

INTERNATIONAL RELATION**Protests in Cuba**

Recently, thousands of Cubans took to the streets across the country to protest longstanding restrictions on rights, scarcity of food and medicines, and the government's poor response to the Covid-19 pandemic. These protests are the biggest anti-government demonstrations on the Communist-run island in decades.

Key Points**Ongoing Protests:**

- The anti-government protests erupted amid Cuba's worst economic crisis since the fall of the Soviet Union, its former ally, or end of the cold war (1945-1991). Cuba has been an authoritarian communist state for more than six decades.
- Cuba has been hit hard by US sanctions and Covid-19.
- Cubans have been angered by the collapse of the economy, food and medicine shortages, price hikes and the government's handling of the pandemic.
- Protesters shouted "freedom" and demanded for President Miguel Diaz-Canel to step down.
- On the other hand, Cuba's President blamed the US for the turmoil. He called tight sanctions imposed by the US on Cuba, has resulted in a policy of economic suffocation and is the prime reason for protests in Cuba.
- Further, the US President said the US stands with the people of Cuba in their call for freedom.

History of Cuba:

- From the 15th century, Cuba was a colony of Spain until the Spanish–American War of 1898, when Cuba was occupied by the US. However, Cuba gained nominal independence as a de facto United States protectorate in 1902.
- In 1940, Cuba attempted to strengthen its democratic system. But, political radicalization and social strife culminated in a coup and subsequent dictatorship under Fulgencio Batista in 1952.
- Open corruption and oppression under Batista's rule led to his ousting in January 1959 by the 26th of July Movement. This established communist rule under the leadership of Fidel Castro.
- Since 1965, the state has been governed by the Communist Party of Cuba.
- Moreover, the country was a point of contention during the Cold War between the Soviet Union and the United States. A nuclear war nearly broke out during the Cuban Missile Crisis of 1962.

USA-Cuba Relationship: The United States and Cuba have had a strained relationship for more than sixty years. The tumultuous US-Cuba relationship has its roots in the Cold War. This can be reflected in the following events.

- **Cuban Revolution:** In 1959, Fidel Castro and a group of revolutionaries seized power in Havana (city capital of Cuba). They overthrew the US-backed government of Fulgencio Batista. After the Cuban Revolution, Fidel Castro's government began nationalizing American-owned properties, imposed economic penalties on trade with the US and increased its trade with the Soviet Union.
- **Cuban Missile Crisis:** Aftermath of events following Cuban revolution, the United States severed diplomatic ties with Cuba and began pursuing covert operations to overthrow the Fidel Castro regime in 1961.
 1. This followed an attempt by the US agencies to topple Cuban Government, known as the Bay of Pigs invasion.
 2. In response, Cuba allowed the Soviet Union to secretly install nuclear missiles on the island. This brought the US and Soviet Union on the brink of Nuclear war.
 3. In the end, Soviet Union agreed to withdraw the missiles in exchange for a pledge from the US not to invade Cuba and to remove the US nuclear missiles from Turkey.
- **US Sanctions:** After Cuban Missile Crisis, the US instituted a ban on nearly all its exports to Cuba, which US President John F. Kennedy expanded into a full economic embargo that included stringent travel restrictions.
 1. These economic sanctions continue till today.
 2. US President Barack Obama took several steps to normalize bilateral relations, including restoring diplomatic ties and expanding travel and trade.
 3. However, the Trump administration reversed aspects of the past agreements by reimposing restrictions on tourism and other commerce.

India's Stand:

- Presently, India is yet to declare its stance on the current ongoing protest, but India in the past has supported lifting the economic blockade of Cuba.
- In the UN General Assembly, India stressed that the continued existence of this siege by the US against Cuba undermines multilateralism and the credibility of the United Nations.

GOVERNANCE
Plea Challenges Sedition Law

Recently, a petition was filed in the Supreme court (SC), that seeks a relook into the Sedition Law.

Key Points
From Petitioner:

- The nearly-60-year old judgment helped sedition to survive in Indian Penal Code.
- The 1962 judgment in the KedarNath case, which upheld Section 124A (sedition), a relic of the colonial legacy, was given at a time when doctrines such as 'chilling effect' (Deterring effect resulting from restrictive law) on free speech were unheard of. It was delivered at a time when scope and inter-relationship of fundamental rights were rather restrictive.
- In the Kedar Nath judgment, the court had reasoned that without Section 124A, the State would be in jeopardy if the government was subverted. It, however, said that Section 124A would apply only to expressions that either intended to or had the tendency to cause violence were punishable as 'sedition'.

Court's Ruling:

- It sends a strong message to the government that sedition is being misused by the authorities to trample upon citizens' fundamental rights of free speech and liberty. SC made it clear that the court is sensitive to the public demand to judicially review the manner in which law enforcement authorities are using the sedition law to control free speech and send journalists, activists and dissenters to jail, and keep them there.
- Section 124A of the Indian Penal Code may have passed its time.
- The Court said "a statute criminalising expression based on unconstitutionally vague definitions of 'disaffection towards Government' etc. is an unreasonable restriction on the fundamental right to free expression guaranteed under Article 19 (1)(a) and causes constitutionally impermissible 'Chilling Effect' on speech".

Background of Sedition Law:

- Sedition laws were enacted in 17th century England when lawmakers believed that only good opinions of the government should survive, as bad opinions were detrimental to the government and monarchy.
- The law was originally drafted in 1837 by Thomas Macaulay, the British historian-politician, but was inexplicably omitted when the Indian Penal Code (IPC) was enacted in 1860.
- Section 124A was inserted in 1870 by an amendment introduced by Sir James Stephen when it felt the need for a specific section to deal with the offence.
 1. It was one of the many draconian laws enacted to stifle any voices of dissent at that time.
 2. It was used by the British to silence Mahatma Gandhi and Bal Gangadhar Tilak.

Sedition Law Today: Sedition is a crime under Section 124A of the Indian Penal Code (IPC).

Section 124A IPC:

1. It defines sedition as an offence committed when "any person by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the government established by law in India".
2. Disaffection includes disloyalty and all feelings of enmity. However, comments without exciting or attempting to excite hatred, contempt or disaffection, will not constitute an offence under this section.

Punishment for the Offence of Sedition:

1. Sedition is a non-bailable offence. Punishment under the Section 124A ranges from imprisonment up to three years to a life term, to which fine may be added.
2. A person charged under this law is barred from a government job.
3. They have to live without their passport and must produce themselves in the court at all times as and when required.

Analysis

Arguments in Favour of Section 124A:

- Has its utility in combating anti-national, secessionist and terrorist elements.
- It protects the elected government from attempts to overthrow the government with violence and illegal means.
- If contempt of court invites penal action, contempt of government should also attract punishment.
- Many districts in different states face a maoist insurgency and rebel groups, they openly advocate the overthrow of the state government by revolution.
- Against this backdrop, the abolition of Section 124A would be ill-advised merely because it has been wrongly invoked in some highly publicized cases.

Arguments against Section 124A:

- It is a constraint on the legitimate exercise of constitutionally guaranteed freedom of speech and expression.
- Dissent and criticism of the government are essential ingredients of robust public debate in a vibrant democracy. They should not be constructed as sedition.
- The British, who introduced sedition to oppress Indians, have themselves abolished the law in their country. There is no reason why India should not abolish this section.
- The terms used under Section 124A like 'disaffection' are vague and subject to different interpretations to the whims and fancies of the investigating officers.
- IPC and Unlawful Activities Prevention Act 2019 have provisions that penalize "disrupting the public order" or "overthrowing the government with violence and illegal means". These are sufficient for protecting national integrity.
- The sedition law is being misused as a tool to persecute political dissent.
- In 1979, India ratified the International Covenant on Civil and Political Rights (ICCPR), which sets forth internationally recognized standards for the protection of freedom of expression. However, misuse of sedition and arbitrary slapping of charges are inconsistent with India's international commitments.

Way Forward

- India is the largest democracy of the world and the right to free speech and expression is an essential ingredient of democracy. The expression or thought that is not in consonance with the policy of the government of the day should not be considered as sedition.
- Section 124A should not be misused as a tool to curb free speech. The SC caveat, given in the KedarNath case, on prosecution under the law can check its misuse. It needs to be examined under the changed facts and circumstances and also on the anvil of ever-evolving tests of necessity, proportionality and arbitrariness.

SOCIAL ISSUE

Challenge to Restitution of Conjugal Rights

The Supreme Court (SC) is going to hear a fresh challenge to the provision allowing restitution (recovery) of conjugal rights under Hindu personal laws (Hindu Marriage act 1955).

Key Points

Conjugal Rights:

- Conjugal rights are rights created by marriage, i.e. right of the husband or the wife to the society of the other spouse.
 - The law recognises these rights— both in personal laws dealing with marriage, divorce etc, and in criminal law requiring payment of maintenance and alimony to a spouse.
 - Section 9 of the Hindu Marriage Act recognises one aspect of conjugal rights — the right to consortium and protects it by allowing a spouse to move court to enforce the right.
 - The concept of restitution of conjugal rights is codified in Hindu personal law now, but has colonial origins.
1. Originating from Jewish law, the provision for restitution of conjugal rights reached India and other common law countries through British Rule.
 2. The British law treated wives as their husband's personal possession hence they were not allowed to leave their husbands.
- Similar provisions exist in Muslim personal law as well as the Divorce Act, 1869, which governs Christian family law. Incidentally, in 1970, the U.K repealed the law on restitution of conjugal rights.

Challenged Provision:

- Section 9 of the Hindu Marriage Act, 1955, which deals with restitution of conjugal rights, reads:
 1. When either the husband or the wife has, without reasonable excuse, withdrawn from the society of the other, the aggrieved party may apply, by petition to the district court.
 2. For restitution of conjugal rights and the court, on being satisfied of the truth of the statements made in such a petition and that there is no legal ground why the application should not be granted, may decree restitution of conjugal rights accordingly.

Reason for Challenging the Law:

Violation of Rights:

- The law is being challenged now on the main grounds that it violates the fundamental right to privacy.
- In 2019, a nine-judge Bench of the SC recognised the right to privacy as a fundamental right. The right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 and as a part of the freedoms guaranteed by Part III of the Constitution.
- The 2019 judgement has set the stage for potential challenges to several laws such as criminalisation of homosexuality, marital rape, restitution of conjugal rights, the two-finger test in rape investigations.
- The plea argues that a court-mandated restitution of conjugal rights amounted to a “coercive act” on the part of the state, which violates one’s sexual and decisional autonomy, and right to privacy and dignity.

Biased Against Women:

- Although the law is gender-neutral since it allows both wife and husband to seek restitution of conjugal rights, the provision disproportionately affects women.
- Women are often called back to marital homes under the provision, and given that marital rape is not a crime, leaves them susceptible to such coerced cohabitation.
- It is also argued whether the state can have such a compelling interest in protecting the institution of marriage that it allows a legislation to enforce cohabitation of spouses.

Not in Consonance with SC Judgements:

- In the recent judgement of *Joseph Shine v Union of India 2019*, the SC has put great emphasis on the right to privacy and bodily autonomy of married women, stating that marriage does not take away their sexual freedom nor choice.
- If everybody is entitled to their bodily autonomy, choice, and right to privacy, how can a court mandate two adults to cohabit if one of them does not wish to do so. How can courts preach autonomy of the body and then turn around and decree otherwise.

Misuse of the Provision:

- Another pertinent matter to take into consideration is the misuse of this provision as a shield against divorce proceedings and alimony payments.
- Often an aggrieved spouse files for divorce from their place of residence and their spouse retaliates by filing for a decree of restitution in their place of residence.

Previous Judgements:

- In 1984, the SC had upheld Section 9 of the Hindu Marriage Act in the case of *Saroj Rani v Sudarshan Kumar Chadha*, holding that the provision serves a social purpose as an aid to the prevention of break-up of marriage.
- In 1983, a single-judge bench of the Andhra Pradesh High Court had for the first time struck down the provision in the case of *T Sareetha v T Venkatasubbaiah* and declared it null and void.
 1. It cited the right to privacy among other reasons. The court also held that in “a matter so intimately concerned the wife or the husband the parties are better left alone without state interference”.
 2. The court had, most importantly, also recognised that compelling “sexual cohabitation” would be of “grave consequences for women”.
- However, in the same year, a single-judge Bench of the Delhi High Court took a diametrically opposite view of the law. In the case of *Harvinder Kaur v Harmander Singh Chaudhry*, the Delhi High Court upheld the provision.

Way Forward

- While we talk about gender equality and the gender-neutral quality of the law, women are still at a disadvantage in Indian society and this provision capitalises on it.

- Dowry deaths are a plague on society and women being emotionally and mentally manipulated and tortured for dowry are aplenty.
- When these wives, tired and broken by cruelty, leave the husband's house, a decree of restitution of conjugal rights is a noose around their necks.
- It's time for the Indian judiciary and society to shift to more progressive views starting with the progressive theory of marriage. Marriage is not built upon the ceremonies but upon the autonomy and freedom of two individuals who agree to share them with each other.

2.Midday Meal Scheme: New Study

Recently, a new study on the intergenerational benefits of India's Midday Meal Scheme was published.

Key Points

About the Study:

- It found that midday meals leave a long-lasting impact. Children of mid-day meal scheme beneficiaries show better growth.
- The study used the nationally representative data on cohorts of mothers and their children by birth year and socio-economic status spanning 23 years.
- It is a first-of-its-kind inter-generational analysis of the impacts of a mass feeding programme.

Height-to-Age Ratio :Girls who had access to the free lunches provided at government schools, had children with a higher height-to-age ratio than those who did not.

Linkage of Midday Meal & Stunting:

- By 2016, the prevalence of stunting was significantly lower in areas where the mid scheme was implemented in 2005.
- The linkages between midday meals and lower stunting in the next generation were stronger in lower socio-economic strata and likely work through women's education, fertility, and use of health services.

Interruption:The interruptions to schooling and to the midday meal scheme could have even longer term impacts, hurting the nutritional health of the next generation as well.

Note:

- Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients.
- The term malnutrition covers 2 broad groups of conditions. One is 'undernutrition'—which includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals).
- Hidden hunger is a lack of vitamins and minerals. It occurs when the quality of food people eat does not meet the nutrient requirements. The food is deficient in micronutrients such as the vitamins and minerals that are needed for their growth and development.

Midday Meal Scheme

About:

- The Midday meal scheme (under the Ministry of Education) is a centrally sponsored scheme which was launched in 1995.
- It is the world's largest school meal programme aimed to attain the goal of universalization of primary education.
- Provides cooked meals to every child within the age group of six to fourteen years studying in classes I to VIII who enrolls and attends the school.

Objective:Address hunger and malnutrition, increase enrolment and attendance in school, improve socialisation among castes, provide employment at grassroot level especially to women.

Quality Check:AGMARK quality items are procured, tasting of meals by two or three adult members of the school management committee.

Food Security:If the Mid-Day Meal is not provided in school on any school day due to non-availability of food grains or any other reason, the State Government shall pay food security allowance by 15th of the succeeding month.

Regulation:The State Steering-cum Monitoring Committee (SSMC) oversees the implementation of the scheme including establishment of a mechanism for maintenance of nutritional standards and quality of meals.

Nutritional Standards:Cooked meal having nutritional standards of 450 calories and 12 gm of protein for primary (I-V class) and 700 calories and 20 gm protein for upper primary (VI-VIII class)

Coverage:All government and government aided schools, Madarsa and Maqtabas supported under the Sarva Shiksha Abhiyan (SSA).

Issues and Challenges:

Corrupt Practices:There have been instances of plain chapatis being served with salt, mixing of water in milk, food poisoning etc.

Caste Bias and Discrimination:Food is central to the caste system, so in many schools, children are made to sit separately according to their caste status.

Covid-19:

- Covid-19 has posed serious threats to children and their health and nutritional rights.
- The nationwide lockdown has disrupted access to essential services, including Mid-Day Meals.
- Although dry foodgrains or cash transfers have been provided to families instead, food and education advocates have warned that this would not have the same impact as hot cooked meals on the school premises, especially for girl children who face more discrimination at home and are more likely to drop out of school due to the closures.

Menace of Malnutrition:

1. According to the National Family Health Survey-5, several states across the country have reversed course and recorded worsening levels of child malnutrition.
2. India is home to about 30% of the world’s stunted children and nearly 50% of severely wasted children under the age of five.

Global Nutrition Report-2020:As per the Global Nutrition Report 2020, India is among 88 countries that are likely to miss global nutrition targets by 2025.

Global Hunger Index (GHI) 2020:India has been ranked at 94 among 107 countries in the Global Hunger Index (GHI) 2020. India has a level of hunger that is “serious”.

Way Forward

- Interventions to improve maternal height and education must be implemented years before those girls and young women become mothers. The fight against stunting has often focussed on boosting nutrition for young children, but nutritionists have long argued that maternal health and well-being is the key to reduce stunting in their offspring.
- Expansion and improvement of school meals is needed for inter-generational pay-offs. As girls in India finish school, get married and have children all in just a few years — so school-based interventions can really help.

BIODIVERSITY & ENVIRONMENT

Amazon Forests: No Longer Carbon Sinks

Recently, the European Union (EU) released a new climate proposal, the Fit for 55 package. The EU in December 2020 submitted a revised Nationally Determined Contribution (NDC) under the Paris Agreement.

Key Points

Aim:

- The new package attempts to deliver the NDC and carbon neutrality goal through proposed changes that would impact the economy, society and industry, as well as ensure a fair, competitive and green transition by 2030 and beyond. Climate neutrality is achieved when a country’s emissions are balanced by absorptions and removal of greenhouse gases from the atmosphere. It is also expressed as a state of net-zero emissions.
- It claims to achieve a balance between “regulatory policies” and market-based carbon pricing to avoid the pitfalls of each.

Major Proposals:

- **Renewable Sources:**It proposes to increase the binding target of renewable sources in the EU’s energy mix to 40% (from 32% earlier) and improve energy efficiency by 36% (from 32.5% earlier) by 2030.
- **Vehicular Carbon Emissions:**
 1. It must be cut by 55% by 2030 and by 100% by 2035, which means a phaseout of petrol and diesel vehicles by 2035.
 2. It also includes some provisions that benefit the auto industry. Public funds will be used to help build charging stations every 60 kilometers, on major highways, a move that will encourage sales of electric cars.

3. It will also help finance a network of hydrogen fueling stations.
- **Emissions Trading System:**
 1. It calls for the creation of an Emissions Trading System (ETS) for buildings and road transport, separate from the EU's current ETS, to become operational from 2026.
 2. ETS are market-based instruments that create incentives to reduce emissions where these are most cost-effective.
- **Social Climate Fund:**
 1. To help low-income citizens and small businesses adjust to the new ETS, the EU proposes the creation of a Social Climate Fund, which will take various forms ranging from funding for renovation of buildings, and access to low carbon transport, to direct income support.
 2. They expect to build up this fund using 25% of revenues from the new ETS. The current ETS is proposed to extend to the maritime sector between 2023 and 2025.
- **Carbon-Border Adjustment Mechanism:**
 1. Among other market-based mechanisms, the EU is proposing a carbon-border adjustment mechanism, which will put a price on imports from places that have carbon-intensive production processes.
 2. This instrument has been deemed to have a small impact on global carbon dioxide emissions by the United Nations Conference on Trade and Development, and could instead have negative impacts on developing countries.
- **Enhance Sink Capacity:** It has set a target to enhance the EU's sink capacity to 310 million tonnes of CO₂ equivalent, which it hopes will be achieved through specific national targets by member countries.

Analysis:

- The EU's NDC target is to reduce greenhouse gas emissions by 55% below 1990 levels by 2030. It has also set a long-term goal of achieving carbon neutrality by 2050.
- 1. The EU's target is more aggressive than that of the US, which committed to reduce emissions by 40% to 43% over the same period, but behind Britain, which pledged a 68% reduction.
- 2. China, the world's largest emitter, has only said it aims for emissions to peak by 2030.
- Fit for 55 Package could put Europe at the forefront of new technologies like electric car batteries, offshore wind generation or aircraft engines that run on hydrogen.
- But the transition will also be painful for some consumers and companies, raising the cost of a wide variety of goods and services, like video monitors imported from China, for example, or a vacation flight to a Greek island or even a full tank of gasoline.
- 1. Companies that make products destined for obsolescence, like parts for internal combustion engines, must adapt or go out of business.
- The proposals could reshape polluting industries like steelmaking, which directly employs 330,000 people in the EU.

India's INDC, to be achieved primarily, by 2030

- To reduce the emissions intensity of the Gross Domestic Product by about a third.
- A total of 40% of the installed capacity for electricity will be from non-fossil fuel sources.
- India also promised an additional carbon sink (a means to absorb carbon dioxide from the atmosphere) of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by the year 2030.

Indian Initiatives to Fight Climate Change:

2. National Clean Air Programme (NCAP)
3. Bharat Stage-VI (BS-VI) emission norms
4. UJALA scheme
5. National Action Plan on Climate Change (NAPCC)
6. Coalition for Disaster Resilience Infrastructure
7. International Solar Alliance

Way Forward

- The principle of climate justice should guide the negotiations over the package.
- Fit for 55 pushes EU decarbonization into higher gear, marking the visible entry of climate policy into the daily life of all European citizens and companies, and also starting to impact global trade partners.

- Ensuring that the transition is socially fair, both domestically and internationally, is the most important element to make it successful in the long-run.

SCIENCE & TECHNOLOGY**Pegasus Spyware**

Recently, it has been reported that Pegasus, the malicious software, has allegedly been used to secretly monitor and spy on an extensive host of public figures in India.

Key Points**About Pegasus:**

- It is a type of malicious software or malware classified as a spyware. It is designed to gain access to devices, without the knowledge of users, and gather personal information and relay it back to whoever it is that is using the software to spy.
- Pegasus has been developed by the Israeli firm NSO Group that was set up in 2010.
- The earliest version of Pegasus discovered, which was captured by researchers in 2016, infected phones through what is called spear-phishing – text messages or emails that trick a target into clicking on a malicious link.
- Since then, however, NSO's attack capabilities have become more advanced. Pegasus infections can be achieved through so-called "zero-click" attacks, which do not require any interaction from the phone's owner in order to succeed. These will often exploit "zero-day" vulnerabilities, which are flaws or bugs in an operating system that the mobile phone's manufacturer does not yet know about and so has not been able to fix.

Targets:

- Human Rights activists, journalists and lawyers around the world have been targeted with phone malware sold to authoritarian governments by an Israeli surveillance firm.
- Indian ministers, government officials and opposition leaders also figure in the list of people whose phones may have been compromised by the spyware. In 2019, WhatsApp filed a lawsuit in the US court against Israel's NSO Group, alleging that the firm was incorporating cyber-attacks on the application by infecting mobile devices with malicious software.

Recent Steps Taken in India:

- **Cyber Surakshit Bharat Initiative:** It was launched in 2018 with an aim to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.
- **National Cyber security Coordination Centre (NCCC):** In 2017, the NCCC was developed to scan internet traffic and communication metadata (which are little snippets of information hidden inside each communication) coming into the country to detect real-time cyber threats.
- **Cyber Swachhta Kendra:** In 2017, this platform was introduced for internet users to clean their computers and devices by wiping out viruses and malware.
- **Indian Cyber Crime Coordination Centre (I4C):** I4C was recently inaugurated by the government. National Cyber Crime Reporting Portal has also been launched pan India.
- **Computer Emergency Response Team - India (CERT-IN):** It is the nodal agency which deals with cybersecurity threats like hacking and phishing.
- **Legislation:**
 1. Information Technology Act, 2000.
 2. Personal Data Protection Bill, 2019.

International Mechanisms:

- **International Telecommunication Union (ITU):** It is a specialized agency within the United Nations which plays a leading role in the standardization and development of telecommunications and cyber security issues.
- **Budapest Convention on Cybercrime:** It is an international treaty that seeks to address Internet and computer crime (cybercrime) by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations. It came into force on 1st July 2004. India is not a signatory to this convention.

IMPORTANT FACTS FOR PRELIM**Hubble Space Telescope**

NASA has returned the science instruments on the Hubble Space Telescope (HST) to operational status, almost a month after suspending their work due to trouble with its payload computer.

Key Points**About:**

- It is named after the astronomer Edwin Hubble.
- The observatory is the first major optical telescope to be placed in space and has made groundbreaking discoveries in the field of astronomy since its launch (into Low Earth orbit in 1990). It is said to be the “most significant advance in astronomy since Galileo’s telescope.”
- It is a part of NASA's Great Observatories Program - a family of four space-based observatories, each observing the Universe in a different kind of light. The other missions in the program include the visible-light Spitzer Space Telescope, Compton Gamma-Ray Observatory (CGRO), and the Chandra X-Ray Observatory (CXO).

Large and Versatile:

- It is larger than a school bus in size (13.3 meters), and has a 7.9 feet mirror.
- It captures images of deep space playing a major role in helping astronomers understand the universe by observing the most distant stars, galaxies and planets.

Data Open to People: NASA also allows anyone from the public to search the Hubble database for which new galaxy it captured, what unusual did it notice about our stars, solar system and planets and what patterns of ionised gases it observed, on any specific day.

Important Contribution of HST:

- Expansion of the Universe was accelerating (1990s), this in turn led to a conclusion that most of the cosmos was made up of mystery "stuff" called dark energy.
- Snapshot of Southern Ring Nebula (1995), it showed two stars, a bright white star and a fainter dull star at the centre of the nebula where the dull star was indeed creating the whole nebula.
- Collision of two dwarf galaxies (1998) one of which is I Zwicky 18. This led to the formation of a new Star.
- Colourful patterns of gases in a black hole powered galaxy known as the ‘Circinus Galaxy’ (1999).
- Collision between two galaxies UGC 06471 and UGC 06472 (2000).
- Snapshot of Neptune (2011): The image of the most distant planet revealed the formation of high-altitude clouds composed of methane ice crystals.
- The disc surrounding a star ‘Beta Pictoris’, which was discovered in 1984, was found to be constituted by two planets, light-scattering dust and debris in 2012.
- It captured the ‘Galaxy Cluster Abell 2744’ in 2013. It is 3.5 billion light-years away and has several clusters of small galaxies in it. It also poses a strong gravitational field which acts as a lens to reflect the light of almost 3,000 background galaxies.
- Captured an encounter of a comet named C/2013 A1 with Mars in 2014. The ‘Comet Siding Spring’ passed with a distance of just 87,000 miles to that of Mars.
- The ‘Gum 29’, a vibrant stellar being ground, which is 20,000 light-years away, consisting of a giant cluster of 3,000 stars was captured in 2014. This behemoth cluster of stars is called ‘Westerlund 2’.
- Captured the disintegration of an ancient comet 332P/Ikeya-Murakami in 2016.
- The Triangulum Galaxy was snapped depicting the specific areas of star birth with a bright blue light spreading across the galaxy in beautiful nebulas of hot gas in 2017.
- Picture of ‘Galaxy ESO 243-49, which had a medium-sized black hole in 2012. The 20,000 suns sized black hole was positioned on a glacial plane of the galaxy.

Successor of HST:

- A successor to Hubble, the James Webb Space Telescope (JWST), is scheduled to launch later this year.
- But many astronomers hope that the two will be able to operate alongside each other - at least for some period of time.

James Webb Space Telescope

- The James Webb Space Telescope (also called JWST or Webb) will be a large infrared telescope with a 6.5-meter primary mirror.
- The telescope will be launched on an Ariane 5 rocket from French Guiana in 2021.
- It will study every phase in the history of our Universe, ranging from the first luminous glows after the Big Bang, to the formation of solar systems capable of supporting life on planets like Earth, to the evolution of our own Solar System.

- Webb is an international collaboration between NASA, the European Space Agency (ESA), and the Canadian Space Agency (CSA).

DAILY ANSWER WRITING PRACTICE

Qns. How are the Judges elected to International Court of Justice (ICJ)? Discuss the importance of ICJ seat to India's diplomacy. (250 words)

Ans:

Introduction

The International Court of Justice (ICJ) is the principal judicial body of the UN. Established in 1946 to replace the Permanent Court of International Justice, the ICJ mainly operates under the statute of its predecessor, which is included in the UN Charter. It has two primary functions: to settle legal disputes submitted by States in accordance with established international laws, and to act as an advisory board on issues submitted to it by authorized international organizations. Dalveer Bhandari, an Indian Justice, was re-elected as a judge to the International Court of Justice (ICJ) in 2018 and will retire in 2027.

Body**Qualifications of ICJ judges:**

- A judge should have a high moral character.
- A judge should fit to the qualifications of appointment of highest judicial officers as prescribed by their respective states or.
- A judge should be a juriconsult of recognized competence in international law.

Election of Judges to ICJ

- The election process for the judges is set out in Articles 4–19 of the ICJ statute.
- It is composed of 15 judges who are elected for the term of nine years, by the UN General Assembly and the UN Security Council. The elected judges form part of the list of people nominated by the national groups in the Permanent Court of Arbitration.
- Elections are staggered, with five judges elected every three years to ensure continuity within the court. If a judge dies in office, the practice has generally been to elect a judge in a special election to complete the term.
- A judge can be dismissed only by a unanimous vote of the other members of the court.
- No two judges can be nationals of the same country. The judges in ICJ are chosen to represent all geographic regions of the world- an informal understanding between the nations.
- There are five seats for Western Countries, three seats for the African States, two for the Eastern Europe States, three for the Asian States and two for Latin American and Caribbean States.
- Article 6 of the Statute provides that all judges should be elected regardless of their nationality. Judges should be of high moral character either qualified for the highest judicial office in their home states or known as lawyers with sufficient competence in international law.
- Judges of ICJ cannot hold any other post or act as counsel.
- Article 31 of the statute sets out a procedure whereby Ad Hoc judges sit on contentious cases before the court. The system allows any party to a contentious case to select one additional person to sit as a judge on that case only. It is thus possible that as many as seventeen judges may sit on one case. Ad Hoc judges usually vote in favour of the state that appointed them and thus cancels each other out.
- Judges may deliver joint judgments or give their own separate opinions. Decisions and advisory opinions are by majority, and, in the event of an equal division, the President's vote becomes decisive.

Importance of ICJ seat for India:

- Judges of the ICJ do not create international law; they interpret it.
- However, the interpretation of international law by states is an eminently political exercise, and the faith placed by U.N. member states in an Indian nominee is therefore also a reflection of India's credentials.
- The U.N. re-elected Bhandari for a second term, but this time, he was elected to a "different" seat on the court.
- It has become customary for seats on the ICJ to be represented by the five U.N. regional groupings: Africa, Asia-Pacific, Eastern European, Latin America and the Caribbean, and the Western Europe and Other Groups (WEOG).
- In an overwhelming majority of cases, ICJ judges support their home states in disputes before the court.

- New Delhi's short-term interests notwithstanding, India remains a scrupulous practitioner of international law.
- In an age of revisionism and aggressive lawfare led by China, India's election to the ICJ is likely a stabilising development.
- New Delhi is an important player, both in the governance of common spaces in Asia and in future regimes to manage new technologies.
- But more pertinently, it has emerged as a rival that can counter China's revanchist manoeuvres.
- The U.N.'s endorsing India's nominee to the ICJ is, for this reason, significant—it is also a welcome signal from many states that they do not believe existing regimes are nearing their expiry date.

Conclusion

The voting in the General Assembly which overwhelmingly favoured India is reflective of the new global order, which is not pleasant to the world powers. India has been seeking that the democratic process need to be played its full course in both the Security Council and the General Assembly and there should not be an intervention or adoption of a process that has never been used before or the one that undermines the voice of the majority.

DAILY QUIZ

Q1. Consider the following statements about School Innovation Ambassador Training Program (SIATP):

1. It has been designed by the Technology Development Board (TDB).
2. It aims to create an environment of scientific temperament, innovation, creativity amongst Indian Students.

Which of the given above statements is/are correct?

- a. 1 only b. 2 only c. Both 1 and 2 **d. Neither 1 nor 2**

Q2. Consider the following statements:

1. Unified Mobile Application for New-age Governance (UMANG) is a Digital India initiative of NITI Aayog.
2. It is aimed at all citizens of India and offers services including payment transfer.

Which of the given above statements is/are correct?

- a. 1 only **b. 2 only** c. Both 1 and 2 d. Neither 1 nor 2

Q3. In 1994, for the first time under which of the following Act, the Environmental Impact Assessment (EIA) notification was formulated in India?

- a. Wild Life (Protection) Act, 1972
- b. Forest (Conservation) Act, 1980
- c. Environment Protection Act, 1986**
- d. Biological Diversity Act, 2002

Q4. Consider the following statements about the Hubble Space Telescope:

1. It is the only telescope designed to be serviced in space by astronauts.
2. It was built by the United States space agency NASA, with contributions from the Italian Space Agency.
3. It makes one orbit around Earth every 45 minutes.

Which of the given above statements is/are correct?

- a. 1 only**
b. 2 and 3 only
c. 1 and 3 only
d. 1, 2 and 3

Q5. Consider the following statements about UDAN Scheme:

1. It is an innovative scheme to develop the regional aviation market.
2. It is a Central Sector Scheme with 100% funding from the Government of India.
3. It is implemented by the Airports Authority of India (AAI).

Which of the given above statements is/are correct?

- a. 1 and 2 only
b. 3 only
c. 1 and 3 only
d. 1, 2 and 3