is located in Kesariya, at a distance of 110 kilometers from Patna, in the East Champaran district of Bihar.
- The first construction of the Stupa is dated to the **3rd century BCE**. The original Kesaria stupa probably dates to the time of Ashoka (circa 250 BCE), as the remains of a capital of a Pillar of Ashoka were discovered there.
- Two great foreign travelers, Fahien and Hsuan Tsang, had visited this place in ancient times and have left interesting and informative accounts of their travels.
- The discovery of gold coins bearing the seal of the famous emperor Kanishka of the Kushan dynasty (AD 30 to AD 375) goes on to further establish the ancient heritage of Kesaria.

Source:-> The Hindu

Kanchenjunga Biosphere

In news

In a recent publication by the BSI, it was reported that Sikkim, the smallest State with less than 1% of India's landmass, is home to 27% of all flowering plants found in the country.

About Kanchenjunga Biosphere

- It is located in Sikkim is one of the highest ecosystems in the world.
- The biosphere has different altitudinal ecosystems, varying from sub-tropic to Arctic, that support an immensely rich diversity of forest types and habitats.
- World's third highest peak, Mt. Khangchendzonga, is situated within the Park.
- Numerous lakes and glaciers, including the 26 km long Zemu Glacier are a part of the Biosphere reserve.

- Khangchendzonga National Park (KNP) was designated a World Heritage Site in 2016 under the 'mixed' category.
- It has been added to UNESCO's World Network of Biosphere Reserves, making it the 11th biosphere in India to be included in the network.

Concern:

 Increasing unregulated tourism, lack of awareness about the landscape and shortage of staff are some of the key challenges in maintaining the reserve's sanctity.

Source:-> TH

Portal in the AYUSH sector

In News

The Minister of AYUSH launched Important Portals in the Ayush sector.

Key takeaways

E-Medha (electronic Medical Heritage Accession) Portal: Online public access catalog for more than 12000 Indian medical heritage books through NIC's e-granthalaya platform.

AMAR (Ayush Manuscripts Advanced Repository) Portal: It has digitized information on rare and hard to find Manuscripts and catalogues of Ayurveda, Yoga, Unani, Siddha, Sowa Rigpa in libraries or in individual collections across India or in other parts of the world.

SHAI (Showcase of Ayurveda Historical Imprints) Portals: This portal showcases inscriptions, Archeo-botanical Information, Sculptures, Philological sources and advanced Archeo Genetic studies. This portal will be of tremendous use in understanding of Indian Knowledge system with a focus on indigenous health care practices.

CCRAS-Research Management Information System (RMIS): A collaborative effort of Indian Council of Medical Research (ICMR) and Central Council for Research in Ayurvedic Sciences (CCRAS), this portal will be a one stop solution for Research and Development in Ayurveda based studies.

Source:-> PIB

VIPER Mission

In news

NASA has announced that it will launch its **Volatiles Investigating Polar Exploration Rover** (VIPER) in 2023.

About the VIPER Mission

- It is a mobile robot to be launched by NASA in the year 2023.
- It is the first resource mapping mission on any other celestial body.
- Objectives: to explore the Moon's South Pole region and evaluate the concentration of water as well as other potential resources on its surface.
- VIPER's findings will inform "future landing sites under the Artemis program by helping to determine locations where water and other resources can be harvested" to sustain humans over extended stays.

About Artemis Program

- Named after the twin sister of Apollo, she is the Goddess of the Moon.
- NASA wants to send the first woman and the next man to the Moon by the year 2024, through this program.
- The astronauts going for the Artemis program will wear newly designed spacesuits, called Exploration Extravehicular Mobility Unit, or xEMU. These spacesuits feature advanced mobility and communications and interchangeable parts that can be configured for spacewalks in microgravity or on a planetary surface.

Source:-> TH Businessline

RBI Retail Direct Scheme

In news

The Reserve Bank of India (RBI) has announced the launch of the RBI Retail Direct scheme.

About RBI Retail Direct Scheme

- It is a one-stop solution to facilitate investment in government securities (G-secs) by individual investors.
- Under the scheme, retail investors (individuals) will have the facility to open and maintain the 'Retail Direct Gilt Account' (RDG Account) with the RBI.
- This RDG account can be opened through an online portal provided for the purpose of the scheme.
- The online portal will then allow the registered users access to primary issuance of G-secs and access to NDS-OM (Negotiated Dealing System Order Matching (NDS-OM).
- No fee will be charged for opening and maintaining the account with the RBI.
- Non-Resident retail investors eligible to invest in government securities under Foreign Exchange Management Act, 1999 are also eligible under the scheme.

About G-secs

- It is a tradable instrument issued by the Central Government or the State Governments-> acknowledges the Government's debt obligation.
- Such securities are short-term (usually called treasury bills, with original maturities of less than one year) or long-term (usually called Government bonds or dated securities with an original maturity of one year or more).
- In India, the Central Government issues both, treasury bills and bonds or dated securities. While the State Governments issue only bonds or dated securities which are called the State Development Loans (SDLs).

About NDS (Negotiated Dealing System)

- It refers to RBI's screen-based electronic order matching system for trading in government securities in the secondary market.
- The goal was to reduce inefficiencies stemming from telephone orders and manual paperwork while increasing transparency for all market participants

Note: A gilt Account means an account opened and maintained for holding Government securities.

Source:-> The Hindu

St. Queen Ketevan

In news

According to the ASI, the relics of St. Queen Ketevan that were found in Goa in 2005 are likely to be put on display in India as well as her native Georgia.

About St Queen Ketevan

- St Queen Ketevan also known as Ketevan the Martyr. She was the queen of Kakheti, a **kingdom in eastern Georgia**, in the 17th century.
- She was killed in 1624 for not converting to Islam, and parts of her remains were brought to Goa by Augustinian monks.
- The relics of the martyred Queen Ketevan were found by the ASI in 2005 in the ruins of the Church of St. Augustine.
- Indian Government has gifted one part of the relics of St Queen Ketevan to Georgia.
- However, the larger part of the relic remained with the ASI in Goa as a reminder of our shared past. This would be publicly displayed for the first time.

Source: ->The Hindu

Soil-less agriculture

In news

A former naval officer who is an expert in soil-less agriculture has been carrying out campaign, 'Mission Turmeric 2021'.

Key takeaways:

- It aims to begin an "orange revolution" by teaching people to cultivate turmeric in shade houses in grow bags (large porous containers made of high density polyethylene) packed with coco-peat (made from the pith of the coconut husk) instead of soil.
- The method resulted in better yield with higher Curcumin content.

About soil-less agriculture

• In soil-less agriculture, such as hydroponics, micro and macro nutrients that have been pre-mixed into a water reservoir, along with high levels of oxygen, are delivered efficiently to the plant roots.

Advantages of Soil-less Agriculture

- Faster growth
- Extreme decrease in water and nutrient use
- Controlled Environment Agriculture
- Requires less space to grow

Challenges

- It cannot be treated as a magic solution. Besides the high initial investment, the method requires practice in order to succeed.
- Growers need to manage the various parameters more meticulously as compared to soil-based cultivation.

Note: Curcumin is a bright yellow phenolic compound in Turmeric known for its potential to fight cancer.

Source:-> TH

Cryptogamic Garden

In news

India's first cryptogamic garden housing nearly 50 species of lichens, ferns, and fungi was inaugurated in the Chakran Town of Uttarakhand's Dehradun district.

About Cryptogams

- It is a plant or a plant-like organism that reproduces by spores without flowers or seeds.
- The term Cryptogamae means "hidden reproduction", referring to the fact that no seed is produced-> represent the non-seed-bearing plants.
- They need a moist environment to survive.
- These are present in aquatic and terrestrial places.
- Algae, bryophytes, lichens, ferns and fungi are the best-known groups of cryptogams.
- This site is chosen because of its low pollution levels and moist conditions which are conducive for the growth of these species.
- Further, Deoban has pristine majestic forests of Deodar and Oak which create a natural habitat for cryptogamic species.

Note

- Plant kingdom can be divided into two sub-kingdoms viz. Cryptogams and phanerogams.
 - Cryptogams consist of seedless plants and plant-like organisms whereas phanerogams consist of seed-bearing plants.
 - Phanerogams are further divided into two classes i.e. gymnosperms and angiosperms.

Source:-> Indian Express

KanwarYatras

- The KanwarYatra is a pilgrimage organised in the Hindu calendar month of Shravana (Saavan).
- Saffron-clad Shiva devotees generally walk barefoot with pitchers of holy water from the Ganga or other holy rivers.
- In the Gangetic plains, the water is taken from pilgrimage sites such as Haridwar, Gaumukh and



Gangotri in Uttarakhand, Sultanganj in Bihar, and Prayagraj, Ayodhya or Varanasi from Uttar Pradesh.

- Devotees carry the pitchers of holy water on their shoulders, balanced on decorated slings known as Kanwars.
- The water is used by the pilgrims to worship Shiva lingas at shrines of importance.
- An important festival with similarities to the Kanwaryatra in North India, called the Kavadi festival, is celebrated in Tamil Nadu, in which Lord Muruga is worshipped.

Source->Indian Express

BHIM-UPI in Bhutan

In news

The Union Minister of Finance of India along with the Finance Minister of Bhutan has jointly launched BHIM—UPI in Bhutan.

Key takeaways:

- Bhutan is now the first country to adopt UPI standards for its QR deployment.
- It will also be the first country in our immediate neighbourhood to accept mobile-based payments through the BHIM App.
- Further, Bhutan is also the second country after Singapore to have BHIM-UPI acceptance at merchant locations

About Bharat Interface for Money (BHIM)

- It was developed by the National Payments Corporation of India(NPCI) in 2016.
- It is a payment app that lets you make simple, easy and quick transactions using Unified Payments Interface (UPI).

About UPI

It is an instant real-time payment system developed by NPCI facilitating inter-bank transactions. The interface is regulated by the Reserve Bank of India and works by instantly transferring funds between two bank accounts on a mobile platform.

Source:-> PIB

India's first green hydrogen mobility project

In news

NTPC Renewable Energy Ltd has signed a MoU with the UT of Ladakh to set up India's First Green Hydrogen Mobility Project in Ladakh Region.

About India's First Green Hydrogen Mobility Project

- It will enable NTPC to help Ladakh in developing a carbon-free economy based on renewable sources and green hydrogen.
- As part of the project, NTPC has planned to ply 5 hydrogen buses in the Ladakh region.
 The company will also be setting up a solar plant and a green hydrogen generation unit in Leh.
- This project will put Leh as the first city in the country to implement a green hydrogenbased mobility project.

Note: Green Hydrogen is clean hydrogen generated by using renewable energy such as solar power and wind energy. The by-products are water and water vapor.

Source:-> PIB

Food Security and Nutrition in the World 2021 report

In news

Food and Agriculture Organization (FAO) has released Food Security and Nutrition in the World 2021 report

Key takeaways

- There is a significant dip in people's affordability for healthy food due to a loss in income.
- The primary reason for a dip in affordability is the loss of income. But food price rise has made the situation more acute.
- Cost of a healthy diet was 60% more than a diet that just meets "requirements for essential nutrients".
- In 2020, some 2.37 billion people couldn't access adequate food, an increase of 320 million people in comparison to the 2019 figure.
- In 2020, the rise in the food insecure population was more than the combined number of the last five years.
- The overall decline in food intake has also increased hunger levels in 2020-> primary SDG of ending hunger by 2030 impossible now
- The increase in the number of undernourished was more than five times greater than the highest increase in undernourishment in the last two decades.
- In 2020, 149 million children (under five years of age) will grow up stunted or too short for their age. Some 45 million children have been wasted, or do not have the right weight for their height.

Source: Down to Earth

Draft of 'Drone Rules 2021'

In news

Ministry of Civil Aviation (MoCA) has released reorganized "Drone Rules, 2021" for public consultation.

Key takeaways:

- The rules will replace the Unmanned Aircraft System Rules (UAS), 2021
- Operating drones without unique identification number will not be allowed, unless exempted.
- Drone operators will have to generate a unique identification

➤ Forms to be filled to operate drones down to 5 from 25. No security clearance before registration or licence. No curbs on ops by foreign cos registered in India ➤ New rules aim to pave way for drone taxis and dedicated corridors for cargo deliveries Drones are bringing the next big tech revolution... It is upon us to ride the new wave —Aviation minister Jyotiraditya Scindia

number of a drone by providing requisite details on the digital sky platform.

- Number of forms reduced from 25 to 5
- Coverage of drones increased from 300 kg to 500 kg and will cover drone taxis,
- Issuance of Certificate of Airworthiness has been delegated to Quality Council of India and certification entities authorized by it.
- Fee reduced to nominal levels; yellow zone reduced from 45 km to 12 km from the airport perimeter.
- In green zones, no flight permission is required up to 400 feet and up to 200 feet in area between 8 to 12 km from airport perimeter.
- No pilot licence will be required for micro drones (for non-commercial use), nano drones and for research and development (R&D) organisations.
- There will no longer be a ban on the use of drones by foreign-owned companies registered in India and no security clearance will be required before any registration or licence is issued.
- The government plans to open what is known as the Digital Sky platform, which manufacturers will be able to use for certification process, and from where interactive airspace maps with green, yellow, and red zones can be accessed.

Source->HT, LiveMint, The Hindu

Conjugate Vaccine

In news

Cuba developed the world's first conjugate vaccine for COVID-19, Soberana 2 (Sovereign)

Key takeaways:

- It is developed by Finlay Institute in collaboration with the Centre for Molecular Immunology and National Biopreparations Centre.
- If approved, Cuba will become the first Latin American country to manufacture and produce vaccines against Covid-19.

Subunit vaccines of Cuba



 In a subunit vaccine, a part of the virus forms the antigen, and it is hitched on to another construct

- In Abdala, the spike protein of the coronavirus is combined with a chemically manufactured adjuvant
- In Soberana 2, the spike protein is chemically linked to the tetanus toxoid, making it a conjugate vaccine
- It is the only conjugate vaccine that combines the virus' receptor-binding domain with a deactivated form of tetanus to boost the immune response.
- Unlike Pfizer-BioNTech and Moderna vaccines, Soberanais three shot vaccine.
- The vaccine can be stored in regular refrigeration settings of 2–8 degrees Celsius.
- The experts are of the view that conjugate-vaccines have been used against bacteria and not viruses.

About Conjugate Vaccine

• Conjugate vaccines combine weak antigen with strong antigen as a carrier-> triggers a strong immune response to the weak antigen.

- These are used to prevent disease by building an immune response to antigens recognised by the immune system.
- Advantages of Conjugate Vaccines
 - 1- Improved immune and memory response
 - 2- Long-lasting protection
 - 3- Effect on bacterial carriage
 - 4- Creation of herd immunity
 - 5- Protection to infants and toddlers

Note:The most common conjugate vaccines are those used for Haemophilus influenza type b and the pneumococcal bacteria.

Source->The Hindu

PRASHAD Scheme

In news

PRASHAD projects were recently inaugurated in Varanasi, Uttar Pradesh.It include a Tourist Facilitation Centre and operation of Cruise Boat from AssiGhat to RajGhat.

About PRASHAD scheme

- It is also called as the 'National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive' (PRASHAD).
- It is a **Central Sector Scheme** fully financed by the Government of India.
- Launched by the Ministry of Tourism in the year 2014-15.
- Aim: Integrated development of identified pilgrimage and heritage destinations.
- It includes infrastructure development such as entry points (Road, Rail and Water Transport), last mile connectivity, basic tourism facilities.

Source: PIB.

Terms in News

Immunity debt: This phenomenon occurs because measures like lockdowns, hand-washing, social distancing and masks are not only effective at controlling Covid-19. They also suppress the spread of other illnesses that transmit in a similar way, including the flu, common cold, and lesser-known respiratory illnesses like RSA.

Genome sequencing:is a process of determining the complete DNA sequence of an organism's genome.

Acute Encephalitis Syndrome (AES): also known as 'Chamki Fever' or Litchi Virus is an umbrella term used for infections that causes inflammation irritation or swelling on the brain. Viruses, bacteria, fungi and a range of agents. However, Japanese encephalitis (JE) virus is the most common cause of AES in India

Biomimicry: A novel method of repairing bone structure using coral and marine sponges as scaffolds

Ransomware: type of malware that prevents users from accessing their system or personal files and demands ransom payment in order to regain access.

Right to repair: It is the right of consumers to be able to repair their own electronics and other products. The goal of the movement is to get companies to make spare parts, tools and information on how to repair devices available to customers and repair shops to increase the lifespan of products and to keep them from ending up in landfills.

Chemotaxis: in microbiology refers to the migration of cells toward attractant chemicals or away from repellents.

Digital sky platform: initiative by MoCA to provide a secure and a scalable platform that supports drone technology frameworks, such as NPNT (no permission, no take-off), designed to enable flight permission digitally and managing unmanned aircraft operations and traffic efficiently.

