

1. SPACE DEBRIS

Context: Indian Space Research Organisation (ISRO) is setting up a network of telescopes and radar to develop its own system to monitor space debris to safeguard its space assets.

- ▶▶ Currently, ISRO has 50 functional satellites, including communication, navigation and surveillance satellites, in space.
- ▶▶ Till now, ISRO was dependent on **NORAD (North America Aerospace Defense Command)** data, which is **available in public domain**, for keeping track of space debris and monitoring our active and passive (dead) satellites.
- ▶▶ However, this global data is not accurate. Norad also keeps accurate data, which is exclusively available to those that are members of its network. Therefore, ISRO can't access this data.

About:

- ▶▶ To **get accurate data** about the movement of space debris **to avoid collision** with its satellites, ISRO has decided to set up telescopes and radars in four corners of the country.
- ▶▶ The multi-object tracking radar installed in Nellore will be part of this project.
- ▶▶ ISRO will also set up a telescope in Ponmudi (Thiruvananthapuram), Mount Abu (Rajasthan) and third one in deep north and will also install a radar in the northeast.
- ▶▶ The network will be set up under the **Directorate of Space Situational Awareness and Management**.
- ▶▶ The directorate would monitor inactive satellites, pieces of orbiting objects, near-earth asteroids and adverse space weather conditions.

2. BANDIPUR NATIONAL PARK

Context: A 42-year-old woman was gored to death by a **Gaur** on a private tea estate in the hill station of Kotagiri in Tamil Nadu's Nilgiris district

About GAUR:

- ▶▶ It is also called the **Indian bison**, is the largest extant bovine.
- ▶▶ Gaur historically occurred throughout mainland **South and Southeast Asia**, including Vietnam, Cambodia, Laos, Thailand, Peninsular Malaysia, Myanmar, India, Bangladesh, Bhutan, China and Nepal.

- ▶▶ Today, the range of the species is seriously fragmented, and it is regionally **extinct in Sri Lanka**.
- ▶▶ Gaur are largely confined to **evergreen forests or semi-evergreen and moist deciduous forests**, but also occur in deciduous forest areas at the periphery of their range

IUCN Red List	Vulnerable
Wildlife Protection Act 1972	Schedule I
CITES	APPENDIX I

About Bandipur National Park:

- ▶▶ It creates the **India's biggest biosphere reserve** popularly known as the '**Nilgiri Biosphere Reserve**'.
- ▶▶ It is the natural inhabitants of gaur (a type of bull), sambhar, chital, mouse deer, four-horned antelope, wild dogs, wild boar, jackal, sloth bear, panther, malabar squirrel, porcupines and the black-knapped hare. Birds like jungle fowl and green pigeon are also found here.
- ▶▶ The park is surrounded by the **Kabini River in the north and the Moyar River in the south while the Nugu River** runs through the park.

3. GENOME INDIA INIATIVE

Context: The **Department of Biotechnology (DBT)** plans to scan nearly 20,000 Indian genomes over the next five years, in a two-phase exercise, and develop diagnostic tests that can be **used to test for cancer**.

- ▶▶ **Phase I:** It involves sequencing the complete genomes of nearly 10,000 Indians from all corners of the country and capture the biological diversity of India
- ▶▶ **Phase II:** In the next phase, about 10,000 "**diseased individuals**" would have their genomes sequenced.
- ▶▶ These vast troves of data sets would be compared using machine learning techniques to identify genes that can predict cancer risk, as well as other diseases that could be significantly influenced by genetic anomalies.
- ▶▶ While 22 institutions, including those from the **Council of Scientific and Industrial Research (CSIR) and the DBT** would be involved in the exercise, the data generated would be accessible to researchers anywhere for analysis.
- ▶▶ This would be through a proposed National Biological Data Centre envisaged in a policy called the '**Biological Data Storage, Access and Sharing Policy**'

4. IMPRINT

Context: Union Human Resource Development Minister inaugurated the **TechEx - technology exhibition** at IIT Delhi

- ▶▶ TechEx was organized to demonstrate products and prototypes developed under the two flagship schemes of the Ministry of Human Resource Development (MHRD) namely **IMPacting Research, INnovation and Technology (IMPRINT)** and **UchhatarAvishkar Yojana (UAY)**.

IMPRINT:

- ▶▶ The scheme was launched in **November, 2015**
- ▶▶ **Aim:** To provide solutions to the most relevant engineering challenges by translating knowledge into viable technology (products or processes) in 10 selected technology domains,
- ▶▶ **Those 10 selected technology domains** include health care, energy, sustainable habitat, nano-technology hardware, water resources and river systems, advanced materials, Information and Communication Technology, manufacturing, security and defence, and environmental science and climate change.
- ▶▶ **Fund:** 142 projects at a total cost of Rs.313.30 cr. was approved under the IMPRINT-I.
- ▶▶ These projects are funded jointly by MHRD and the participating Ministry in the ratio of 50:50.

Uchhatar Avishkar Yojana (UAY):

- ▶▶ It was announced on October 6, 2015
- ▶▶ **Objective:** To promote innovation of a higher order that directly impacts the needs of the Industry and thereby improves the competitive edge of Indian manufacturing.
- ▶▶ **Fund:** A total of 142 projects, including 83 in Phase-I and 59 in Phase-II) have been approved under UAY at a total cost of Rs.388.86 cr.
- ▶▶ UAY projects are funded jointly by MHRD, participating Ministries and the Industry in the ratio of 50:25:25.
- ▶▶ The scheme focusses on a viable industry-academic collaboration where industry shares a part of the cost of research

5. RESOURCE ASSISTANCE FOR COLLEGES WITH EXCELLENCE

Context: A new higher education model has been launched in Rajasthan for distribution of faculties and movable assets among the government colleges at the district level to rationalise the availability of resources

- ▶▶ **Objectives:** The model will create a pool for sharing of facilities which will benefit the colleges lacking infrastructure
- ▶▶ **Requirement:** The colleges in need will submit their requirement to the nodal college in the district, which will send the teachers on deputation, if needed, and provide the facilities such as projectors, digital libraries, equipment and technicians
- ▶▶ **RACE** will give autonomy to small colleges and help them find solutions to their problems at the local level

6. LALIT KALA AKADEMI

Context: Minister of State (Independent Charge), Ministry of Culture & Tourism, Govt. of India, inaugurated the celebration - **65th Foundation day of Lalit Kala Akademi**

About Lalit Kala Akademi:

- ▶▶ It is also known as National Academy of Art.
- ▶▶ It is India's national academy of fine arts and an autonomous organisation, established in New Delhi in 1954 by Government of India
- ▶▶ Aim: To promote and propagate understanding of Indian art, in and outside the country.
- ▶▶ It is funded by Ministry of Culture

7. INTELIGHTS

Context: In a first-of-its-kind initiative in the country, Mohali traffic police have launched 3-D Smart Traffic Signal devised by the students of a Chandigarh university.

About Intelights:

- ▶▶ The wireless system, called '**Intelights**', has been installed at the traffic crossing near the Airport Road, on a pilot project basis, and will regulate traffic signals with a smart bird's eye view wireless sensor system.
- ▶▶ The team worked to develop one-of-its-kind, real-time solution for defending 'Green Corridors' for ambulances while controlling the movement of vehicles on roads.
- ▶▶ Intelights proposes a **360-degree solution** to curb the rising problem of traffic congestion
- ▶▶ Presently, the timers of traffic lights display a preset value which leads to waste of time.

- ▶▶ For instance, consider a scenario where green light of '**20 seconds**' is displayed but there is no vehicle present at that particular intersection - thus leading to unnecessary waste of time.
- ▶▶ To tackle this issue, 'Intelights' proposes an Intelligent Traffic Timer Control; which uses dynamic signal control technology to adjust the timers of red, yellow and green lights according to the traffic density at an intersection.
- ▶▶ The system uses existing CCTV cameras to gather live traffic video feed, and automatically evaluates the traffic density using Artificial Intelligence, and sets the signal timers accordingly.
- ▶▶ This process is repeated for every cycle of traffic lights to keep traffic flowing smoothly.

