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INTERNATIONAL RELATIONS

PM MODI'S PARIS VISIT

As the India-France strategic partnership hits the quarter-century mark, it has been given "strong guidance" by the "common vision"

Rafale Deal

- Mr. Modi's visit to France is being interpreted as a step towards closer military cooperation between the two countries, as India is gearing up to acquire 26 new Rafale-M fighter jets that will fit into India's maritime military plans.
- Mr. Modi's schedule in Paris includes interactions with the French President and other leading figures in the government and business world, with the high point being the Bastille Day military parade, where he will be the chief guest.

Bastille Day is the national day of France, which is celebrated on 14 July each year. In French, it is formally called the Fête nationale française. The French National Day is the anniversary of the Storming of the Bastille on 14 July 1789, a major event of the French Revolution.

- This year marks the 25th anniversary of our strategic partnership. There are several pillars of our strategic partnership and each of these pillars would

come up for stocktaking under the bilateral talks

Military cooperation

- The Rafale-M proposal was cleared by the Defence Procurement Board in the run-up to the visit, and the Defence Acquisition Council — the highest decision-making body on procurement in the Defence Ministry — is expected to review it

Scorpene-class conventional submarines

- There are several other defence deals in the pipeline which could see movement during Mr. Modi's visit, including a proposal to buy three more Scorpene-class conventional submarines for the Navy, and a plan to jointly develop fighter jet engines to power fifth-generation advanced medium combat aircraft, and the twin-engine deck-based fighter to operate from carriers.
- The two delegations will discuss cooperation on civil nuclear issues, space, cyber security technology, counter terrorism, climate change, renewable energy, and the international solar alliance. "Reorientation of our security partnership in line with Atmanirbhar Bharat [self-reliant India] objectives, supply chain integration between the industry and business segments of the two countries would all form part of discussions

NATO ANNUAL SUMMIT - UKRAINE'S NATO ENTRY

The News

NATO leaders are holding their annual summit at Vilnius, Capital of Lithuania as Ukraine looks to the security alliance for support in its attempt to push back invading Russian forces.

The Vilnius communique, however, while emphasising NATO's support for Ukraine, gave no clear timetable on when the country might be able to join the alliance, in a major disappointment for Ukrainian President Volodymyr Zelenskyy, who had travelled to the Lithuanian capital.

- At the end of annual summit, Ukraine President welcomes promise of weapons; NATO-Ukraine council formed to bring Kyiv as close as possible to the military alliance without actually joining it
- Zelenskyy welcomed fresh commitments of weapons and ammunition to fight Russia's invasion even as he expressed disappointment over the lack of a clear path for his country to join NATO as the alliance wrapped up its annual summit.

- A joint declaration issued by the G-7 lays the groundwork for each nation to negotiate agreements to help Ukraine bolster its military over the long term. Mr. Zelenskyy described the initiative as a bridge toward eventual NATO membership and a deterrent against Russia.

NATO-Ukraine Council

- The announcement came as NATO leaders launched a new forum for deepening ties with Ukraine, known as the NATO-Ukraine Council. It's intended to serve as a permanent body where the alliance's 31 members and Ukraine can hold consultations and call for meetings in emergency situations.
- The setting is part of NATO's effort to bring Ukraine as close as possible to the military alliance without actually joining it. Norway said it would supply ultra-light drones and components for air defence missile systems to Ukraine.

PAKISTAN GETS FINAL IMF NOD FOR \$3-BN LOAN IN STAND-BY ARRANGEMENT

Context: the International Monetary Fund (IMF) on Wednesday gave a final nod to a \$3 billion "stand-by arrangement" for the country to support the government's efforts to stabilise the ailing economy.

Details of the news

- The Executive Board of the International Monetary Fund (IMF) approved a 9-month Stand-By Arrangement (SBA) for Pakistan for an amount of SDR2,250 million (about \$3 billion, or 111% of quota) to support the authorities' economic stabilisation programme.
- The development came after Pakistan received \$2 billion from Saudi Arabia and \$1 billion from the UAE as per conditions of the fund.

Why Pakistan needs SBA?

- Pakistan has been struggling to get IMF support for its ailing economy. Pakistan's economy was hit hard by significant shocks last year, notably the spillovers from the severe impacts of floods, the large volatility in commodity prices, and the tightening of external and domestic financing conditions.
- These factors together with uneven policy implementation under the EFF combined to halt the post-pandemic recovery, sharply increase inflation, and significantly depleted internal and external buffers.

- It is believed that the new loan will improve the country's foreign exchange reserve and also open the door to multilateral loan agreements with institutions and countries.

What is International Monetary Fund (IMF)?

- The International Monetary Fund (IMF) works to achieve sustainable growth and prosperity for all of its 190 member countries.
- The IMF has three critical missions: furthering international monetary cooperation, encouraging the expansion of trade and economic growth, and discouraging policies that would harm prosperity.

What is Stand-by Arrangement (SBA)?

The Stand-by Arrangement (SBA) provides short-term financial assistance to countries facing balance of payments problems. Historically, it has been the IMF lending instrument most used by advanced and emerging market countries.

Eligibility: All member countries facing external financing needs are eligible for SBAs subject to IMF policies. However, SBAs are more often used by middle income (and, more recently, advanced) member countries, since low-income countries have a range of concessional instruments tailored to their needs.

Duration: The length of a SBA is flexible, and typically covers a period of 12–24

months, but no more than 36 months, consistent with addressing short-term balance of payments problems.

QUIET DIPLOMACY COULD EASE SOUTH CHINA SEA TENSIONS

There are a number of countries in Southeast Asian region with overlapping claims to the region, and that this has led to tensions and even armed clashes. A quiet diplomacy is a more effective way to resolve disputes than public statements or threats.

Public statements and threats can actually make the situation worse,

as they can lead to a hardening of positions. A quiet diplomacy is more likely to build trust between the parties involved. He argues that trust is essential for any successful resolution of a dispute. A quiet diplomacy is more likely to be successful if it is led by a neutral third party, such as the United States or the European Union.

IN UNHRC VOTE, INDIA STANDS AGAINST DESECRATION OF KORAN

India voted in favour of a resolution at the UN Human Rights Council that condemned the desecration of the Koran. The resolution was passed by a vote of 29-14, with 13 abstentions. India's vote was seen as a strong statement against religious intolerance.

The resolution was tabled by Pakistan and called on all states to "condemn and strongly reject the recent public and premeditated acts of desecration of the Holy Quran." The resolution also called on states to "take all necessary measures to prevent such acts and to hold the perpetrators to account."

India's vote was in line with its long-standing commitment to religious freedom and tolerance. The Indian government has repeatedly condemned acts of religious intolerance, and has taken steps to protect the rights of all religious communities in India.

The vote was welcomed by Muslim groups in India, who said it was a sign that the Indian government was committed to protecting the rights of Muslims. However, some Hindu groups criticized the vote, saying that it was an attack on freedom of expression.

ECONOMICS AND DEVELOPMENT

U.S. CPI INFLATION SLOWED TO 3% IN JUNE JULY 13, 2023

U.S. consumer prices rose 3% in June 2023, the slowest pace in 12 months. The core CPI, which excludes food and energy prices, rose 2.3%, also the slowest pace in 12 months. The slowdown in inflation was driven by a number of factors, including falling energy prices and easing supply chain disruptions.

- The decline in energy prices was the main reason for the slowdown in inflation. Oil prices fell by more than 20% in June from a peak in March.

Supply chain disruptions have also eased in recent months, as businesses have been able to get more goods and materials.

Some economists warned that inflation could pick up again in the coming months, as the economy continues to recover from the COVID-19 pandemic. The Federal Reserve is closely monitoring inflation, and is expected to raise interest rates later this year in an effort to cool prices. The Fed has said that it wants to see inflation fall to its 2% target before raising rates.

INDIA'S GROWTH STATISTICS

India's retail inflation rose to 4.81 % in June 2023, the highest in three months, driven by a spike in food prices. The rising costs faced by households for items such as cereals, pulses, milk and tomatoes led to increase in food inflation from less than 3 % in the previous month rose to 4.5 %. The Reserve Bank of India (RBI) has been keeping interest rates low in an effort to support economic growth, but it may need to take action to cool inflation.

India's factory output grew to a three-month high of 5.2 % in May 2023, as against 4.5% growth in April, primarily due to pick up in manufacturing and mining output. The growth was led by infrastructure, which grew by 8.4%, followed by manufacturing (5.7%) and mining (4.7%). Twelve of the 23

manufacturing sectors showed growth, led by electrical machinery (19.2%), furniture (13.3%) and basic metals (12.2%). The growth in IIP is a positive sign for the Indian economy, which is showing signs of recovery after the COVID-19 pandemic.

Excerpts from News Articles:

June inflation quickens to 4.8% as food prices climb – The Hindu

IIP rises 5.2%, led by infrastructure – The Hindu

June retail inflation rises to a 3-month high costlier food: IIP up 5.2 % in May– The Indian Express

28 % GST ON ONLINE GAMING

The Goods and Services Tax (GST) Council has decided to levy a uniform 28% tax on online gaming, casinos and horse racing. This move has been met with mixed reactions from the industry, with some companies expressing concern that it will stifle growth.

The decision to levy a uniform 28% tax was made after the GST Council considered the "moral question" of prioritizing online gaming over essential goods, which have been subject to GST for some time. The council also noted that online gaming is a "high-margin" industry, and that a higher tax rate would be appropriate.

Some companies believe that the higher tax rate will make it more difficult for them to compete with international players, who are not subject to the same taxes. Others believe that the industry will adapt and find ways to pass on the cost of the tax to consumers.

Here are some of the key implications of the GST move for the online gaming industry:

- Higher prices for consumers: The higher tax rate is likely to lead to higher prices for consumers, which could dampen demand for online gaming. The industry could adapt and find ways to pass on the cost of the tax to consumers.
 - Increased competition from international players: International players, who are not subject to the same taxes, may be able to offer lower prices and attract more customers.
 - Slower growth: The GST move could lead to slower growth in the online gaming industry, as companies may be less willing to invest in the sector.
 - Innovation: The higher tax rate could force companies to innovate and find new ways to reduce costs. This could lead to new products and services that are more appealing to consumers.
- Earnings for the Government: The government is expecting to earn an additional ₹17,000 crore in revenue from the 28% GST on online gaming.

POLITY AND GOVERNANCE

IS IT POSSIBLE TO HAVE PARTIAL APP BANS?

Context: Last week, the Telecom Regulatory Authority of India (TRAI) sought inputs on whether it would be possible to have "selective" app bans instead of internet shutdowns, in order to reduce the impact that a wholesale communications lockdown can entail.

Does India have a history of Internet shutdowns?

- Internet shutdowns are imposed in States and districts across India from time to time in order to prevent the rapid spread of provocative content during communally charged periods.

- In Jammu and Kashmir as well as in Manipur, authorities and courts have gradually loosened long-term restrictions by allowing wired internet connections and limited wireless internet access.
- In current times, regulating messaging apps has become more a matter of security and policing.
- To restrict against communal misinformation and provocative content spreading online, the Ministry of Electronics and Information Technology added a requirement of 'traceability' to the IT Rules, 2021, wherein one can find the original sender of a forwarded message. However, civil society groups and tech firms said that such requirements were impossible without breaking end-to-end encryption.

What is end-to-end encryption?

End-to-end encryption (E2EE) is a method of secure communication that prevents third parties from accessing data while it's transferred from one end system or device to another.

In E2EE, the data is encrypted on the sender's system or device, and only the intended recipient can decrypt it. As it travels to its destination, the message cannot be read or tampered with by an internet service provider (ISP), application service provider, hacker or any other entity or service.

Many popular messaging service providers use end-to-end encryption, including Facebook, WhatsApp and Zoom.

How would the TRAI move work?

The approach suggested by TRAI would require telecom operators and messaging app firms like WhatsApp to cooperate with each other and stop access to services during a shutdown.

- The telecom regulator has sought inputs on licensing messaging apps in India, which may require firms to be subjected to surveillance and blocking requirements.

What about VPNs?

- It is possible to block websites and certain apps by ordering telecom operators to do so. However, Virtual Private Networks (VPNs) make these blocks trivial to bypass.
- VPNs tunnel a user's internet traffic through another server. While these tools are mostly used for completely innocuous purposes, the government has been showing a growing distrust of VPNs. This is because VPNs are often encrypted, leaving the government with little visibility into what goes on in users' connections. VPN firms usually route data through servers located in another country, and frequently cycle the IP addresses these servers use to evade detection and blocking.
- When the Indian Computer Emergency Response Team (CERT-in) published directions in 2022 requiring VPN firms to retain records of users from India, most large VPN providers stopped offering servers physically located in India.

Can VPNs be blocked?

- Blocking VPNs is not straightforward, as companies operating them tend to frequently change the IP addresses associated with their servers. Also, Internet rights activists say that blocking VPNs would be a damaging move for online privacy.
- The encrypted nature of information transfer over VPNs allows them to not only secure confidential information but also to safeguard their own identity, thus protecting them from surveillance and censorship.

GEOGRAPHY

THE LESSON FROM A MONSOON-BATTERED NORTH INDIA: TIME TO BE PREPARED

Context: Extreme weather events are likely to become normal. We need to be proactive.

Brief Background of the recent extreme climatic events

- Last weekend, parts of North India witnessed heavy rains that triggered flash floods and left a trail of destruction.
- Homes were flooded, roads and bridges washed away and communication networks disrupted, isolating communities and hampering rescue efforts. At least 50 deaths were reported.
- The rains triggered landslides which caused more damage.
- Himachal Pradesh was the worst affected. Several places in Haryana, Punjab and Himachal Pradesh reported record rainfall between Saturday and Sunday.

What caused the downpour?

Three main factors can trigger such heavy rains in the region and the Himalaya.

- First, an active monsoon with strong winds in the lower air layers, bringing moisture into the region from the Bay of Bengal or the Arabian Sea.
- Second, a large-scale atmospheric forcing in the form of outflows in the upper layers of the atmosphere moving eastward through mid-latitude troughs.
- These troughs can also direct the flow of moisture towards the Himalaya.
- Third, deep convection triggered by orographic uplift combined with the steep terrain of the Himalaya.

Trends in extreme rainfall events

- Recent studies show an increasing trend in extreme rainfall in many parts of the country, especially central India.
- The number of extreme rainfall events (more than 15 cm in 24 hours) has tripled in the region.
- The duration of rainstorms over central India has also tripled.
- The observations also indicate that during the monsoon, the total number of rainy days and rainy hours decreases. This indicates that when it rains, it rains very heavily.
- The Himalayan region, with its complex topography and varied weather patterns, is prone to extreme rainfall events.
- A study on the 2013 floods in Uttarakhand identified this region as one where

deep, intense convective clouds are most likely to form. Instances of such deep convection have increased over time.

Evidences of possible reasons of extreme rainfall

- Climate change is thought to be one of the main causes of growing trends in extreme rainfalls. Warmer temperatures lead to increased evaporation, which, in turn, leads to more moisture in the atmosphere. This extra moisture leads to heavy rainfall when weather systems coincide with the unique geography of the Himalayan region.
- Changes in land use and land cover also appear to be reasons for the increase in extreme monsoon rainfall, especially its intensity. There is growing evidence of the impact of Arctic warming on the monsoon climate through mid-latitude circulation.

Way Forward

To mitigate floods, we need a multi-pronged approach that includes both proactive measures and reactive strategies. These include:

1. A robust early warning system that alerts people about heavy rains and possible flash floods.
2. Continuous monitoring of rainfall patterns, river levels and an advanced flood warning system.
3. Flood risk maps that take into account factors such as topography, historical flood data and hydrological modelling to assess vulnerability, identify high-risk zones and target actions.
4. Improving and maintaining climate-resilient infrastructure, such as drainage systems and channels to prevent waterlogging.
5. Proper implementation of land use planning and zoning regulations. For example, areas prone to flash floods can be designated as non-residential or restricted areas.
6. The protection and restoration of natural ecosystems, such as forests and wetlands. Vegetation acts as a natural buffer, absorbing rainfall and reducing runoff.
7. Awareness campaigns can influence people to take the right actions during floods, including arranging evacuation, providing first aid and getting information from reliable sources.

WE AIM TO INSPIRE YOU

SCIENCE AND TECHNOLOGY

WHAT IS THE NATIONAL RESEARCH FOUNDATION?

Background : The Union Cabinet has approved the introduction of the National Research Foundation (NRF) Bill in Parliament, placing once again the debate on science and technology funding in the spotlight.

The Questions

- How is the body going to be funded?
- Is the funding too less when compared to the nation's GDP?
- How is the NRF planning to make research and development easier?

What is the NRF?

- Setting up the NRF was one of the key recommendations of the National Education Policy 2020.
- The NRF intends to act as a coordinating agency between researchers, various government bodies and industry, thus bringing industry into the mainstream of research.
- In addition to providing research grants to individuals, the NRF plans to seed, grow and facilitate research in India's universities, especially State universities, by funding research infrastructure and researchers.

How will it be funded?

- The NRF will operate with a budget of ₹50,000 crore for five years, of which 28% (₹14,000 crore) will be the government's share, and the remaining 72% (₹36,000 crore) will come from the private sector. The NRF draft proposes the government's share to increase eventually to ₹20,000 crore per year.
- Out of the government's share, ₹4,000 crore will be used from the existing Science and Engineering Research Board's budget, which will be subsumed under the NRF. Therefore, the government has earmarked an additional 10,000 crore over the next five years for the NRF.
- However, this increase in the nation's gross domestic expenditure on research and development (GERD) seems too meagre, (less than 2% of GERD) especially if one compares the GDP and the comparative spending in other big economies, such as the U.S. and China. As per the last available statistics (2017-18), India's GERD was ₹1,13,825 crore. While India's GDP was 7.6 and 5.1 times smaller than that of the U.S and China respectively, India's GERD was nearly 24 times less than both these countries during the same period. And in the last five years, that gap has further widened.

How can the NRF facilitate the "ease of doing science"?

- First, the time between applying for a research grant and receiving the money must be minimal, preferably within six months. Although the NRF draft mentions that the peer-review process will be completed within six months, releasing funds may take time, pending financial clearance.
- Second, all the paperwork must be digitally processed without sending stacks of papers in hard copies to the NRF.
- Third, all finance-related queries, paperwork, approval, and acceptance need to be between the NRF and the finance department of the university/research

institution keeping the scientist free to focus on research.

- Fourth, the NRF needs explicit spending guidelines away from the General Financial Rules (GFR) and the government's e-Marketplace (GeM) usage. Scientific research needs independent guidelines for spending money, which provides flexibility while making scientists accountable. Finally, the release of money needs to be timely.
- Although the NRF draft mentions timely disbursement of funds, a mechanism needs to be in place to facilitate and implement this. While the participation of the private industry in the NRF is an important and welcome step, it is unclear how the government will raise ₹36,000 crore from the industry.
- Although the NRF describes a legislative route to facilitate this, a more detailed plan and establishing mechanisms akin to escrow accounts will reassure the scientific community.

What next?

- The proposed NRF is largely modelled after the National Science Foundation of the U.S. It borrows some of the best practices from the German, U.K., Swiss, Norwegian, South Korean, and Singapore science agencies.
- Even if the NRF draft discusses critical thinking, creativity, and bringing innovation to the forefront, it is unclear how the NRF will transparently seed, fund and coordinate research across institutions.
- The success of NRF will lie in how the government sets rules and implements the same, different from what already exists.

Bill in the Parliament:

- The Union Cabinet has approved the introduction of the National Research Foundation (NRF) Bill in Parliament.
- The NRF will operate with a budget of ₹50,000 crore for five years, of which 28% (₹14,000 crore) will be the government's share, and the remaining 72% (₹36,000 crore) will come from the private sector.
- The NRF intends to act as a coordinating agency between researchers, various government bodies and industry, thus bringing industry into the mainstream of research.



CHANDRAYAN - INDIAN MOON MISSION TIMELINE

- A successful soft landing will make India the fourth country, after the United States, Russia, and China, to achieve the feat. The position remains vacant after the missions from Israel and India in 2019 crash-landed and the spacecraft carrying a lander-rover from Japan and a rover from UAE failed in 2022.
- While the objectives of the mission remain the same, scientists at the Indian Space Research Organisation (Isro) have learnt from the previous mission. The lander's design was improved after a series of tests to see how it performs under various circumstances, such as inability to reach the landing spot, failure of electronics or sensors, velocity being higher than needed, among others.

CHANDRAYAAN-2	CHANDRAYAAN-3
COMPONENTS Orbiter, Lander, Rover	COMPONENTS Propulsion module, Lander, Rover
EXPERIMENTS ON BOARD 11 instruments, 4 on Lander, 3 on Rover	EXPERIMENTS ON BOARD Same experiments on Lander and Rover as Chandrayaan-2 New experiments on propulsive module as propulsive module
WEIGHT Orbiter: 2,379 kg Lander: 1,471 kg Rover: 27 kg (max. 100 kg) Payload total: 3,878 kg	WEIGHT Propulsion module: 3,345 kg Lander: 2,980 kg (including rover) Rover: 28 kg Payload total: 3,000 kg
MISSION LIFE Orbiter: Planned 1 year, minimum 7 years	MISSION LIFE Propulsion Module: 3-6 months
LANDER ROVER : 1-hour day	LANDER ROVER : 1-hour day
LANDING SITE Mihalganjan S 22.7 degree E, high plains between two craters, Maitri and Shalabha	LANDING SITE Mihalganjan S 22.28 degree E, slightly off the site for Chandrayaan-2
DAYS TO MOON Ascent: Earth: 23 days Ascent: Moon: 7 days Ascent: Moon: 21 days	DAYS TO MOON 42 DAYS, SOONER THAN CHANDRAYAAN-2
TOTAL: 48 DAYS	LANDER 4Wheeled, stronger legs, built with technology for rover mission, using data already generated by the 12 tonnes. Additional solar panels.



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