

AWAITING LIFT-OFF INTO THE SECOND SPACE AGE

Context

India achieved big during the First Space Age **despite modest entry**. Those achievements have provided India with a strong foundation to unleash its full potential in the Second Space Age.

The First Space Age

- The first space age became reality **during the 1950s and 1960s**.
- The Space Age began in **1957** with the launch of satellite **Sputnik 1**.
- In **1961**, cosmonaut **Yuri Gagarin** became the world's first person in space.
- In **1969**, **Neil Armstrong** became the first person to walk on the moon.
- During the first space age, 60 to 120 space launches took place annually. And **93% of these projects were by the US and USSR** (now Russia).

The Second Space Age

- The contrast between the first space age and the second is stark.
- **For instance**, today there are **more private players** active in the space domain.
- Last year alone, out of 180 launches, 61 were by SpaceX, a private company owned by Elon Musk.
- Since 2020, **90% of space launches are by and for the private sector**.

India's space journey

- India started its space journey in **the 1960s**.
- In **1963**, India launched its first rocket, a US-supplied **Nike Apache**, from **Thumba (Kerala)**.
- Subsequently, in **1969** Indian Space Research Organisation (ISRO) came into existence.
- With 15000 employees and an annual budget of 14000 crore-15,000 crore, ISRO has delivered more than what is initially envisaged from it.
- It manages four to five launches annually, 53 operational satellites – 21 for communication, 21 for earth observation, eight for navigation, and the remaining as scientific experimental satellites.

Projects by ISRO

- **SITE**

- The first major project by ISRO was **Satellite Instructional Television Experiment**.
- This project was completed by leasing a US satellite in 1975-76.
- The objective of SITE mission was educational outreach across 2400 villages covering 5 million people.
- **INSAT and GSAT**
- This INSAT series in the 1980s, followed by GSAT, became the backbone of telecommunication and broadcasting infrastructure.
- **Remote Sensing Capability**
- The use of space-based imagery was very beneficial for Weather forecasting, Forest mapping, Analysing agricultural yields, Groundwater and watersheds, etc.
- **Satellite aided navigation**
- This project began with **GAGAN**; a joint project between ISRO and the Airport Authority of India.
- The objective was to **augment Global Positioning System (GPS)** and to improve Indian air traffic management over Indian air space.
- This project has now expanded on a regional level and is called **Navigation with Indian Constellation-NavIC**.

Conclusion

- India needs legislation (a space activities act) to give legal framework to space policies, help set up a regulatory authority and create an enabling environment for raising venture capital funding into the Indian space start-up industry.
- By promoting private space players and regulating their activities, India will be better able to realise the Second Space Age.

[PROJECT TIGER: PM ARRIVES IN MYSORE TO COMMEMORATE 50 YEARS OF PROJECT TIGER, LAUNCH INTERNATIONAL BIG CATS ALLIANCE](#)

Why in News?

- The PM recently launched the **International Big Cats Alliance (IBCA)**, inaugurated the programme ‘**Commemoration of 50 years of Project Tiger**’, and released the summary report of **All India Tiger Estimation (5th cycle)**.

About the International Big Cats Alliance (IBCA):

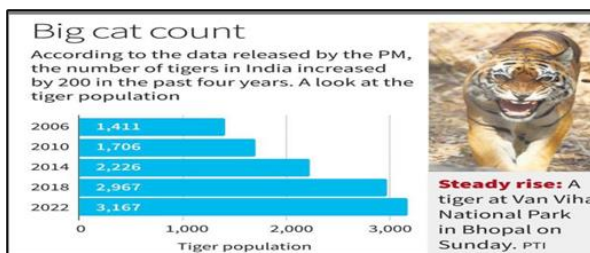
- In 2019, the PM of India called for an **Alliance of Global Leaders** to obliterate demand and firmly **curb poaching and illegal wildlife trade in Asia**.
- Taking the message of the PM forward, the International Big Cats Alliance is being launched which will **focus on the protection and conservation of seven major big cats** of the world (Tiger, Lion, Leopard, Snow Leopard, Puma, Jaguar and Cheetah).
- The Alliance will have a **membership of the range countries** harbouring these species.

What is Project Tiger?

- It is a tiger conservation programme launched in **1973** as a **centrally sponsored scheme** by the Government of India and administered by the **National Tiger Conservation**

Authority (NTCA).

- It aims at
 - **Ensuring a viable population of the Bengal tiger** (‘endangered’) in its natural habitats,
 - Protecting it from extinction,
 - **Preserving areas of biological importance** as a natural heritage that represent the diversity of ecosystems across the tiger's range in the country.
- For tiger conservation, **Tiger Reserves** were set up in 1973 and are governed by Project Tiger.
 - Initially, the Project covered **nine tiger reserves** spread over 18,278 sq km.



- Now, the project includes **54 tiger reserves** sprawling over around 75,000 sq km of the region.

- The monitoring system **M-STrIPES** (Monitoring System for Tigers - Intensive Protection and

Ecological Status) - is a software-based monitoring system developed (by NTCA in 2010) to **assist patrol and protect tiger habitats**.

DRAFT NATIONAL CURRICULUM FRAMEWORK 2023

Why in news?

- The Ministry of Education released the **pre-draft** of the National Curriculum Framework (NCF) for **school education** for public feedback.

What is NCF?

- It is a document that outlines the philosophy, goals, and objectives of education in India.
- It serves as a framework for designing school curricula, textbooks, and teaching practices.
- Previously, four NCFs (1975, 1988, 2000 and 2005) have been published by the NCERT in India.
- So, the current set of NCERT textbooks, barring the recent deletions, are all based on the NCF 2005.

National Education Policy 2020 and NCF

- The National Education Policy 2020 (NEP 2020) aims to devise four National Curriculum Frameworks (NCFs):
 - National Curriculum Framework for Early Childhood Care and Education (NCFECCE)
 - National Curriculum Framework for School Education (NCFSE)
 - National Curriculum Framework for Teacher Education (NCFTE)
 - National Curriculum Framework for Adult Education (NCFAE)
- Under the latest round of revision, draft frameworks on early childhood care and education and school education have already been prepared.
- Work on teacher and adult education is underway.
- Apart from textbooks, the NCF, after its adoption by the CBSE and other state boards, will also restructure various other aspects of the classroom, including choice of subjects, pattern of teaching, and assessment.

News Summary: Draft National Curriculum Framework 2023

What are the proposed changes in design of subjects and exams at secondary stage?

- **Choice of subjects and exams in classes IX-XII**
 - Over two years, in class IX and X, the students will have to study **16 courses** categorised under eight curricular areas.

- Students will be given a choice to pick 16 courses from eight curricular areas.
 - The suggested curricular areas are Humanities (that includes languages), Mathematics & Computing, Vocational Education, Physical Education, Arts, Social Science, Science, and Inter-disciplinary Areas.
- **Links between class IX and X**
 - Students will have to clear eight board exams to obtain the final certification which will factor in their performances in exams held over two years.
 - Each of these exams will assess their hold on courses they learnt in class IX and X.
- Under the current system, there are no such links between class IX and X and students across most boards have to pass at least five subjects to clear class X.
 - In other words, modular Board Examinations will be offered as opposed to a single examination at the end of the year.
 - The final certification will be based on the cumulative result of each of the examinations.

How will teaching-learning change for younger students if the recommendations are implemented?

- **At the foundational level**
 - For children aged 3-8 enrolled in grades between **preschool and class II**, the pedagogical approach suggested is play based.
 - It adds that textbooks are to be used from Grade 1 and most of the content should be concrete materials – toys, puzzles, and manipulatives.
- **At the preparatory stage (For grades III, IV, V)**
 - Children are to be introduced to textbooks on languages, mathematics, while also retaining the activity and discovery-based approach.
- **The middle stage (class VI, VII, VIII)**
 - In the middle stage (class VI, VII, VIII), natural as well as social sciences will be introduced.
 - As per the NCF, the textbooks need to play a central role in mediating the content in the Middle Stage.

When will these changes come into effect?

- The government recently announced that textbooks based on the **revised NCF** will be taught in schools starting from the 2024-25 academic session.
 - But a specific timeline on the implementation of the changes on exams, assessment and subject design has not been made available yet.
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RAMAKRISHNA MOVEMENT

Recently, the Prime Minister of India participated in the 125th Anniversary celebrations of Sri Ramakrishna Math at Vivekananda House in Chennai, Tamil Nadu.



About Ramakrishna Movement:

- It was initiated by Swami Vivekananda to spread the **universal message of Vedanta** in the light of Sri Ramakrishna Paramhansa (He was a teacher of swami Vivekanand)
- The main motto of this initiative is to work for the **alleviating of the poor** and the downtrodden with the motto ‘for one’s liberation and the good of the world’.
- With this aim, Swami Vivekananda founded the Ramakrishna Math and Ramakrishna Mission.
- The Ramakrishna Mission was formed in May 1897 with aims purely **spiritual and humanitarian**.

What is Vedanta?

- Vedanta is one of the world’s most **ancient spiritual philosophies** and one of its broadest, based on the Vedas, the sacred scriptures of India.
 - **Vedanta affirms:**
 - The oneness of existence,
 - The divinity of the soul, and
 - The harmony of all religions.
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MIZORAM, ASSAM NEW ACTIVE SECTORS FOR INFILTRATION: BSF

Why in news?

- Mizoram and Assam have emerged as the new active sectors in 2022 among the five states that share the international border with Bangladesh, which has seen a four-fold rise in intruder apprehension by the Border Security Force (BSF).
- This has been highlighted by the new data released by the BSF.

What is Border Security Force (BSF)?

- It is one of the 7 Central Armed Police Forces (CAPF) of India and was raised in December 1965 in the wake of 1965 War to ensure the security of the borders of India.
- It is the only CAPF which has its own Water Wing, Air Wing and other ancillary units.
- The Force Headquarters is in New Delhi.
- It works under the administrative control of Ministry of Home Affairs.

What are the role and responsibilities of BSF?

- Its operational responsibility is spread over 6,386.36 km of International Border with Pakistan and Bangladesh.
- **Peace Time Role**
 - Promote a sense of security among the people living in the border areas.
 - Prevent trans-border crimes, unauthorized entry into or exit from the territory of India.
 - Prevent smuggling and any other illegal activity.
- **War Time Role**
 - Holding ground in less threatened sectors so long as the main attack does not develop in a particular sector
 - Protection of vital installations particularly air-fields
 - Limited aggressive action against Para military or irregular forces of the enemy within the overall plan of the Armed forces
 - Guarding of prisoners of war cages.
 - Assistance in control of refugees
- It is also deployed on Line of Control (LoC) in J&K under the Operational control of the Army.
- **Overseas Deployment:**
 - BSF contributes its personnel every year for UN Missions.
 - It is handling the security issues on the famous Kartarpur Corridor.

- At the time of natural disaster/calamities, BSF provides assistance in areas of deployment such as:
 - Kashmir flood in 2014,
 - Kerala flood in 2018 and
 - Kedarnath Tragedy in 2013.

India – Bangladesh Border (IBB)

- The India-Bangladesh border is India's longest border measuring 4,096.7 km.
- It passes through West Bengal (2216.7 km), Assam (263 km), Meghalaya (443 km), Tripura (856 km) and Mizoram (318 km).
- The entire border consists of varied geographical features like plains, hills, riverine stretches, and forests with hardly any natural obstacles.
- The India-Bangladesh border is highly porous and a hotspot of illegal immigration, cattle smuggling, human trafficking and other illegal cross border activities.

TAIWAN STRAIT

Seventy-one Chinese military aircraft crossed the sensitive median line of the Taiwan Strait recently as China began drills around Taiwan.



About Taiwan Strait:

- Taiwan Strait, also called **Formosa Strait**, is a **180-kilometre-wide strait** separating the island of **Taiwan** and **continental Asia**.
- The strait **extends from southwest to northeast** between the **South and East China seas**.
- The **narrowest part** is **130 km wide**.
- It **reaches a depth of about 230 feet (70 m)** and contains the **Pescadores Islands** (which are controlled by the government of Taiwan).
- The chief **ports** are **Amoy in mainland China** and **Kao-hsiung in Taiwan**.
- **Median line of the Taiwan Strait:**
 - It is the **informal dividing line** in the Taiwan Strait between the **Chinese mainland and Taiwan**.

- It came about during the Cold War as a way to try and delineate the two opposing sides and reduce the risk of clashes
 - **No agreement or treaty ever solidified its status.** But over the decades, it helped keep Taiwan and China's militaries apart.
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INTERNATIONAL TRADE UNION CONFEDERATION (ITUC)

The International Trade Union Confederation and its Global Unions partners are calling for the International Financial Institutions (IFIs) to overhaul the multilateral system and take bold action to ensure a new social contract for a sustainable recovery.

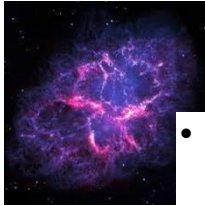


About International Trade Union Confederation (ITUC):

- It is an organization established in 2006, that promotes the trade union movement.
 - It represents 176 million workers in 161 countries and territories and has 325 national affiliates.
 - **Mission: Promotion and defence of workers' rights and interests**, through international cooperation between trade unions, global campaigning and advocacy within the major global institutions.
 - Its main areas of activity include the following: **trade union and human rights; economy, society and the workplace; equality and non-discrimination**; and international solidarity.
 - It is governed by four-yearly world congresses, a **General Council** and an **Executive Bureau**.
 - It works closely with the **International Labour Organisation** and with several other UN Specialised Agencies.
 - **Headquarters: Belgium**
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WHAT IS A CRAB NEBULA?

Recently, NASA's Imaging X-ray Polarimetry Explorer (IXPE) captured a crab nebula like never before.



About Crab Nebula:

- It is situated in the **Taurus constellation**, a staggering 6500 light-years distant from Earth.
- It was formed as a result of a **supernova** and possesses a mass equivalent to two Suns.
- The discovery of the object as a nebula is attributed to the English physician and amateur astronomer **John Bevis** in about 1731.
- It is one of the few astronomical objects from which radiation has been detected over the **entire measurable spectrum**, from radio waves through infrared and visible wavelengths to ultraviolet, X-rays, and gamma rays.

What is Nebula?

- The word nebula is derived from Latin which **means a cloud**.
- A nebula is a formation in space which is **constituted mostly of helium, dust**, and other gases in various concentrations.
- The shape and size of a nebula vary, and as such there can be **various types of formations having different sizes**.
- It is believed that they are **formed by the collapsing of the interstellar medium**, which then comes together because of the gravitational pull of the particles.
- Some of the most popular ones are **Pelican, Crab, Eagle, and Ring Nebula**, with Ring being among the most observed ones on the planet.