

### TARGETS SET BY ISRO: SPACE STATION BY 2035, INDIAN ON MOON BY 2040

#### Why in News?

- Building on the success of the Indian space initiatives, including the recent Chandrayaan-3 and Aditya L1 Missions, the Indian PM announced two new targets for space agency ISRO.
- The two new targets are setting up an Indian space station by 2035 and taking the first Indian to Moon by 2040.

#### Timeline of ISRO's Milestones:



- **Chandrayaan-3 Mission:** It was successfully launched from the SDSC SHAR, India, on 14 July 2023 on a mission to demonstrate new technologies and to achieve India's first soft landing on the moon.
- **Aditya L1 Mission:** It is India's first space-based observatory to study the Sun. It was successfully launched from Satish Dhawan

Space Centre today i.e., on 2 September, 2023.

#### Future Targets Set by ISRO:

- **Gaganyaan Mission/ India's human space flight programme:** A high-level meeting was chaired by the Indian PM to assess the progress of Gaganyaan Mission, under which the first test vehicle is slated to fly on October 21.
  - **Many technologies** such as the human-rated launch vehicle, crew escape system, space suit, and the system to maintain the environment inside the crew module are being developed for the first time for the Gaganyaan mission.
- **Bharatiya Antariksha Station (Indian Space Station):** The PM directed that India should now aim for new and ambitious goals, including setting up Indian Space Station by 2035.
  - The first indication of a sustained human programme and an eventual space station came in 2019 from the then ISRO chief K Sivan.

- **He said the Indian space station is likely to be much smaller**, built by combining a couple of modules similar to the current crew module, weighing only 20 tonnes (ISS - 450 tonnes and Chinese Tiangong Space Station - 100 tonnes).
- **Sending first Indian to the Moon by 2040:** The Department of Space has been tasked with developing a roadmap for Moon exploration, including a series of Chandrayaan missions. The next Chandrayaan mission is likely to bring back Moon samples.
- **Preparations for a Venus mission:** The current ISRO chief S Somanath recently stated that it has already been configured.
- While he did not provide details of the scientific experiments on the mission, a 2019 proposal had said that there would be 12 payloads, including a thermal camera, mass spectrometer and a cloud-monitoring camera.
- **Other targets:** In addition, ISRO will also work on a next generation launch vehicle, a new launch pad, and human-centric laboratories and technologies.

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## HOW SYNERGISTIC BARRIERS ARE AFFECTING PROGRESS ON SDGS

### Context

- **Focusing the lack of progress on various Sustainable Development Goals (SDGs)**, including biodiversity protection and greenhouse gas (GHG) emissions, world leaders met at the SDG Summit in New York on September 18 and 19, 2023.
- The summit once again **reaffirmed their shared commitment to eradicate poverty and end hunger.**

### Sustainable Development Goals (SDGs)

- The SDGs/Global Goals were **adopted by the United Nations in 2015** as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.
- The SDGs framework sets **targets for 231 unique indicators across 17 SDG goals** related to economic development, social welfare, and environmental sustainability, **to be met by 2030.**
- The 17 SDGs are **integrated**; they recognise that action in one area will affect outcomes in others, and that development must balance **social, economic, and environmental sustainability.**

- Countries have committed to **prioritise progress for those who are the farthest behind.**
- The **creativity, technology, and financial resources** from all of society are necessary to achieve the SDGs in every context.

## Synergistic Barriers Affecting India's Progress Towards Meeting SDGs

- **Ambitious Targets Act as Barriers for Small-Scale Applications**
  - Policymaking processes are generally robust, with a clear view on synergistic outcomes, especially **when multi-stakeholder approaches to policymaking are practiced.**
  - For example, in India, **the push for renewable energy started with both energy security and air pollution in focus,** and received a push with climate commitments.
- Other than that, **isolated operations, inadequate cross-departmental data collection and analysis, and an inability to attribute co-benefits to specific actions** are all barriers for meeting greater targets.

## Conclusion

- **India can require all its resources** engaged in SDG reporting to **start identifying and developing reporting frameworks on the value created from specific SDG interventions.**
- Existing documents and reports on the subject **if modified to reflect Indian contexts** could provide a **useful starting point for this work.**

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## ADVANCED TRAFFIC MANAGEMENT SYSTEM (ATMS) STANDARDS

To improve road safety and reduce incident response time, the National Highways Authority of India (NHAI) will implement upgraded and forward-looking Advanced Traffic Management System (ATMS) Standards and Specifications, 2023.



### About the Advanced Traffic Management System (ATMS) Standards:

- **Aim:** To enhance road safety, reducing incidence response time and **digital enforcement on national highways and expressways.**
- The new standard includes the following features

- It provides for the implementation of digital highways by developing integrated utility corridors along the national highways to develop **optic fibre cables (OFC) infrastructure**.
- Under the new standards, **the existing VIDS cameras** will be replaced with the **Video Incident Detection and Enforcement System (VIDES)** to emphasize the digital enforcement of traffic rules.
- For comprehensive coverage, these cameras are slated for installation every **10 km along National Highways** and the feeds from these cameras will be integrated at the command and control centres located at every 100 km
- The vehicle speed detection system (VSDS) is now integrated into VIDES, optimizing use of automatic number plate recognition (ANPR) cameras.
- Depending on the detected incident, VIDES will **alert route patrol vehicles** or ambulances, generate e-challans, relay alerts to nearby variable messaging boards, or **send notifications through ‘Rajmargyatra’ mobile app** to nearby travellers
- These measures play an **active role in disaster management** by providing inputs for effective planning and implementation.
- It will also provide online sharing of highway status and other important information that will help both the agencies and the highway users.

## WHO ARE CHAKMAS?

A single-judge bench of the Tripura High Court recently asked the administration to take necessary measures to stop the persecution of two tribal Chakma families that converted to Christianity last year.



### About Chakmas:

- Chakmas are one of the largest **ethnic groups native to the Chittagong Hill Tracts (CHT) region of southeastern Bangladesh**.
- They have their own **age-old culture, language, and scripts**.
- They **primarily live** in the Chittagong Hills Tracts of **Bangladesh**, the Chin and Arakan provinces of **Myanmar**, in the **northeastern Indian states** of **Mizoram, Tripura, and Arunachal Pradesh**, and a few families in **West Bengal**.

- **Population:**

- The Chakma population is estimated to be around **550,000**.
- The **majority** (approximately **300,000** people) are located in the Chittagong Hill Tracts of **Bangladesh**.
- There are also about **80,000 Chakmas** in Mizoram State.

**Religion:**

- The majority of Chakmas practise **Theravada Buddhism**, tinged with aspects of animism and Hinduism.
- **Every Chakma village** has a **Buddhist temple (kaang)**, and the **Buddhist priests** or monks are called **Bhikhus**.
- The **Chakmas** worship **Hindu deities** like **Lakshmi**, who is worshipped as the Goddess of the Harvest.

- **Society:**

- Chakmas are **divided into clans (gojas)**, which are further **subdivided into subclans (guttis)**.
- **Members of the same subclan** are forbidden to marry each other.

- **Language:** The Chakmas speak a **dialect of Bengali (Bangla)** and use the **standard Bengali alphabet**.

**Agricultural Practices:**

- They practice **shifting cultivation** called **JUM**.
- They **grow paddy, maize, cotton, sesame, etc.** in their JUM, along with vegetables and spices.
- They also know the art of **low-land cultivation**.

**Key Facts about Theravada Buddhism:**

- Theravada, the "**Doctrine of the Elders**," is the name for the school of Buddhism that **draws its scriptural inspiration from the Pali Canon, or Tipitaka**, which scholars generally accept as the **oldest record of the Buddha's teachings**.
- It is **one of the two major branches** of Buddhism, the **other being Mahayana Buddhism**.

- Owing to its historical dominance in southern Asia (Sri Lanka, Thailand, and Burma), Theravada is also identified as "Southern Buddhism," in contrast to "Northern Buddhism," which migrated northwards from India into Tibet, China, Japan, and Korea.
- Theravada is sometimes identified as "Hinayana" (the "Lesser Vehicle"), in contradistinction to "Mahayana" (the "Greater Vehicle"), which is usually a synonym for Tibetan Buddhism.
- It is the dominant religion in Cambodia, Laos, Myanmar, Sri Lanka, and Thailand and is practiced by minorities in India, Bangladesh, China, Nepal, and Vietnam.
- In contrast to Mahayana and Vajrayana, Theravāda tends to be conservative in matters of doctrine and monastic discipline.

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## GOOGLE MANUFACTURING PLANS IN INDIA

### Why in news?

- Prime Minister Narendra Modi and the CEO of Alphabet, Sundar Pichai discussed the company's plan to establish an electronics manufacturing ecosystem in India.
- During this interaction, PM Modi appreciated Google's partnership with Hewlett Packard (HP) to **manufacture Chromebook laptops in India.**
- Alphabet is the parent company of Google.

### Chromebook Manufacturing in India

- The Chromebooks are laptops that run on Google's Chrome operating system.
- Chromebooks are among the most popular laptops in educational institutions worldwide.
- However, these are yet to find mainstream traction in India, where most laptops run on Microsoft's Windows operating system.
- These are being built at the Flex facility near Chennai, where HP has been producing a range of laptops and desktops since August 2020.
- Production began on October 2, and will cater to the demand, mainly from the education sector, for affordable PCs in India.

### What is the significance of the manufacturing of the Chromebooks?

- The production of Chromebooks in India is a major boost to the country's electronics manufacturing ambitions.
- It has put Google among the most high-profile names to begin manufacturing in India.
- This is significant as companies all over the world are looking to diversify supply chains in response to geopolitical uncertainties.
- The manufacture of Chromebooks in India will help Google compete more effectively with Windows computers built by companies such as Dell, Lenovo, and Asus.

## **Why is local electronics manufacturing important for India?**

- **Potential manufacturing hub**
  - At present, companies, especially from the US, are looking to diversify away from China, which has been the hub of such manufacturing for decades.
  - Against this backdrop, India seeks to establish itself as a “trusted partner” in global supply chains.
- **Rising imports of electronic goods**
  - Indian imports of electronic goods and laptops/ computers have increased in the last few years.
    - During April-June this year, the import of electronic goods increased to \$6.96 billion from \$4.73 billion in the year-ago period.
    - The biggest share of imports is in the category of personal computers, including laptops and palmtops.
    - Under this category, imports from China stood at \$558.36 million in April-May this year as against \$618.26 million in the year-ago period.
  - China accounts for roughly 70-80% of Indian imports of personal computers and laptops.
  - New Delhi would like to change this situation as soon as possible.

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## **SUPREME COURT'S VERDICT ON SAME-SEX MARRIAGE**

### **Why in news?**

- A five-judge Constitution Bench headed by Chief Justice of India (CJI) D Y Chandrachud unanimously declined to recognise same-sex marriages.

- The Bench, in a 3-2 majority verdict, also declined to allow civil unions for non-heterosexual couples.

## **Special Marriage Act (SMA), 1954**

- **Background:**

- All marriages in India can be registered under the respective personal law -Hindu Marriage Act, 1955, Muslim Marriage Act, 1954, or under the Special Marriage Act, 1954.
- It is the duty of the judiciary to ensure that the rights of both the husband and wife are protected.

- **About**

- The Special Marriage Act, 1954 is an Act of the Parliament of India with provision for civil marriage for people of India and all Indian nationals in foreign countries, irrespective of religion or faith followed by either party.
- A marriage under the Special Marriage Act, 1954 allows people from two different religious backgrounds to come together in the bond of marriage. It lays down the procedure for both solemnization and registration of marriage

## **Key provisions**

- **Prior notice to the marriage officer**

- The couples have to serve a notice with the relevant documents to the Marriage Officer 30 days before the intended date of the marriage.

- **Registration process**

- Both parties are required to be present after the submission of documents for issuance of public notice inviting objections.
- Registration is done 30 days after the date of notice after deciding any objection that may have been received during that period by the SDM.
- Both parties along with three witnesses are required to be present on the date of registration.

## **What is civil union?**

- A civil union under the Special Marriage Act is a legally recognized union between two individuals, regardless of their caste, religion, or nationality.





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- It also refers to the legal status that allows same-sex couples specific rights and responsibilities normally conferred upon married couples.
- This type of union allows couples to have a formal, legally binding relationship without going through the traditional rituals and customs of a religious or cultural marriage ceremony.
- Although a civil union resembles a marriage and brings with it employment, inheritance, property, and parental rights, there are some differences between the two.

**How is a civil union different from marriage?**

- Religious or cultural beliefs do not play a role in a civil union, whereas they often do in a marriage.
- In some countries, civil unions are only available to same-sex couples, whereas marriage is available to both same-sex and opposite-sex couples.
- A civil union may not be recognized by all states or countries, whereas a marriage is generally recognized worldwide.

