

POLITY

❖ **The workings of the Supreme Court collegium**

❖ **CONTEXT:** The Chief Justice of India (CJI) N.V. Ramana's tenure is drawing to an end in a few days. The Ramana Collegium has been particularly successful. Meeting frequently and working quickly, they took the perennial problem of judicial vacancies by its horns and turned it around. The collegium, as a united front, was able to recommend numerous judicial appointments and scripted history by getting nine Supreme Court judges appointed in one go. Of the nine, Justice B.V. Nagarathna, is in line to be the first woman CJI in 2027.

❖ **What exactly is the collegium system?**

- The collegium system was born out of years of friction between the judiciary and the executive. The hostility was further accentuated by instances of court-packing (the practice of changing the composition of judges in a court), mass transfer of high court judges and two supersessions to the office of the CJI in the 1970s.
- The Three Judges cases saw the evolution of the collegium system. In the First Judges case, the court held that the consultation with the CJI should be "full and effective".
- The Second Judges case introduced the collegium system in 1993. It ruled that the CJI would have to consult a collegium of his two senior-most judges in the apex court on judicial appointments. The court held that such a "collective opinion" of the collegium would have primacy over the government.
- It was the Third Judges case in 1998, which was a Presidential reference, that expanded the judicial collegium to its present composition of the CJI and four of his senior-most judges.

❖ **How does the collegium system work?**

- The collegium of the CJI and four senior-most judges of the Supreme Court make recommendations for appointments to the apex court and High Courts.
- The collegium can veto the government if the names are sent back by the latter for reconsideration.
- The basic tenet behind the collegium system is that the judiciary should have primacy over the government in matters of appointments and transfers in order to remain independent.
- However, over time, the collegium system has attracted criticism, even from within the judicial institution, for its lack of transparency.
- It has even been accused of nepotism. The government's efforts to amend the Constitution and bring a National Judicial Appointments Commission were struck down by a Constitution Bench.

❖ **How are judicial appointments to the Supreme Court made?**

- The appointment of the CJI and judges of the apex court is governed by a Memorandum of Procedure.
- The CJI and the judges of the Supreme Court are appointed by the President under clause (2) of Article 124 of the Constitution.
- The appointment to the office of the CJI should be of the senior-most judge of the Supreme Court considered fit to hold the office.
- The Union Law Minister would, at an "appropriate time", seek the recommendation of the outgoing CJI on his successor.
- Once the CJI recommends, the Law Minister forwards the communication to the Prime Minister who would advise the President on the appointment.
- In the case of an appointment of a Supreme Court judge, when a vacancy is expected to arise in the apex court, the collegium would recommend a candidate to the Union Law Minister.
- The CJI would also ascertain the views of the senior-most judges in the Supreme Court, who hail from the High Court from where the person recommended comes from.
- The opinions of each member of the Collegium and other judges consulted should be made in writing and form part of the file on the candidate sent to the government. If the CJI had consulted non-judges, he should make a memorandum containing the substance of consultation, which would also be part of the file.
- After the receipt of the Collegium recommendation, the Law Minister would forward it to the Prime Minister, who would advise the President in the matter of appointment.

❖ **Has the increase in judicial appointments lowered pendency in the Supreme Court?**

- The increase in the number of judges has not guaranteed lower pendency of cases in the apex court over the years.
- The number of pending cases has risen to 71,411 as on August 1, 2022 from a little over 55,000 in 2017. This is despite the fact that the sanctioned judicial strength of the court was increased to 34 judges in August 2019. A steady rise in arrears regardless of the periodic increase in judicial strength has been a constant phenomenon since 1950.
- In 1950, the Supreme Court had eight judges and a pendency of 100-plus cases.

- A decade later, in 1960, the judges' strength in the Supreme Court grew to 14 while pendency rose to 3,247. In 1978, the number of apex court judges was 18 and pendency had crossed the 14,000-mark. In 1986, there were 26 judges in the Supreme Court while pendency increased to 27,881. In 2009, the number of judges in the Supreme Court reached 31 though pendency went beyond 50,000. In 2014, the number of judges remained 31 but pendency had burgeoned to over 64,000. In 2020 and 2021, the pandemic added to the pendency rate in the apex court. The year 2020 ended with a backlog of 64,426 cases and 2021 with 69,855 cases.
- The court currently has 31 working judges. Four serving judges, including Chief Justice Ramana, would retire in the next few months. His successor Justice U.U. Lalit, is scheduled to retire in November 8, with hardly a three-month tenure as top judge. Justice D.Y. Chandrachud is in line as per the seniority norm to be the 50th CJI Chief Justice in November. Justice B.V. Nagarathna, is in line to be the first woman CJI in 2027. The problems of arrears and vacancies in the apex court may likely fall on his shoulders in a year of churn.

ENVIRONMENT

❖ The Great Barrier Reef's recovery and vulnerability to climate threats

❖ **CONTEXT:** The highest levels of coral cover, within the past 36 years, has been recorded in the northern and central parts of Australia's Great Barrier Reef (GBR), according to the annual long-term monitoring report by the Australian Institute of Marine Science (AIMS). The researchers behind the report have warned, however, that this could be quickly reversed owing to rising global temperatures. This came after the reef experienced a mass coral bleaching event in March 2022.

❖ What are coral reefs?

- Corals are marine invertebrates or animals which do not possess a spine. They are the largest living structures on the planet. Each coral is called a polyp and thousands of such polyps live together to form a colony, which grows when polyps multiply to make copies of themselves.
- Corals are of two types — hard corals and soft corals.
- Hard corals extract calcium carbonate from seawater to build hard, white coral exoskeletons. Hard corals are in a way the engineers of reef ecosystems and measuring the extent of hard coral is a widely-accepted metric for measuring the condition of coral reefs.
- Soft corals attach themselves to such skeletons and older skeletons built by their ancestors. Soft corals also add their own skeletons to the hard structure over the years. These growing multiplying structures gradually form coral reefs.
- Australia's Great Barrier Reef is the world's largest reef system stretching across 2,300 km and having nearly 3,000 individual reefs. It hosts 400 different types of coral, gives shelter to 1,500 species of fish and 4,000 types of mollusc. Coral reefs support over 25% of marine biodiversity even as they take up only 1% of the seafloor.
- The marine life supported by reefs further fuels global fishing industries. Besides, coral reef systems generate \$2.7 trillion in annual economic value through goods and service trade and tourism.
- In Australia, the Barrier Reef, in pre-COVID times, generated \$4.6 billion annually through tourism and employed over 60,000 people including divers and guides.

❖ What does the new report say?

- The annual long-term monitoring by AIMS began 36 years ago, and reefs are surveyed through in-water and aerial techniques.
- The current report surveyed 87 reefs in the GBR between August 2021 and May 2022. The report states that reef systems are resilient and capable of recovering after disturbances such as accumulated heat stress, cyclones, predatory attacks and so on, provided the frequency of such disturbances is low.
- The new survey shows record levels of region-wide coral cover in the northern and central GBR since the first ever AIMS survey was done.
- Coral cover is measured by determining the increase in the cover of hard corals. The hard coral cover in northern GBR had reached 36% while that in the central region had reached 33%. Meanwhile, coral cover levels declined in the southern region from 38% in 2021 to 34% in 2022.
- The record levels of recovery, were fuelled largely by increases in the fast-growing Acropora corals, which are a dominant type in the GBR.
- Incidentally, these fast growing corals are also the most susceptible to environmental pressures such as rising temperatures, cyclones, pollution, crown-of-thorn starfish (COTs) attacks which prey on hard corals and so on.
- Also, behind the recent recovery in parts of the reef, are the low levels of acute stressors in the past 12 months — no tropical cyclones, lesser heat stress in 2020 and 2022 as opposed to 2016 and 2017, and a decrease in COTs outbreaks.

❖ **Does this mean the reef is out of the woods?**

- Besides predatory attacks and tropical cyclones, scientists say that the biggest threat to the health of the reef is climate change-induced heat stress, resulting in coral bleaching.
- Corals share a symbiotic relationship with single-celled algae called zooxanthellae. The algae prepares food for corals through photosynthesis and also gives them their vibrant colouration.
- When exposed to conditions like heat stress, pollution, or high levels of ocean acidity, the zooxanthellae start producing reactive oxygen species not beneficial to the corals.
- So, the corals kick out the colour-giving algae from their polyps, exposing their pale white exoskeleton and leading to coral starvation as corals cannot produce their own food.
- Bleached corals can survive depending on the levels of bleaching and the recovery of sea temperatures to normal levels. Severe bleaching and prolonged stress in the external environment can lead to coral death.
- Over the last couple of decades, climate change-induced rise in temperature has made seas warmer than usual.
- Under all positive outlooks and projections in terms of cutting greenhouse gases, sea temperatures are predicted to increase by 1.5°C to 2°C by the time the century nears its end.
- According to the UN assessment in 2021, the world is going to experience heating at 1.5°C in the next decade, the temperature at which bleaching becomes more frequent and recovery less impactful.
- The concern is that in the past decade, mass bleaching events have become more closely spaced in time.
- The first mass bleaching event occurred in 1998 when the El Niño weather pattern caused sea surfaces to heat, causing 8% of the world's coral to die.
- The second event took place in 2002. But the longest and most damaging bleaching event took place from 2014 to 2017.
- Mass bleaching then occurred again in 2020, followed by earlier 2022. According to the Australian government's scientists, 91% of the reefs it had surveyed in March 2022 were affected by bleaching.
- Notably, half of the total reefs were surveyed before the peak of 2022's mass coral bleaching event in the GBR. Since surveys to determine the effects of bleaching need to occur during or after the summer heat wave. The aerial surveys by AIMS included 47 reefs and coral bleaching was recorded on 45 of these reefs. While the levels were not high enough to cause coral death it did leave sub-lethal effects such as reduced growth and reproduction.
- According to The AIMS report the prognosis for the future disturbance suggests an increase in marine heat waves that will last longer and the ongoing risk of COTs outbreaks and cyclones. Therefore, while the observed recovery offers good news for the overall state of the GBR, there is an increasing concern for its ability to maintain this state.

PRELIMS

1. First flight of India's newest rocket, what it means for ISRO

❖ **CONTEXT:** It was one of the most keenly-awaited launches of recent years. The maiden flight of the SSLV or the Small Satellite Launch Vehicle, India's newest addition to its rocket fleet, had been postponed several times in the last three years. The pandemic played its role, but there were delays from ISRO's side as well.

- The rocket finally embarked on its first flight, carrying two satellites, including an earth observation micro-satellite called EOS-02. After a successful lift-off and separation of its three stages, the flight deviated from its script. ISRO initially said there was data loss in the final stages of the flight. Later, the space agency elaborated saying that the rocket placed "the satellites into 356 km x 76 km elliptical orbit instead of 356 km circular orbit", adding that the "satellites are longer be usable".
- This less-than-perfect flight of the SSLV puts a cloud of doubt over the new rocket that is being billed to become ISRO's main launch vehicle in the coming years.
- It is a rocket that can be assembled within 72 hours by a team of just 5-6 people. A rocket that costs at least one-tenth of the those currently in use. A rocket that can enable a space launch from India every week. And, a rocket that caters specifically to the small and micro satellites that constitute over 90 per cent of all satellites being launched these days.
- There is a reason why it is considered a gamechanger, and is seen as something that can truly transform the Indian space sector. But recent flight has the potential to delay the timelines further.

❖ **Era of small satellites**

- For a very long time, small satellites — anything weighing between 5 and 1,000 kg — have had to remain content with hitching a ride to space on rockets commissioned to carry some other, larger satellites.
- The timeline of the launch used to be dictated by this larger, primary, satellite, whose interests would take precedence. But with more and more businesses, government agencies, even universities and laboratories

beginning to send satellites — nearly all of them falling in this category of small satellites — to space, the constraints of a piggyback ride have started to hurt.

- In fact, the demand for the launch of small satellites has increased at a rapid pace in the last eight to ten years, it is due to the ever-growing need for space-based data, communication, surveillance, and commerce. Estimates suggest that tens of thousands of small satellites would be launched in the next ten years.
- Satellite builders and operators, therefore, do not have the luxury to wait for months to get a berth on a rocket, or pay the very high travel costs. Increasingly, organisations are creating a constellation of satellites in space. Projects like Starlink of SpaceX or OneWeb are putting together a constellation of hundreds of satellites.
- As a result, the demand for dedicated rockets that can be launched frequently, and can offer cheap rides to space, is growing. This is also a lucrative business opportunity for agencies with launching capability like ISRO, because most of the demand comes from companies that are launching satellites for commercial purposes.
- Several new players, both in the government as well as private sector, have begun to offer launching services. In India, where the space sector is fast being opened up for the private sector, at least three private companies are developing rockets that can launch small satellites into space. It is to cater to this demand, and to grab this business opportunity, that ISRO has also developed the SSLV.

❖ **More launches**

- In a good year, ISRO makes 5-6 launches with its PSLV and GSLV (Geospatial Satellite Launch Vehicles) rockets. These rockets typically take 70-80 days to assemble.
- Dozens of people work on the assembly, and each of these cost tens of millions of dollars. Though many of these also carry commercial satellites, the revenue generated is not commensurate with the costs incurred.
- The SSLV is meant to change all this. This rocket is supposed to have a quick turnaround time, usually less than three days. It can be assembled on demand at short notice, and at a fraction of the cost of the existing launch vehicles. The SSLV would have the capability to carry satellites weighing up to 500 kg to the lower earth orbits (up to altitudes of 1,000 km from earth's surface) which is one of the most sought after places in space for positioning of satellites.
- But more importantly, it is likely to drastically increase ISRO's launch rate. According to ISRO officials it looking at 50 to 60 launches every year with the SSLV. That would practically be one launch every week, a sharp contrast from the 2-3 launches every year that ISRO has been able to manage.

2. **What is Lumpy Skin Disease, the viral illness spreading among cattle**

- ❖ **CONTEXT:** Over the last few weeks, over 3,000 cattle have died in Rajasthan, Gujarat and Punjab due to a viral infection called the Lumpy Skin Disease (LSD). The National Dairy Development Board has supplied 28 lakh doses of goat pox vaccine to the three states.

❖ **The disease**

- According to a report by GAVI (Global Alliance for Vaccines and Immunisation), the Lumpy Skin Disease (LSD) is caused by a virus called Capri pox virus and is "an emerging threat to livestock worldwide". It is genetically related to the goat pox and sheep pox virus family
- LSD infects cattle and water buffalo mainly through vectors such as blood-feeding insects. Signs of an infection include the appearance of circular, firm nodes on the animal's hide or skin that look similar to lumps.
- Infected animals immediately start losing weight and may have fever and lesions in the mouth, along with a reduced milk yield. Other symptoms include excessive nasal and salivary secretion.

❖ **Previous outbreaks**

- The disease has been endemic in most African countries. But since 2012, it has spread rapidly through the Middle East, South east Europe and West and Central Asia. Since 2019, several outbreaks of LSD have been reported in Asia. In May this year, Pakistan's Punjab also reported the deaths of over 300 cows due to LSD. In September 2020, a strain of the virus was discovered in Maharashtra. Gujarat too has reported cases over the last few years, sporadically. Currently, the point of concern is the number of deaths being reported.

❖ **Risk to humans**

- The disease is not zoonotic, which means it does not spread from animals to humans. However, according to doctors, "milk produced by an infected animal will be fit for human consumption after boiling or pasteurisation as these processes will kill the viruses, if any"

3. **Jal Jeevan Mission (JJM)**

- ❖ **CONTEXT:** A Maharashtra village Pimpalghar-Ranjnoli village holds a lesson for the rest of India. Each of the 5,644 residents of Pimpalghar-Ranjnoli village, situated in the industrial belt of Thane district's Bhiwandi tehsil along the Mumbai-Nasik highway, has access to 55 litres of water every day.

- Under the JJM, the central government, in partnership with states, aims to provide potable water in adequate quantity and prescribed quality on a long term basis to every rural household, including in tribal areas of the country, through tap water connection by 2024
- The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting. The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission.
- It comes under Jal Shakti Ministry.
- ❖ **JJM's Performance so far?**
- Around 9.65 crore households (50.38%) have tap water connections across the nation as of 10th June, 2022.
- At the State level, Goa, Telangana and Haryana have achieved 100% tap connectivity to all households in the State.
- Union territories like Puducherry, the Andaman and Nicobar Islands, Dadra & Nagar Haveli and Daman & Diu have also provided 100 % of their households with tap water connections.
- States with over 90 % FHTC (Functional Household toilet coverage) coverage are – Punjab at 99.72 %, Gujarat at 95.91 %, Himachal Pradesh at 93.05% and Bihar at 92.74%.
- States with the least FHTC coverage are — Rajasthan at 24.87 % , Chhattisgarh at 23.10 % , Jharkhand at 20.57% and Uttar Pradesh at 13.86%.

ANSWER WRITTING

Q. What are the main constraints in the transport and marketing of agricultural produce in India?

Introduction

Indian agriculture support to the national gross domestic product (GDP) is around 15 percent. With food being the uttermost need of humans, the emphasis has been on commercializing agricultural production. Due to this, adequate production and even distribution of food have become a high priority global concern. However, there are several difficulties involved in agricultural marketing as agricultural produce involves an element of risk like perishability and it again depends on the type of produce. If the agricultural produce happens to be seasonal, it also pose threat. Similarly, there are several risk elements involved in agricultural marketing.

Some major constraints associated with transportation and marketing of agricultural produce:

- **Connectivity:** There is a lack of connectivity from villages to markets.
- **Sorting and grading technology:** Farmers lack knowledge about the process
- **Numerous stakeholders working in isolation:** The food supply chain is complex with perishable goods and numerous small stakeholders. In India, the infrastructure connecting these partners is very weak.
- **Lack of demand estimation:** Demand forecasting is absent and the farmers try to push whatever they produce into the market.
- **Lack of technology applications:** Cold chain logistic supply chains should take advantage of technology improvements in data capture and processing, product tracking and tracing, synchronized freight transport transmit times for time compression along the supply chain, and supply-demand matching.
- **Lack of system integration:** The supply chain needs to be designed and built as a whole in an integrated manner. The process of new product development, procurement, and order to delivery processes should be well designed and well supported with the help of IT tools and software.
- **Presence of a large number of unorganized retailers:** At present, the unorganized retailers are linked with farmers through wholesalers or commission agents. The commission agents and wholesalers' redundant supply chain practices make unorganized further inefficient.
- **Slowdown in production growth:** With around 67 percent of landholdings being marginal, with an average size of 0.4 hectares, more than half of marginal farmers are likely to not have any excess income to spare beyond subsistence, hindering the improvements in farm-level productivity
- **Weak rural Infrastructure:** Lack of better roads and rail facilities creates logistics problem
- **Absence of Cold Storage Facilities:** It leads to spoiling of perishable items like fruits etc.
- **Unavailability of Insurance Products to protect goods while moving.**
- **Presence of Asymmetric information:** It is usually found that the middle man has more information than both farmers and consumers regarding prices, supplies, and stocks available.
- **Other issues:** Apart from the above areas of concern, other issues such as Lack of applied research, Taxation issues, access to credit, obsolete technologies, etc. persist in the sector.

Way forward:

- Improving infrastructure through schemes like Aajeevika Grameen Express yojana, SAMPADA yojana for building warehouses.
- Vertical coordination of farmers through cooperatives, contract farming, and retail chains would facilitate better delivery of output, reduce market risks, provide better infrastructure, attract more public interest, acquire better extension services, and create awareness regarding the prevailing and new technologies.

- Customized logistics is another important immediate requirement to make logistics effective. This reduces the cost, facilitates the maintenance of the quality of the produce, and fulfills the requirements of targeted customers.
- Information system for better coordination among different stakeholders from farmers to consumers is the need of the hour. The internet and mobile communication can also be used to enable information and financial transfer between the stakeholders.
- There are initiatives such as the India Food Banking Network (IFBN), which is promoting the concept of collaborative consumption with support from the private sector and civil society organizations.

MCQs

- Consider the following statements with reference to Jal Jivan mission
 - It is a central sector scheme implemented under Ministry of Jal shakti
 - It aims to provide taped drinking water to every household by 2024
 - Puduchery is the only union territory with 100% house hold coverage under the scheme
 Which of the above statement/s is or are correct?
 - 1 and 2 only
 - 2 only**
 - 2 and 3 only
 - 3 only
- Which of the following statements is correct regarding the system of Collegium for appointment of judges to the higher judiciary?
 - It originated from the 'first Judges case', 1981 when SC rejected the method of selection and appointment of judges by Union Executive
 - Supreme Court (SC) collegium currently consists of the Chief Justice of India (CJI) and 2 other senior most judges of SC
 - High Court (HC) Collegium currently consists of the Chief Justice of the HC and 3 other senior most judges of HC
 - Retirement age of judges currently is 65 for SC judges and 62 for HC Judges**
- Which of the following judges case is responsible for the present composition of collegiums system for appointment and transfer of judges?
 - First Judges Case
 - Second Judges Case
 - Third Judges Case**
 - Fourth Judges Case
- Consider the following
 - Andaman and Nicobar
 - Gulf of Kuchchh
 - Gulf of Mannar
 - Sundarbans
 Which of the above have coral reefs
 - 1,2 and 3 only**
 - 2,3, and 4 only
 - 1 and 2 only
 - 2 and 3 only
- Consider the following statements
 - Lumpy Skin Disease (LSD) is caused Capri pox virus.
 - It is a vector born disease
 - Vaccination against these diseases is covered under the Livestock Health and Disease Control Programme of India.
 Which of the above statement/s is/are correct?
 - 1 and 3 only
 - 1 and 2 only
 - 2 and 3 only
 - All of the above**
- Lumpy Skin Disease (LSD) is endemic to which of the following?
 - Africa**
 - South East Asia
 - Australia
 - North America
- Regional Standardization Forum seen in news is used in the context of which of the following?
 - Digital transformation**
 - Free Trade Agreement
 - Military acquisition
 - Regional transport
- Recently Tahiti pristine coral reefs discovered is associated with which of the following ocean?
 - North Atlantic
 - Central pacific**
 - Indian ocean
 - South china sea
- Consider the following statements
 - Coral reefs are only found in tropical waters.
 - World's largest coral reef system is Great Barrier Reef (GBR) off the north western coast of Australia.
 - Great Barrier Reef is a UNESCO World Heritage Site.
 Select the correct statement/s using the codes given below?
 - 1 and 2 only
 - 2 and 3 only
 - 3 only**
 - 2 only
- Which of the following is the world's largest cold water reef?
 - Rost reef**
 - Tahiti pristine coral reefs
 - Great heartland reef
 - French Coral Polynesia