

Current Affairs search results for tag: Environment

1. New Green Lynx Spider Species *Peucetia chhaparajirvin* Found in Rajasthan (May 10, 2024)

Atul Bodkhe, an arachnologist based in Daryapur, has unveiled a new species of green lynx spider known as *Peucetia chhaparajirvin*.

An Overview of the News

- The species was discovered in the Tal Chhapar Wildlife Sanctuary located in Churu District, Rajasthan.
- Named after its place of discovery, "chhaparajirvin" pays homage to the Tal Chhapar region where it was found by Nirmala Kumari and Vinod Kumari.
- This new spider species was found inhabiting the green leaves of the Babul Tree, scientifically known as *Vachellia nilotica*.
- It exhibits nocturnal behavior and sustains itself by preying on small insects.
- Specimens of the spider have been preserved in the entomology lab at the University of Rajasthan, Jaipur.
- The identification and description of the species were conducted at the Spider Research Lab (SR-Lab) situated in J.D. Patil Sangludkar Mahavidyalaya, Daryapur, Amravati district, Maharashtra.

About Rajasthan

- Established on - 30 March 1949
- Capital - Jaipur (Executive Branch)
- Chief Minister - Bhajan Lal Sharma
- State Flower - Rohida

2. Kolkata becomes the third Indian city to adopt an Air Quality Early Warning System (AQEWS) (Aug. 28, 2023)

Kolkata became the third Indian city to adopt the **Air Quality Early Warning System (AQEWS)** to combat rising air pollution.

An Overview of the News

- The system, developed by the **Indian Institute of Tropical Meteorology (IITM) in Pune**, aims **to address rising air pollution levels in urban areas**.
- AQEWS in Kolkata uses an advanced sensor network to provide real-time monitoring of the **Air Quality Index (AQI)**.
- AQI is a standardized measure of the level of air pollution, with a value ranging from 0 to 500.

- The system focuses on **PM2.5 (particles with a diameter of 2.5 micrometers or smaller) levels**, which is a major contributor to health problems due to its ability to enter the lungs.

Air pollution status in Kolkata:

- Kolkata is facing severe air pollution, which is mainly driven by **pollutants like PM2.5**.
- Recent AQEWS measurements show that the AQI is 74, which is expected to rise above **170 by 30 August**.
- These forecasts highlight the urgency of tackling air pollution and emphasize the role of early warning systems.

Data Integration and Accuracy:

- AQEWS integrates data from the National Air Quality Network and satellite sources to generate accurate air pollution forecasts.
- The accuracy of the system was proved during the experimental phase that started in **September 2022**.
- The inclusion of data from 420 air quality monitoring stations across India ensures a comprehensive approach to the assessment of air quality.

Union Minister for Environment, Forest and Climate Change - **Bhupendra Yadav**

3. BHEL develops India's first catalyst set to curb NOx emissions in power plants (Aug. 26, 2023)

Bharat Heavy Electricals Limited (BHEL), a government engineering firm successfully produced the first indigenous Selective Catalytic Reactor (SCR) to control NOx emissions from thermal power plants.

An Overview of the News

- SCR Catalysts were earlier imported in line with the 'Make in India' initiative.
- The initial batch of indigenous SCR Catalyst was manufactured for **5x800 MW Yadadri Thermal Power Station in Telangana**.
- The inaugural event took place at BHEL's Bengaluru Solar Business Division unit, which was led by Renuka Gera, Director, of Industrial Systems and Products.
- BHEL set up a manufacturing facility at its Solar Business Division unit to produce SCR catalysts for reducing NOx emissions in thermal power plants.
- **Burning coal converts its nitrogen content into nitrogen oxides (NOx)**, a major air pollutant that includes substances such as **NO, NO2, and N2O**.
- Recognizing the serious environmental impact of NOx, the **Telangana State Power Generation Corporation Limited (TSGENCO) ordered SCR units for the Yadadri Thermal Power Station**.

- Other orders for SCR units came from **Maharashtra State Power Generation Company Limited (MAHAGENCO)**, **West Bengal Power Development Corporation Limited (WBPDC)**, and **NALCO** for various thermal power stations.
- BHEL is dedicated to environmental protection, offering a range of eco-friendly technologies for thermal power plants, including high-efficiency boilers, electrostatic precipitators, flue gas desulphurization units, and selective catalytic reactors.
 - BHEL achieved indigenization of technology in collaboration with NANO, a leading company of the Republic of Korea for the development of SCR technology.

Bharat Heavy Electricals Limited (BHEL):

- It is a major **Central Public Sector Enterprise in India**.
- It has the distinction of being the largest manufacturer of power generation equipment under government ownership.
- BHEL works as a part of the Government of India and comes under the purview of the Ministry of Heavy Industry.
- Establishment - **1956**
- Headquarters - **New Delhi**

4. NGT action regarding Kuldiha Wildlife Sanctuary: Unauthorized mining (Aug. 22, 2023)

NGT-action-regarding-Kuldiha-Wildlife-Sanctuary-Unauthorized-mining

The National Green Tribunal (NGT) intervened to address unauthorized mining in Odisha's Kuldiha Wildlife Sanctuary.

An Overview of the News

- A complaint of unauthorized mining was raised in the eco-sensitive area of Kuldiha Wildlife Sanctuary.
- 97 sand mining sites were given on lease near Similipal-Hadgarh-Kuldiha-Conservation Reserve, especially Sukhuapata Reserve Forest Area.
- These mining activities violate the Forest (Conservation) Act, of 1980, and may harm the ecosystem and wildlife.
- Reference was made to the Supreme Court judgment (Binay Kumar Dalai and others v. State of Odisha and others) which indicated that mining should take place only after implementing a comprehensive wildlife management plan and preserving the traditional elephant corridor.

Kuldiha Wildlife Sanctuary:

- Located in northeastern Odisha, adjacent to the Simlipal National Park.

- Spread over 272.75 sq km, part of the moist deciduous forest region of the Eastern Highlands.
- Connected to Simlipal National Park through Sukhupada and Nato hill ranges.
- Sal trees dominate the mixed deciduous forests.
- These include tigers, leopards, elephants, gaurs, sambars, giant squirrels, hill mynas, peacocks, hornbills, migratory birds, and reptiles.

Mayurbhanj Elephant Reserve:

- Part of Mayurbhanj Elephant Reserve along with Simlipal and Hadgarh Wildlife Sanctuaries.
- Local name: Tenda Elephant Reserve, provides protection to elephants.

5. PM Modi launches 'Urea Gold', a sulphur-coated fertiliser for advanced farming (Aug. 1, 2023)

Prime Minister Modi launched a new type of urea called "Urea Gold" during his visit to Rajasthan.

An Overview of the News

- Urea Gold is coated with sulphur, which can enhance soil quality and reduce farmers' expenditure.
- Urea Gold, also known as Sulphur Coated Urea (SCU), is a new variety of urea that requires less field application and improves crop quality.
- The launch aims to address soil fertility issues and lower input costs for farmers, making Urea Gold a more economic and qualitatively better option than the existing neem-coated urea.
- Sulphur coated urea releases nitrogen slowly, and adding humic acid extends its shelf life as a fertiliser.
- According to a report, using 15 kg of Urea Gold provides benefits equivalent to 20 kg of conventional urea, making it a more efficient and cost-effective option for farmers.

6. Indian Meteorological Department (IMD) launched heat index (July 24, 2023)

Indian-Meteorological-Department-(IMD)-launched-heat-index

The Indian Meteorological Department (IMD) has come out with the heat index for different regions of the country on the basis of recent tests.

An Overview of the News

- This was announced by Union Earth Sciences Minister Kiren Rijiju.

- The heat index is designed to provide general guidance and information about the level of discomfort caused by high temperatures in the hot regions of India.
- By releasing the Heat Index, the IMD aims to provide valuable insights into heat-related conditions to help people better cope with extreme temperatures.

About Heat Index:

- **Purpose of Heat Index:** The heat index launched by the India Meteorological Department (IMD) aims to provide information on the effect of humidity on high temperatures. It calculates a "feel-like" temperature for humans, which shows how the weather conditions can cause discomfort.
- **Pilot Implementation:** The Heat Index is currently being implemented on a pilot basis across the country including the state of Andhra Pradesh. This allows the accuracy and relevance of the index to be tested and refined.
- **Heat index for specific cities:** Under the Heat Action Plan, the National Disaster Management Authority (NDMA) collaborates with local agencies such as the Indian Institute of Public Health (IIPH) to assess the heat index for specific cities such as Bhubaneswar and Ahmedabad.
- **Colour-coded system:** The Heat Index uses a colour-coded system to indicate the severity of weather conditions:
 - Green: Experimental heat index below 35 °C.
 - Yellow: Experimental heat index in the range of 36–45 °C.
 - Orange: Experimental heat index in the range of 46–55 °C.
 - Red: Experimental heat index above 55 °C.

Importance of Heat Index:

- People gain a better understanding of how humidity affects higher temperatures, leading to a more accurate perception of weather conditions.
- The Heat Index helps identify the level of discomfort and potential health risks caused by excessive heat.
- By knowing the heat index, individuals can take necessary precautions to minimize discomfort and avoid heat-related health problems.
- In addition to reporting the day's minimum and maximum temperatures, the heat index also provides information on what the current temperature feels like, taking into account the humidity level.
- The Heat Index uses air temperature and relative humidity data to deliver accurate and relevant information to the public.

Indian Meteorological Department:

- It was established on 15 January 1875 and operates under the Ministry of Earth Sciences, Government of India.

- The department is primarily responsible for conducting meteorological observations, providing weather forecasts and conducting activities related to seismology.
- Its headquarters, known as Mausam Bhawan, is located in New Delhi.

7. India's PFRDA approves Sovereign Green Bonds for pension funds (July 24, 2023)

India's-PFRDA-approves-Sovereign-Green-Bonds-for-pension-funds

The Pension Fund Regulatory and Development Authority (PFRDA) in India approved the inclusion of Sovereign Green Bonds (SGBs) in pension funds.

An Overview of the News

- These bonds issued by the government will be used to finance projects focused on environmental initiatives.

Significance of PFRDA's investment in Sovereign Green Bonds:

- **Advancing Sustainable Projects:** The decision to allow pension funds to invest in SGBs facilitates direct allocation of funds to environmentally beneficial projects, thereby contributing to India's sustainable development objectives.
- **Environment-friendly pension portfolio:** Allowing pension funds to include SGB in their investment portfolio diversifies their holdings and aligns with the growing demand for investments that are socially responsible and environment-friendly.
- **Government's commitment to the environment:** Issuance of Sovereign Green Bonds reflects the government's commitment to address environmental challenges and promote a green economy.
- **Raising awareness about sustainable investing:** The inclusion of sovereign green bonds in pension funds can raise awareness among retail investors about the importance of sustainable investing. As a result, it encourages a more informed and socially responsible approach to financial decision making.

Sovereign Green Bond:

- These are bonds issued by governments that are designed to finance projects related to the environment and climate.
- These bonds provide investors with an opportunity to earn returns backed by a government guarantee, thereby adding a sense of security to their investments.
- The main purpose of Sovereign Green Bonds is **to finance initiatives and projects that aim to address environmental challenges and promote sustainability.**
- Governments issue these bonds specifically to raise money for environmental projects, as a sign of their commitment to tackling climate issues and promoting green initiatives.
- Green bonds are a type of debt security that helps raise capital for projects that have a positive impact on the environment or contribute to climate change mitigation and adaptation efforts.

About Pension Fund Regulatory and Development Authority (PFRDA)

- It is responsible for regulating pensions in India and was **established in 2003 under the Ministry of Finance.**
- The main objective of PFRDA is **to promote old age income security and protect the interests of National Pension System (NPS) subscribers.**
- **Deepak Mohanty is the chairman** of the Pension Fund Regulatory and Development Authority.

National Pension System (NPS) in India:

- It is a defined-contribution pension system which comes under the purview of PFRDA.
- NPS was created under the **Indian Trust Act 1882** to effectively manage the assets and funds of the scheme in the best interest of its subscribers.

8. Events in China: Discussion on the conservation of the Hoolock gibbon (July 20, 2023)

Events-in-China-Discussion-on-the-conservation-of-the-Hoolock-gibbon

The meeting took place in Haikou, Hainan province of China from 7 to 9 July. It was organised by the Global Gibbon Network (GGN).

An Overview of the News**Hoolock Gibbon: The only ape of India**

- Previously, scientists believed that there were two species of ape in India: the western hoolock gibbon and the eastern hoolock gibbon.
- A recent study by the Hyderabad-based Center for Cellular and Molecular Biology reveals that India is home to only one ape species, the Hoolock gibbon.

Features of Hoolock Gibbon

- Belonging to the Hylobatidae family, the hoolock gibbon is one of 20 gibbon species on Earth.
- Known for their energetic vocal performances, the population of these apes is estimated to be around 12,000.
- They are the smallest and fastest species of apes, exhibiting high intelligence and strong family bonds.

Distribution and Accommodation

- The hoolock gibbon is native to tropical and subtropical forests in the southeastern part of Asia, including Bangladesh, northeastern India, parts of Myanmar, and southwestern China.

- In India, they are unique in the Northeast between south of the Brahmaputra River and east of the Dibang River.
- Hoolock gibbon populations face a number of threats, including deforestation for infrastructure projects, habitat destruction, hunting for meat, and human encroachment.

Conservation Efforts

- To protect Hoolock gibbons, conservationists have proposed setting up dedicated gibbon wildlife sanctuaries on the lines of Assam.
- Legal protection, limited infrastructure development in their habitats and efforts to control human encroachment and poaching are also necessary.

Conservation Status

- Since the 1990s, the Hoolock gibbon population has declined significantly, leaving all 20 gibbon species at high risk of extinction.
- The IUCN Red List maintains the previous classification, with the eastern hoolock gibbon classified as vulnerable and the western hoolock gibbon as endangered.
- Both species are included in Schedule I of the Indian (Wildlife) Protection Act, 1972.

Global Gibbon Network (GGN)

- Established in 2022 in Haikou, China, GGN aims to protect singing gibbons and their habitats, which are an integral part of Asia's unique natural heritage.
- GGN envisions promoting participatory conservation policies, legislation and actions for gibbon conservation.

9. Birth of three tiger cubs for the first time in Ramgarh Vishdhari Tiger Reserve (RVTR) (July 19, 2023)

For the first time, three tiger cubs were born at Ramgarh Vishdhari Tiger Reserve (RVTR) in Bundi, Rajasthan.

An Overview of the News

- This significant event happened a year after a tigress named T-102 was transferred to the park.
- The number of tigers in the reserve has now increased to five, including a male tiger named T-115 and a tigress named T-102, who is the daughter of Ranthambore tigress T-73.
- During the previous birth, the tigress gave birth to four cubs in November 2020, but they were killed by male tiger T-115 or other wild animals.
- To ensure the safety and survival of the newborn cubs, plans are underway to relocate the tigress from the area, as the male tiger poses a threat to them.

Ramgarh Vishdhari Tiger Reserve:

- Ramgarh Vishdhari Wildlife Sanctuary was designated a tiger reserve on **5 July 2021 as it was given in-principle approval by the NTCA.**
- It was given the status of a **wildlife sanctuary in 1982 under a state act called the Rajasthan Wild Animals and Birds Protection Act, 1951.**
- It is located in the **Bundi district of Rajasthan.**
- Its **core area is 481.9 sq km and buffer area is 1019.98 sq km.**
- **Mez river passes through this tiger reserve which is a tributary of Chambal river.**
- The total population of tigers in this reserve is five which includes one male tiger, one tigress and three newborn cubs.

10. Rare bird 'Jerdon's Babbler' spotted in Dudhwa Tiger Reserve, Uttar Pradesh (July 16, 2023)

A rare and globally endangered bird species called 'Jerdon's Babbler' was recently spotted in the grasslands of Dudhwa Tiger Reserve (DTR) in Uttar Pradesh.

An Overview of the News

- According to surveyors, more than 95% of 'Jerdon's Babbler' in India are from Assam and Arunachal Pradesh.
- The Jordanian babbler lives in pairs in small flocks in tall grasslands.
- This globally threatened bird has been listed as 'vulnerable' by the International Union for Conservation of Nature (IUCN) since 1994.

Distribution and Conservation Efforts

- Earlier, the Jordan Babbler was found along the Sutlej River in Haryana and Punjab. However, due to habitat loss, this species is now mainly found in Assam and Arunachal Pradesh.
- Noida-based Habitats Trust works towards protecting the grasslands in the area to support the bio-diverse bird population.
- Their efforts are aimed at restoring ecological functionality and promoting the well-being of both species and humans.
- About 30% of the global population of the Jordanian babbler is found in India.

About 'Jerdon's Babbler':

- It is a passerine bird native to the wetlands and grasslands of the Indian subcontinent.
- Its scientific name is **Chrysomma altirostre.**

- It is a member of the **genus Chrysomma of the family Paradoxornithidae.**
- It is found in Bangladesh, India, Myanmar, Nepal, Pakistan.
- It lives throughout the year near river channels, where it inhabits dense reeds and tall grasslands.