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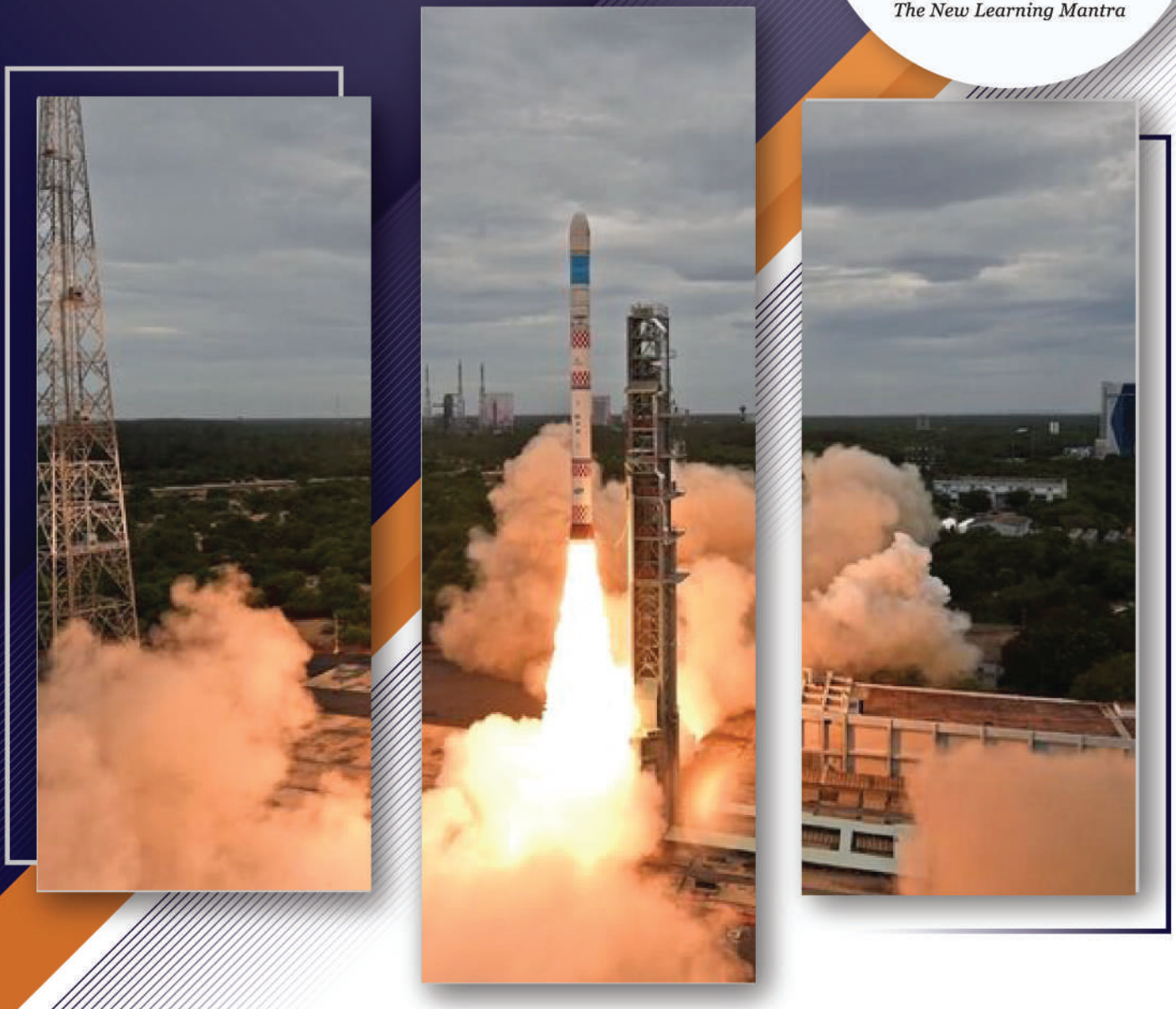

VEDHIK

DAILY NEWS ANALYSIS

08-AUG-2022

FOREWORD

We, at Team Vedhik is happy to introduce a new initiative - "Daily Current Affairs_The Hindu" compilations to help you with UPSC Civil Services Examination preparation. We believe this initiative - "Daily Current Affairs_The Hindu" would help students, especially beginners save time and streamline their preparations with regard to Current Affairs. A content page and an Appendix has been added segregating and mapping the content to the syllabus.

It is an appreciable efforts by Vedhik IAS Academy helping aspirants of UPSC Civil Services Examinations. I would like to express my sincere gratitude to Dr. Babu Sebastian, former VC - MG University in extending all support to this endeavour. Finally I also extend my thanks to thank Ms. Shilpa Sasidharan and Mr. Shahul Hameed for their assistance in the preparing the compilations.

We welcome your valuable comments so that further improvement may be made in the forthcoming material. We look forward to feedback, comments and suggestions on how to improve and add value for students. Every care has been taken to avoid typing errors and if any reader comes across any such error, the authors shall feel obliged if they are informed at their Email ID.

CONTENTS

CSIR gets its first woman chief

N. Kalaiselvi, 'lithium battery expert', is expected to aid India's e-vehicle push

JACOB KOSHY
NEW DELHI

The Council of Scientific and Industrial Research (CSIR) has, for the first time in its 80-year history, appointed a woman Director-General.

N. Kalaiselvi, currently Director of the CSIR-Central Electro Chemical Research Institute (CSIR-CECRI), Karaikudi, Tamil Nadu, will now lead the network of 38 laboratories and nearly 4,500 scientists, and has been appointed for two years, said a note from the Appointments Committee of the Union Cabinet.

Ms. Kalaiselvi's research spans over 25 years and is focused on electrochemical power systems and developing electrode materials, custom-design synthesis methods, optimising reaction parameters and electrochemical evaluation of in-house prepared electrode materials for making energy storage devices.

Her research interests include lithium and beyond lithium batteries, supercapacitors and waste-to-wealth driven electrodes and electrolytes for energy storage and electro-catalytic applications.

Credits galore: Ms. Kalaiselvi (second from right) published many research papers, holds six patents. ▪ SPECIAL ARRANGEMENT

She has been involved in projects to increase electric mobility in India and her expertise in these sectors will likely help with India's push towards increasing the number of electric vehicles. India has around 1.4 million electric vehicles comprising motorbikes, cars, three-wheelers and buses.

The Centre announced the second phase of a programme, FAME (Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India), that will invest ₹10,000 crore in developing electric vehicle infrastructure.

A long journey

From Ambasamudram village in Tirunelveli district of Tamil Nadu to heading the CSIR as its first woman Director-General, it has been a long journey for Ms. Kalaiselvi. Having studied in a Tamil-medium school in the district, she had gone on to pursue her Ph.D. degree from Annamalai University in Chidambaram.

In February 2019, Ms. Kalaiselvi was appointed Director of the Karaikudi-based Central Electro Chemical Research Institute (CECRI). This is the first time a scientist from the CECRI has been appointed Director-General of the CSIR.

A scientist from the CECRI said Ms. Kalaiselvi was better known as "lithium battery expert" among the academics. She was instrumental in bringing out a number of research papers, has six patents to her credit and was a guide to research scholars in pursuing their Ph.D. degrees.

The CECRI will be celebrating its platinum jubilee in 2022 from where Ms. Kalaiselvi has been elevated to the top position in the Council of Scientific and Industrial Research as its Director-General, New Delhi, the scientist added.

(With inputs from Srikrishna L.)

Progressing ahead: U.S. Navy ship Charles Drew arriving at the L&T Shipyard near Chennai on Sunday. ▪ M. VEDHAN

In a first, U.S. Navy ship in India for repairs

The work will go on till August 17

SPECIAL CORRESPONDENT
NEW DELHI

In a first, a U.S. Navy Ship, *Charles Drew*, arrived in India for carrying out repairs and allied services at the Larsen & Toubro (L&T) Shipyard at Kattupalli, Chennai on Sunday, adding a new dimension to the fast expanding Indo-U.S. strategic partnership.

"This is the first-ever repair of a U.S. Navy ship in India. The U.S. Navy had awarded a contract to the shipyard for undertaking maintenance of the ship. The event signifies the capabilities of Indian shipyards in the global ship repairing market," a Defence Ministry statement said.

The *USNS Charles Drew* will be at the Kattupalli shipyard for a period of 11 days from August 7 to 17 and undergo repairs in various areas. At the India-U.S. 2+2 in April, both sides agreed to explore the possibilities of utilising Indian shipyards for the repair and maintenance of ships of the U.S. Maritime Sealift Command to support mid-voyage repair of U.S. Naval ships.

J.D. Patil, member of the executive council and adviser to the CEO of L&T for Defence and Smart Technologies, said that the Marine Sealift Command of the U.S. Navy had undertaken rigorous evaluation of select shipyards in India and cleared L&T for undertaking repairs on their vessels which he said was "a recognition for the modern infrastructure at the shipyard built to global standards".

Terming the event a red-letter day for the Indian shipbuilding industry and Indo-U.S. defence relationship, Defence Secretary Ajay Kumar described the arrival of *Charles Drew* for repairs as a sign of a maturing Indian shipbuilding industry.

"Today, India has six major shipyards with a turnover of nearly $2 billion. We have our own design house capable of making all kinds of state-of-the-art ships. The country's first Indigenous Aircraft Carrier *Vikrant* is a shining example of the growth of the industry," he said. In the next two or three 3 years, India will see the first large-size marine diesel engine being designed and developed in the country, Mr. Kumar said

He further said, "In a big step towards ship building efforts, a decision has been made to develop the capabilities of naval shipyards and marine diesel engines in India of six megawatts and above will be designed and manufactured in the country." Request for proposal in this regard will be floated by the Indian Navy.

"It has been decided to develop the diesel marine engine under the 'make-one' procedure wherein the government provides 70% assistance to the project cost for design and development of the engine and in the in-principle approval has been given," he added.

Judith Ravin, U.S. Consul-General in Chennai, said, "In April U.S. Secretary of State Antony Blinken and Secretary of Defence Lloyd Austin affirmed their intention to explore utilising Indian shipyards for repairs on U.S. Navy vessels. This inaugural repair of the ship is a landmark development."

Vice-Admiral S.N. Ghormade, Vice Chief of the Naval Staff, said Voyage Repair Availability of *Charles Drew* shows the kind of mutual trust and also consolidates our status as a major defence partner.

(With inputs from Sunitha Sekar)

Wang Yi thanks Bangladesh for backing 'One China' policy

Chinese FM meets PM Hasina, discusses Rohingya crisis

KALLOL BHATTACHERJEE
NEW DELHI

Chinese Foreign Minister Wang Yi on Sunday thanked Bangladesh for adhering to the 'One China' policy in the backdrop of the Taiwan crisis. The discussion in this regard took place between Mr. Wang and his Bangladesh counterpart Dr. A.K. Abdul Momen in Dhaka.

"We largely know what is happening centering Taiwan. China has its own policy. He (Wang) thanked Bangladesh and expressed gratitude as we reiterated our position. We hope it will not further aggravate... as the world can't afford to have another crisis," said Minister of State for Foreign Affairs Shahriar Alam, explaining that Bangladesh has urged all sides to exercise "utmost restraint" and avoid

Wang Yi, left, with A.K. Abdul Momen in Dhaka on Sunday. ▪ AP

any actions that may increase tension and undermine peace and stability in the Indo-Pacific region and beyond.

Mr. Wang and Mr. Momen held talks for an hour following which officials from both sides signed four agreements covering disaster prevention and reduction, cultural and tourism exchange programme between Bangladesh and China during 2023-27 and educational cooperation between the University of Dhaka and China's Institute of Oceanography to enhance collaboration in marine science and technology. Mr Wang announced that as part of post-pandemic opening up, China would welcome students from Bangladesh from Sunday onwards.

The Rohingya refugee crisis featured during the talks that Mr. Wang held with Mr. Momen and Prime Minister Sheikh Hasina on Sunday.

"Myanmar is a difficult country. We are sincerely working to resolve the crisis and will continue our efforts in the future," Agriculture Minister Muhammad Abdur Razzaque quoted Mr. Wang as saying.

PM lauds States for cooperative federalism in fighting COVID-19

NITI Governing Council discusses crop diversification, NEP, urban governance

SPECIAL CORRESPONDENT
NEW DELHI

Prime Minister Narendra Modi on Sunday said the collective effort of all the States in the spirit of cooperative federalism was the force that helped India emerge from the COVID-19 pandemic.

Addressing the seventh meeting of the NITI Aayog Governing Council, the Prime Minister said that during the pandemic, every State played a crucial role by focusing on the grassroots delivery of public services through cooperation across political lines.

In that process, India emerged as an example for the developing nations to look up to as a global leader, he added.

Telangana and Bihar Chief Ministers K. Chandrasekhar Rao and Nitish Kumar, respectively, did not participate in the meeting, which was attended by 23 Chief Ministers, three Lieutenant-Governors and two Administrators and Union Ministers.

Through a four-page letter to the Prime Minister, the Telangana Chief Minister had earlier conveyed that he would stay away from the meeting "as a mark of strong protest against the present trend of the Union government to discriminate against the States and not treating them as equal partners".

Top deck: Prime Minister Narendra Modi (centre) and other Ministers and Chief Ministers at the seventh Governing Council meeting of NITI Aayog in New Delhi on Sunday. ▪ PTI

The NITI Aayog termed the decision "unfortunate", while Union Minister Piyush Goyal on Saturday said the boycott showed that the Telangana Chief Minister had lost interest in the development works for the country's growth.

Key issues

This year, the Governing Council discussed key issues such as crop diversification and achieving self-sufficiency in pulses, oilseeds and other agri-commodities; implementation of the National Education Policy (NEP) in school education and higher education; and urban governance.

In his inaugural address, the Prime Minister stressed the need to focus on modernised agriculture, animal husbandry, and food processing to become self-sufficient and a global leader in the agriculture sector.

Mr. Modi said rapid urbanisation could be turned into a strength by using technology to ensure ease of living, transparent service delivery and improvement in the quality of life.

Describing the country's G20 presidency in 2023 as a unique opportunity to show to the world that India was not just confined to Delhi, but included every State and Union Territory, the Prime Minister called for a mass movement for identification of the best talent available in the country.

There should be a dedicated team for G20 in the States to derive the maximum possible benefit from the initiative, Mr. Modi said.

'Focus on 3Ts'

In his closing remarks, the Prime Minister said each State should focus on promoting trade, tourism and technology via every Indian Mission around the world.

CONTINUED ON ▸ PAGE 10

PM lauds States for cooperative federalism

The States must focus on reducing imports, increasing exports and identifying opportunities thereof. Even though the GST collection had improved, there was much more potential. "Increasing GST collection requires collective action by the Centre and States. It is crucial for strengthening our economic position and becoming a $5 trillion economy," he said.

Earlier, External Affairs Minister S. Jaishankar said, "For the first time in the history of G20, India will host the G20 meetings over the year, not only in Delhi, but in every State and Union Territory". While highlighting the initiatives to boost learning outcomes, capacity-building of teachers, and skilling, Union Education Minister Dharmendra Pradhan thanked and requested further support of the States in the successful implementation of the National Education Policy. At a press conference, NITI Aayog Member Ramesh Chand later said the Prime Minister also emphasised the need for self sufficiency in the area of edible oil. India was currently importing edible oil worth about ₹1 lakh crore, thus meeting nearly half the total demand from imports.

During the meeting, a key demand from the States was to make the Minimum Support Price (MSP) for pulses and oil seeds more effective. Rajasthan Chief Minister Ashok Gehlot sought better irrigation facilities in 13 districts for rapid growth in mustard cultivation.

In response to a media query, the NITI Aayog Member said over the past five-six years, the production of pulses had gone up substantially, except for the deficit in masoor and arhar dal, leading to import dependency of just about 7%. He said the northeastern States were expanding the oil palm cultivation areas.

At the meeting, Chhattisgarh Chief Minister Bhupesh Baghel reiterated the demand for a five-year extension of GST compensation. He also asked for a revision of the rates of royalty for coal and other major minerals; and suggested that the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) be implemented in the rural areas located close to cities and cities with a population of less than 20,000.

EXPLAINER

The workings of the Supreme Court collegium

How is the collegium constituted and what are its responsibilities? Who is set to be the next Chief Justice of India?

THE GIST

- The collegium of the Supreme Court consisting of the Chief Justice of India and four senior-most judges of the Supreme Court make recommendations for appointments to the apex court and High Courts.
- 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 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.

KRISHNADAS RAJAGOPAL

The story so far: 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 was 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.

A view of the Supreme Court of India. ▪ SUSHIL KUMAR VERMA

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. The problems of arrears and vacancies in the apex court may likely fall on his shoulders in a year of churn.

Focused on inflation

A rate increase was needed to prevent inflation expectations from stymieing growth

The RBI's Monetary Policy Committee on Friday raised the benchmark interest rate for a third straight meeting as policymakers battle to rein in inflation that has persistently 'remained at or above' the prescribed upper tolerance threshold for six months. The 50 basis points raise takes the policy repo rate to 5.4%, and, more significantly, to a level last seen in the pre-pandemic second quarter of fiscal 2019-20, when a growth slowdown and retail inflation of about 3.2% warranted a rate cut. As the MPC's Jayanth Varma had pointed out in June, when the MPC had recommended a 50 basis points increase, the impact of the 90 basis points total increase from May still left the real policy rate at the time lagging behind the RBI's 100 basis points increase in retail inflation projection for the year – from 5.7% to 6.7%. It is only now that the cumulative increase totals 140 basis points, and puts the central bank slightly ahead of the curve. Still, as Governor Shaktikanta Das acknowledged, consumer price inflation, even if off April's eight-year high, remains 'uncomfortably high' with inflationary pressures broad-based. And with the MPC's own forecasts for the second and third quarter pegging retail price gains well above the upper tolerance mark of 6%, at 7.1% and 6.4%, respectively, the rate setting panel had little option but to continue the withdrawal of monetary accommodation to prevent inflation expectations from getting unmoored and stymieing growth by retarding consumption.

From an external sector and exchange rate perspective as well, globalised inflationary surges are prompting policy tightening in advanced economies that is in turn roiling currency markets including appreciably weakening the rupee and adding imported inflation to the mix. Noting that 'successive shocks to the global economy' had led multilateral institutions including the IMF to lower their global growth projections and 'highlight the rising risks of recession', Mr. Das remarked, "disquietingly, globalisation of inflation is coinciding with deglobalisation of trade". Russia's invasion of Ukraine and the resultant impact on trade flows from the conflict zone have upended supply chains for several commodities and added to price pressures for a range of goods. The latest geopolitical tensions triggered in East Asia by U.S. House Speaker Nancy Pelosi's visit to Taiwan in the face of Beijing's dire warnings, and China's decision to respond with aggressive military drills around one of the world's busiest shipping lanes, could also impact global trade at a time when uncertainty and risk aversion are already high. Mr. Das's confidence in the 'resilience' of the economy's fundamentals notwithstanding, it is probably apposite for the MPC to hereafter heed Mr. Varma's exhortation by 'providing projections of the future path of the policy rate'. This would help anchor price gain expectations firmly and surely enhance the RBI's inflation-fighting credentials.

Satellites launched by SSLV in 'wrong orbit, not usable'

Launch vehicle put them in elliptical, not circular orbit: ISRO

PRESS TRUST OF INDIA
SRIHARIKOTA

The Indian Space Research Organisation (ISRO) on Sunday said the satellites onboard its maiden Small Satellite Launch Vehicle "are no longer usable" after the SSLV-D1 placed them in an elliptical orbit instead of a circular one.

The space agency said a committee would analyse, and make recommendations on, Sunday's episode. With the implementation of those recommendations, "ISRO will come back soon with SSLV-D2".

The SSLV-D1 carrying the EOS-02 and AzaadiSAT satellites lifting off from Sriharikota on Sunday. ▪ RAGU R

"SSLV-D1 placed the satellites into a 356x76 km elliptical orbit instead of the 356-km circular orbit. Satellites are no longer usable. Issue is reasonably identified. Failure of a logic to identify a sensor failure and go for a salvage action caused the deviation," ISRO said in an update on its official Twitter handle.

It added a detailed statement by ISRO Chairman S. Somanath will be "uploaded soon". In its maiden mission, the launch vehicle carried the Earth Observation Satellite EOS-02 and the co-passenger student satellite AzaadiSAT.

CONTINUED ON ▸ PAGE 10

Satellites launched by SSLV in wrong orbit

SSLV had suffered "data loss" in its terminal stage, after performing "as expected" in all stages. It had earlier lifted off from the spaceport here on Sunday morning.

After establishing itself with the successful launches of various satellites using its Polar Satellite Launch Vehicle (PSLV) and Geosynchronous Satellite Launch Vehicles (GSLV), ISRO had targeted the SSLV market which places the satellites into 500-km low-earth orbit.

The EOS-02 is an experimental optical remote sensing satellite with a high spatial resolution. It is to realise and fly an experimental imaging satellite with a short turnaround time and to demonstrate launch-on-demand capability. EOS-02 belongs to the microsatellite series of spacecraft.

The AzaadiSAT is a 8U CubeSat weighing around 8 kg. It carries 75 different payloads each weighing around 50 grams. Girl students from rural regions across the country were provided guidance to build these payloads.

The payloads were integrated by the student team of Space Kidz India. The ground system developed by Space Kidz India will be utilised for receiving the data from this satellite, ISRO said.

It is not the first time for ISRO to face a setback on its maiden launch missions as PSLV – dubbed as one of the trusted workhorses for the space agency – was not successful in its first flight way back on September 20, 1993.

After its first successful launch in October 1994, PSLV emerged as the reliable and versatile launch vehicle of India with 39 consecutively successful missions by June 2017. It had successfully launched the Chandrayaan-1 in 2008 and also the Mars Orbiter Spacecraft in 2013 that later travelled to the Moon and Mars, respectively.

EXPLAINER

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

What is the extent of recovery recorded in Australia's Great Barrier Reef? What are the potential threats to its health?

DIKSHA MUNJAL

The story so far: 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 this year.

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 grow 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%

The Great Barrier Reef as on March 7. ▪ AFP

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, the report showed, 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 this year. According to the Australian government's scientists, 91% of the reefs it had surveyed in March were affected by bleaching.

Notably, half of the total reefs were surveyed before the peak of this year's mass coral bleaching event in the GBR. Since surveys to determine the effects of bleaching need to occur during or after the summer heatwave, the authors of the report say that the full impact of this year's mass bleaching would only be known in next year's report. 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.

The AIMS report says that the prognosis for the future disturbance suggests an increase in marine heatwaves 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," the report says.

THE GIST

- 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, according to the annual long-term monitoring report by the Australian Institute of Marine Science.
- Australia's GBR is the world's largest reef system stretching across 2,300 km and having nearly 3,000 individual reefs.
- 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. The record levels of recovery were fuelled by increases in the fast-growing Acropora corals. However, scientists warned that these fast growing corals are also the most susceptible to environmental pressures such as rising temperatures, cyclones, pollution etc.

India begins cooperation with Combined Maritime Forces

Modalities of nature of cooperation is being worked out, say officials

DINAKAR PERI
NEW DELHI

Last month, India formally commenced cooperation with the Bahrain-based multilateral partnership, Combined Maritime Forces (CMF). However, the modalities of the exact nature of cooperation are being worked out, according to official sources.

At the India-U.S. 2+2 in April, India had announced that it would join the CMF as an Associate Partner, which Defence Minister Rajnath Singh had then said would strengthen cooperation in regional security in the western Indian Ocean.

Joining the CMF is the latest in a series of multilateral engagements by the Indian Navy as part of India's widening military diplomacy.

During July-end, the Deputy Chief of the Naval Staff (DCNS), Vice-Admiral Sanjay Mahindru, visited the headquarters of the CMF, which the Navy said marks "the initiation of the Indian Navy's 'Associate Support' to CMF in keeping with India's commitment to the collective responsibility of maritime security in the Indian Ocean."

In tandem: Vice-Admiral Sanjay Mahindru at the Combined Maritime Forces headquarters in Bahrain in July. ▪ @INDIANNAVY

"Commitments to resources and personnel are limited for Associate membership and it will be cooperative engagement based on the needs and requirements. The modalities for this are being worked out," an official source said.

The Indian Navy could be contributing a warship when required, however, there is no deployment as of now, the source added.

The Indian Navy has a Liaison Officer posted at the U.S. Central Command (CENTCOM) in Bahrain who will also function as the point person for cooperation with the CMF, officials stated.

The Combined Maritime Forces is a multinational naval partnership to promote security, stability and prosperity across approximately 3.2 million square miles of international waters, which encompass some of the world's most important shipping lanes.

34 members grouping

The 34-nation grouping is commanded by a U.S. Navy Vice Admiral, who also serves as Commander U.S. Naval Forces CENTCOM and U.S. Fifth Fleet. All three commands are co-located at U.S. Naval Support Activity Bahrain. In the immediate neighbourhood, Pakistan is a full member of Combined Maritime Forces .

It comprises three task forces: CTF 150 (maritime security and counter-terrorism), CTF 151 (counter piracy) and CTF 152 (Arabian Gulf security and cooperation).

As per CMF's website, it is a flexible organisation and members are not bound by either a political or military mandate. "Contributions can vary from the provision of a liaison officer at CMF HQ in Bahrain to the supply of warships or support vessels in task forces, and maritime reconnaissance aircraft based on land," it stated.

We can also call on warships not explicitly assigned to CMF to give associated support, which is assistance they can offer if they have the time and capacity to do so whilst undertaking national tasking, the description on the website stated.

Under this framework, India has in the past cooperated with CMF on various occasions. For instance, the Combined Maritime Forces's CTF 151 has coordinated with Indian and Chinese warships deployed on anti-piracy duties to patrol the Maritime Security Transit Corridor.

General Studies Paper I	
A	History of Indian culture will cover the salient aspects of art forms, literature and architecture from ancient to modern times;
B	Modern Indian history from about the middle of the eighteenth century until the present-significant events, personalities, issues;
C	Freedom struggle-its various stages and important contributors / contributions from different parts of the country;
D	Post-independence consolidation and reorganization within the country;
E	History of the world will include events from 18th century such as industrial revolution, world wars, re-drawal of national boundaries, colonization, decolonization,
F	Political philosophies like communism, capitalism, socialism etc.-their forms and effect on the society
G	Salient features of Indian Society, Diversity of India;
H	Effects of globalization on Indian society;
I	Role of women and women's organization;
J	Social empowerment, communalism, regionalism & secularism
K	Salient features of world's physical geography;
L	Geographical features and their location- changes in critical geographical features (including water bodies and ice-caps) and in flora and fauna and the effects of such changes;
M	Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc.
N	Distribution of key natural resources across the world (including South Asia and the Indian subcontinent);
O	Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India);
P	Population and associated issues;
Q	Urbanization, their problems and their remedies
General Studies Paper II	
A	India and its neighbourhood- relations;
B	Important International institutions, agencies and fora- their structure, mandate;
C	Effect of policies and politics of developed and developing countries on India's interests;
D	Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
E	Indian Constitution, historical underpinnings, evolution, features, amendments, significant provisions and basic structure;
F	Comparison of the Indian Constitutional scheme with other countries;
G	Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein; Inclusive growth and issues arising from it;
H	Parliament and State Legislatures - structure, functioning, conduct of business, powers & privileges and issues arising out of these;
I	Structure, organization and functioning of the executive and the judiciary, Ministries and Departments;

J	Separation of powers between various organs dispute redressal mechanisms and institutions;
K	Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional bodies;
L	Statutory, regulatory and various quasi-judicial bodies;
M	Mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections;
N	Salient features of the Representation of People's Act;
O	Important aspects of governance, transparency and accountability, e-governance- applications, models, successes, limitations, and potential;
P	Citizens charters, transparency & accountability and institutional and other measures;
Q	Issues relating to poverty and hunger,
R	Welfare schemes for vulnerable sections of the population by the Centre and States, Performance of these schemes;
S	Issues relating to development and management of social sector / services relating to education and human resources;
T	Issues relating to development and management of social sector / services relating to health
General Studies Paper III	
A	Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment;
B	Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth;
C	Inclusive growth and issues arising from it;
D	Infrastructure Energy, Ports, Roads, Airports, Railways etc. Government budgeting;
E	Land reforms in India
F	Major crops, cropping patterns in various parts of the country, different types of irrigation and irrigation systems;
G	Storage, transport and marketing of agricultural produce and issues and related constraints;
H	e-technology in the aid of farmers; Technology Missions; Economics of Animal-Rearing.
I	Issues of buffer stocks and food security, Public Distribution System- objectives, functioning, limitations, revamping;
J	Food processing and related industries in India – scope and significance, location, upstream and downstream requirements, supply chain management;
K	Issues related to direct and indirect farm subsidies and minimum support prices
L	Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology;
M	Indigenization of technology and developing new technology;
N	Developments and their applications and effects in everyday life;
O	Issues relating to intellectual property rights
P	Conservation, environmental pollution and degradation, environmental impact assessment
Q	Disaster and disaster management
R	Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security;
S	Money-laundering and its prevention;

T	Various forces and their mandate;
U	Security challenges and their management in border areas;
V	Linkages of organized crime with terrorism;
W	Role of external state and non-state actors in creating challenges to internal security;
X	Linkages between development and spread of extremism.
General Studies Paper IV	
A	Ethics and Human Interface: Essence, determinants and consequences of Ethics in human actions;
B	Dimensions of ethics;
C	Ethics in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators;
D	Role of family, society and educational institutions in inculcating values.
E	Attitude: Content, structure, function; its influence and relation with thought and behaviour;
F	Moral and political attitudes;
G	Social influence and persuasion.
H	Aptitude and foundational values for Civil Service , integrity, impartiality and non-partisanship, objectivity, dedication to public service, empathy, tolerance and compassion towards the weaker sections.
I	Emotional intelligence-concepts, and their utilities and application in administration and governance.
J	Contributions of moral thinkers and philosophers from India and world.
K	Public/Civil service values and Ethics in Public administration: Status and problems;
L	Ethical concerns and dilemmas in government and private institutions;
M	Laws, rules, regulations and conscience as
N	sources of ethical guidance;
O	Accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding;
P	Corporate governance.
Q	Probity in Governance: Concept of public service;
R	Philosophical basis of governance and probity;
S	Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
T	Case Studies on above issues.