● POLITY   ● ECONOMICS   ● TECHNOLOGY   ● ECOLOGY

SCIENCE AND TECHNOLOGY

NIPAH BREAKS OUT IN KERALA

CONTEXT: Nipah virus resurfaces in Kerala, with two deaths and two additional cases confirmed; concern over human-to-human transmission.

SO FAR: A Central team of experts assists Kerala in responding to Nipah virus outbreak. Guidelines and protective kits provided to medical colleges. No need for drug imports currently; patients are being well managed. Authorities assure that close contacts of the deceased are under treatment, and an alert has been issued.

Kerala's State Health Department forms core committees for Nipah virus management, including surveillance, testing, contact tracing, and patient transport. A contact list of 168 individuals is established. A fever survey is conducted in affected areas, and an isolation ward with 75 beds is set up. A bat habitat survey is planned, and expert teams from NIV and ICMR are arriving to assist with testing and investigations. Hospitals are instructed to follow infection control protocols, and unnecessary hospital visits are discouraged.

NIPAH VIRUS

- Nipah virus infections in humans vary from asymptomatic cases to severe respiratory issues and fatal encephalitis, with a fatality rate of 40% to 75%. Outcomes depend on local healthcare capabilities.

- Nipah virus can spread to humans from animals, contaminated foods, and direct human-to-human transmission. Fruit bats are its natural hosts.

- Sadly, there's no treatment or vaccine available for humans or animals. Supportive care is the main approach for treating infected individuals.

- The WHO's 2018 R&D Blueprint highlighted an urgent need for accelerated research and development to combat the Nipah virus.

- The severity of Nipah virus outbreaks can be influenced by local epidemiological surveillance and clinical management capabilities, emphasizing the importance of preparedness.

ECONOMICS AND DEVELOPMENT

JULY INDUSTRIAL OUTPUT SOARS TO A 5-MONTH HIGH

CONTEXT: The National Statistical Office (NSSO) revised the June estimates of the Index of Industrial Production (IIP) growth upward to 3.75 %. The last time industrial output had grown at a sharper pace than July was in February 2023, with a 5.8 % year-on-year uptick.
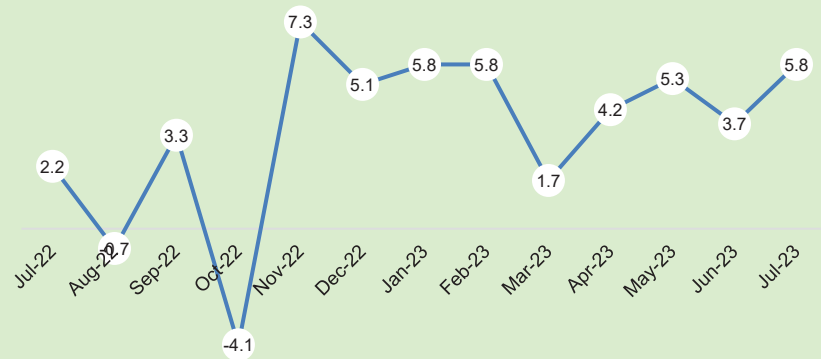

FIGURE: Line chart representation of the core sector growth rates (on Y-o-Y basis in per cent). Pie chart representation of weightage of core sector industries (Inset).

Consumer durables' production remained in contraction mode for the seventh time in eight months, though the extent of shrinkage dropped from 6.9 % in June to 2.7 % in July. Consumer demand for non-durables appeared to be strengthening, with an uptick of 7.4 % in their output compared with just 1.2 % in June. For the first four months of 2023-24, this is the only use-based segment of industry with negative growth, down 2.7 % from a year earlier.

Capital goods output, a reflection of planned investment activity, rose 4.6 % YoY in July, recovering from an eight-month low of 2.2 % in June. However, in absolute terms, the output levels were at a three-month low and 4.6 % below June's production.

Nine manufacturing industries witnessed negative growth including electronics, which is disappointing given that it is part of the production-linked incentive schemes, and textiles continue to underperform due to the hard hit on exports.

The sustenance of this industrial growth will depend on consumer goods reviving, and can only be ascertained by data for the next three months. High inflation as well as dilution of pent-up demand will dampen future growth.

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DAILY NEWS ANALYSIS
Page 01

RETAIL INFLATION SLOWS DOWN; FOOD PRICES STILL HIGH

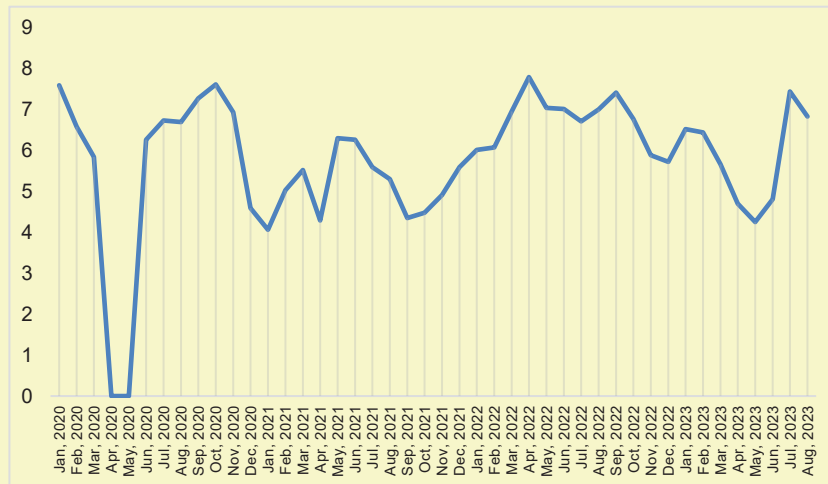**CONTEXT:** The retail inflation of India eased slightly from the 15-month high of 7.44% in July to 6.83 % in August.

FIGURE: *Line chart representation of the Consumer Price Index based inflation.*

accelerated inflation, the outlook for food inflation remains on edge.
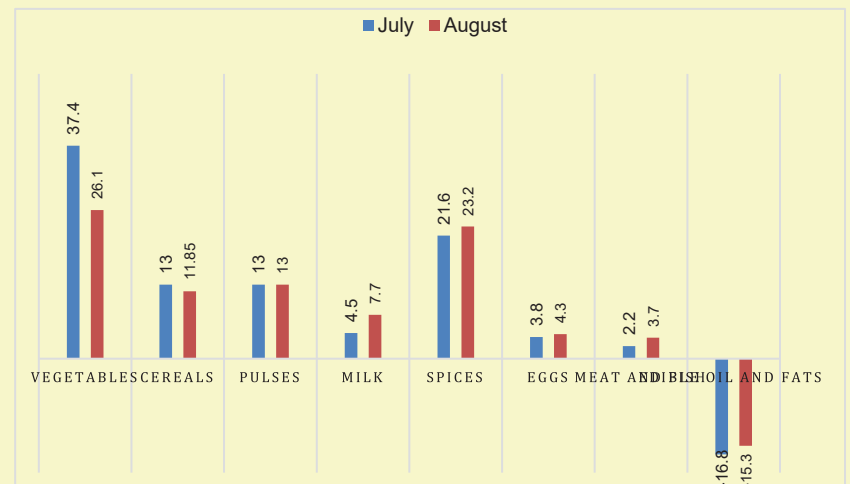
FIGURE: *Bar chart representation of the Consumer Price Index based inflation.*

Vegetable prices dropped by 5.8 % sequentially from July contributing, almost half the decline in August's Consumer Price Index (CPI) and a slight dip in the inflation rate for clothing, footwear, housing and miscellaneous items helped to moderate inflation. Seven of the 12 food segments in index seeing

As many as 12 States recorded higher inflation than the national average of 6.83%, with Rajasthan seeing the steepest price rise of 8.6%. Delhi, on the other hand, clocked the lowest inflation of 3% in August, possibly aided by the subsidised supply of tomatoes to people. Food prices remain elevated at around 10 % and rural consumers continued to face over 7 % inflation.

FLASH FLOODS HIT LIBYAN CITY, 2,300 FEARED DEAD, MANY MISSINGSS

CONTEXT: At least 2,300 people were killed and thousands were reported missing in Libya after catastrophic flash floods broke river dams and tore through an eastern coastal city.

Massive destruction shattered the city of Derna, home to about 1,00,000 people, where multi-storey buildings on the river banks collapsed and houses and cars vanished in the raging waters. Libyan emergency services reported an initial death toll of more than 2,300 in Derna alone, and said over 5,000 people remained missing while about 7,000 were injured. The floods were caused by torrential rains from Storm Daniel, which made landfall in Libya on Sunday.

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DAILY NEWS ANALYSIS
Page 02

AI'S REDEFINITION OF GLOBAL HEALTH INJUSTICES

CONTEXT: Researchers find AI, like Midjourney Bot Version 5.1, can identify race, gender, and ethnicity in medical images, potentially reinforcing biases.

BACKGROUND: AI, specifically Midjourney Bot Version 5.1, couldn't avoid perpetuating inequalities and prejudices in global health imagery, according to research published in The Lancet Global Health. Despite attempts to invert stereotypes, AI still reflected biases, often associating marginalized groups with disease and depicting white saviors. This highlights the challenges of addressing ingrained biases in AI systems.

Invasive health imagery raises privacy concerns.

- Global health publications often reinforce racial, gender, and colonial biases in disease depictions.
- Misrepresentation in health photos associates communities with problems, perpetuating stereotypes.
- Structural racism and colonialism worsen health outcomes and trust issues.
- Generative AI reflects real-world power imbalances and can identify race and gender in images.
- Caution is needed when deploying AI in new areas to avoid entrenching biases.

Biased caricatures perpetuate stereotypes and prejudice

AI in global health presents risks like avoiding responsibility and inappropriate automation. It raises ethical questions about AI learning from real images and reproducing stereotypes. The Gates Foundation's funding of AI projects for social and healthcare issues in the Global South raises concerns about AI's nature and its deployment.

Examining AI's history and contexts is crucial to determine where it should be used. Questions on improving datasets, data ownership, primary beneficiaries, and the interests of associated organizations must be addressed. AI and global health are not neutral; they reflect powerful institutions' interests, highlighting the need for accountability and critical assessment.

Applications of AI in Health

- Medical Diagnosis: AI assists doctors in diagnosing diseases by analyzing medical images, symptoms, and patient data.
- Drug Discovery: AI accelerates drug development by simulating molecular interactions and identifying potential drug candidates.
- Personalized Treatment: AI tailors treatment plans based on an individual's genetic and health data for better outcomes.
- Healthcare Management: AI optimizes hospital operations, patient scheduling, and resource allocation for efficiency.
- Telemedicine: AI powers virtual consultations, enabling remote monitoring, and improving access to healthcare services.
- Role of AI in addressing the Global Health Injustice
- Equitable Access: AI can bridge healthcare gaps by providing remote diagnostics and treatment options, ensuring access for underserved populations.
- Early Detection: AI enables early disease detection, reducing disparities in healthcare outcomes and improving treatment effectiveness.
- Health Data Analytics: AI analyzes vast health datasets to uncover disparities, aiding policymakers in addressing global health inequalities.
- Precision Medicine: AI tailors treatments based on individual data, reducing one-size-fits-all approaches that may not benefit all populations.
- Resource Allocation: AI optimizes resource distribution, ensuring that healthcare resources reach regions with the greatest need, promoting fairness.

As exemplified by Midjourney Bot Version 5.1, has inadvertently perpetuated biases in global health imagery, reflecting long-standing inequalities and reinforcing stereotypes. This underscores the need for cautious and ethical AI deployment, considering historical contexts and questioning the interests it serves, especially in addressing global health disparities.

FARMERS TO APPROACH SC AGAINST INDO-U.S. DEAL ON POULTRY

CONTEXT: Farmers and traders associations fear that the new agreements to end disputes over import of poultry products and to reduce import tariff on apples, almonds, chickpeas and lentils will harm the interests of farmers and small and medium industries in the poultry sector.

Poultry Federation of India will move the Supreme Court against the unilateral decision of the Union government. This agreement is against the interest of poultry farmers in the country. Tonnes of chicken legs will now be imported, rather dumped, to our country. We are also keen to know if the U.S. authorities will certify that pork or beef are not used in the poultry feed. Beef and pork consumption is a sensitive issue in the country.

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DAILY NEWS ANALYSIS
Page 03

INTERNATIONAL RELATIONS

SOUTH KOREA KEEN ON JOINING QUAD

CONTEXT: South Korean Envoy in India Chang Jae-bok said that South Korea is very keen on joining the Quad grouping.

Mr. Chang remarked that Quad members, India, Australia, Japan and U.S., are crucial partners of Korea.

About QUAD:

- The Quad, officially the Quadrilateral Security Dialogue (QSD), is not a formal alliance. It is an informal strategic forum comprising four maritime democracies—India, Japan, Australia and the United States.

- **Primary objectives:** The Quadrilateral Security Dialogue aims to address maritime security, climate change and the COVID-19 pandemic among other issues. The Quad is also seen as an attempt to counter China's growing influence and expansionist ambitions.

India- South Korea CEPA

- India and South Korea are negotiating expansion of the Comprehensive Economic Partnership Agreement (CEPA) and have so far held 10 rounds of discussions but there are lots of unresolved issues.

- The CEPA was agreed in 2009 and became effective from 2010. Five or six years later both sides realised that it needs to be upgraded. From 2016-17 there were negotiations which were stopped during the pandemic.

INTERNATIONAL RELATIONS

RUSSIAN COMPANIES CEASE OFFERING DISCOUNTS ON FERTILISER SUPPLIES TO INDIA

CONTEXT: Russian companies have ceased offering fertiliser such as di-ammonium phosphate (DAP) to India at discounted prices due to tightening global supplies after becoming the biggest suppliers to the country last year.

India's fertiliser imports from Russia more than tripled to a record 4.35 million tons in the 2022-23 financial year as suppliers gave discounts to the global market price for DAP, urea and NPK fertilisers. Russia's aggressive selling last year eroded the Indian market share of other fertiliser exporters including China, Egypt, Jordan, and the United Arab Emirates (UAE).

Russian companies offering fertilisers at market prices could increase India's import costs and subsidy burden amid a rally in global prices, as top exporter, China, tries to curtail overseas sales. The current price of Russian DAP is approximately $ 570 per ton on a cost and freight (CFR) basis for Indian buyers, which is the same price offered to other Asian buyers. Global fertiliser prices have been surging over the past two months, making it challenging for Indian companies to accumulate stocks for the upcoming winter season when demand for DAP rises for the wheat crop, said an official from a Mumbai-based fertiliser company. In July, global suppliers were offering urea at approximately $300 per ton on a CFR basis, but are now quoting $ 400 per ton, he said. DAP prices were about $ 440 per ton in July.

ECOLOGY AND ENVIRONMENT

CLIMATE PHENOMENA AND FOOD SECURITY

CONTEXT: Disruptive weather patterns, including prolonged Western disturbance, raised concerns about infrastructure and life loss in the Himalayas and northern India.

AN EL NIÑO PHASE: Climate change may alter the Western disturbance, shifting winter precipitation to intense rain events. The intensifying El Niño phase in the Pacific Ocean may impact the southwest monsoon, with the Indian Ocean Dipole potentially offsetting the effects. Dynamic models suggest ENSO and IOD contribute to 65% of the southwest monsoon's inter-annual variability.

EL NIÑO AND FOOD SECURITY:-

- Agriculture depends on green (rain-fed soil moisture) and blue water (rivers, reservoirs) in India.

- El Niño affects rain fed agriculture by delaying rains and causing heat stress, impacting crops.

- Despite irrigation investments, around half of India's cultivated area relies on green water.

- Many staple crops also depend on green water, and El Niño events can lead to production declines.

- The hope is that other climate phenomena like the IOD will mitigate El Niño's impact on Indian agriculture, food security, and water-sharing conflicts.

EL NIÑO AND THE NORTHEAST MONSOON: The fate of winter Rabi crops in India relies on blue water from reservoirs and groundwater after the southwest monsoon. El Niño-linked heavy rainfall events affect the northeast monsoon. Central India's highlands, a climate change hotspot, experience significant water stress, particularly due to Rabi irrigation, impacting both urban centers and river basins.

To enhance food security and adapt to climate challenges like El Niño, shifting to less water-intensive crops like millets is crucial. This can save over 30% of blue water but requires proper policies to prevent new water demands. Alternative crop strategies, improved forecasts, and responsible dam management are vital for addressing the water and climate crisis and ensuring the well-being of India's 1.4 billion people.

DROP THE BAD IDEA OF SIMULTANEOUS ELECTIONS

GIST: Simultaneous elections risk undermining democratic plurality, and risk aiding the kind of concentration of power that federalism is meant to be a bulwark against

In simple terms, having simultaneous elections for both national and state governments in India is not a good idea. Here's why:

Not Much Money Saved: Supporters say it would save money, but the actual savings are very small.

Campaign Mode is Not the Real Issue: Some argue that it would free up politicians from constant campaigning. But the real problem is that national politicians should focus on national issues, while state politicians should handle state matters. Simultaneous elections won't fix this.

Logistical Nightmare: Holding elections for a country as big as India with its huge population all at once would be a logistical nightmare.

Incompatibility with Democracy: In a democracy, a government must have the confidence of the people's representatives. If a government falls, simultaneous elections won't work, and we'd have to resort to President's Rule (central rule) or hold quick elections, which would create problems.

Horse-Trading Becomes Worse: There would be a strong push to avoid government falls, leading to more political horse-trading, where the richest parties benefit the most.

Federalism and Democracy at Risk: Simultaneous elections could blur the lines between national and state issues, risking the distinct identities of each state's democracy. It could also lead to the concentration of power, which federalism is meant to prevent.

Reduced Public Participation: Frequent elections allow people to participate and debate more. Simultaneous elections would reduce this opportunity without offering any better ways for public involvement.

So, while simultaneous elections might seem like a good idea on the surface, it could create more problems than it solves, undermining the principles of federalism and democracy in India.

NO FILTER

Requiring government approval before investigating corruption is a bad idea. The Supreme Court said a law making this requirement has been invalid since 2003. It was meant to follow a rule called the 'Single Directive,' which the court had previously rejected. In 2014, the court also struck down this law, saying it only protected certain officials and not everyone equally.

Now, this decision affects only cases from 2003 to 2014. But the law has changed since then. In 2018, a new law said approval is needed even before starting a corruption probe. Requiring approval before investigating corruption is not a good idea. It hides the truth and warns corrupt officials when allegations come up. It may be necessary to have safeguards to filter out frivolous inquiries into the conduct of public servants making crucial and bona fide decisions, but it is equally in the interest of the public that these provisions do not become a shield for the unscrupulous.

SC REFERS PLEA AGAINST SEDITION LAW TO A CONSTITUTION BENCH

The Supreme Court of India has sent the issue of the sedition law (Section 124A) in the Indian Penal Code to a special group of judges called a Constitution Bench. This decision came even though the government wanted to wait for Parliament to decide on a new law called the Bharatiya Nyaya Sanhita Bill, which aims to replace the old law from 1860.

The government said the court should not look at this case now because Parliament might change the law soon. But the court disagreed. They said that even if a new law comes, it won't apply to past cases. So, they need to check if the old law is okay or not.

Some lawyers argue that not everything against the government should be considered a crime. They also say the new law is even worse.

The court said they need to look at the old law independently, regardless of the new law's status. They also mentioned a past decision from 1962 about this law and said they should review it based on new rights and changes since then.

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DAILY NEWS ANALYSIS
Page 05

BORDER MANAGEMENT IN INDIA

CONTEXT: The Union Home Minister laid the foundation stone for a mooring place at Koteshwar in Kutch and also inaugurated the newly constructed Chidiyamod-Biarbet Link Road and OP Tower in the Harami Nala area.

Harami Nala is a natural water body, approximately 25 kilometres long that flows west to east from Pakistan into Kutch just south of the Vighakot sector, flanked by vast marshy mud flats that are affected by low and high tides. About 22 odd kilometres of the channel lie on the Indian side of the "vertical line" of the IB between India and Pakistan which itself is not contested.
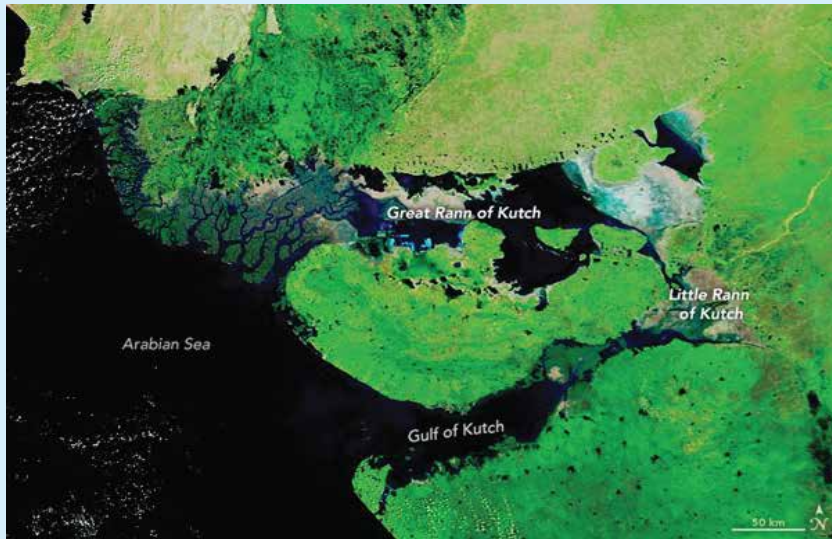
Mr. Shah tweeted that he had inaugurated a 9.5-metre-tall observation post tower equipped with high resolution pan-tilt-zoom cameras, to bolster intelligence-gathering capabilities. This will come up at BOP 1164, further up north from BOP 1170, along the "vertical line" of the International Boundary (IB). The great advantage of the new tower, worth ₹3 crore, and others coming up at BOPs 1165, 1166 and 1169 (apart from three more in the Creek area), is that they will provide live camera feed and continuous surveillance over the open stretch of water and mudflats surrounding Harami Nala.

The Harami Nala is extremely rich in fishing, especially prawns. Moreover, the formidable marshy terrain through which it runs makes it impossible to approach or patrol on foot even during low tide. Treacherous tides, morass and mirages are matched by scorching temperatures (above 50° Celsius) in summer.

In contrast, the Harami Nala has always been more accessible from the other side. Pakistani fishing boats try and make their way up the many small creeks to surreptitiously enter the Harami Nala on the Indian side, drawn by the plentiful catch. In the past, they did so with impunity. There was the added risk of infiltration by terrorists and drugs and arms smuggling.

In the past, the entry point of the Harami Nala on the Indian side could not be approached by the BSF personnel due to a lack of infrastructure. They had to wade through deep slush to launch small patrol boats into the channel from areas to the rear. This situation improved after a set of all terrain vehicles (ATVs) were procured from Italy and stationed at border pillar 1175, the last such observation post at the time. It also helped that special scaffolding was put up on the bank of the channel in the rear areas on the Indian side where troopSs could bivouac for watch duties and be rotated in the ATVs. Speed boats, tethered alongside, also began to make a difference in terms of preventing ingress by Pakistani fishing boats.

These initiatives, together worth ₹361.35 crore, are being rolled out in pursuit of Prime Minister Narendra Modi's vision of a "secure border". The Mooring Place project, with an allocated budget of ₹257 crore, will make a huge difference by allowing berthing, repairs and maintenance for bigger vessels, including the floating BOPs, thus bolstering the BSF's capabilities in the Creek area.
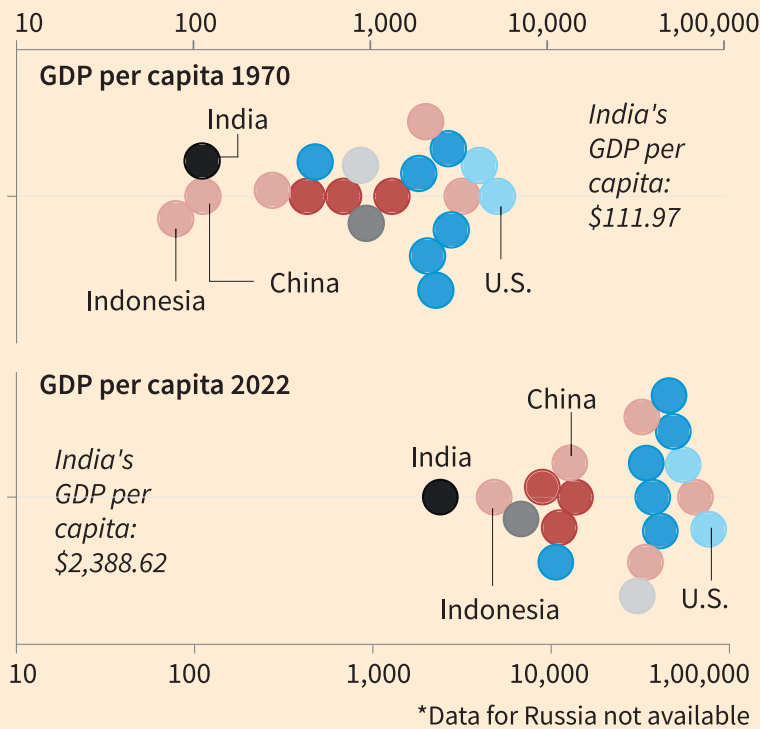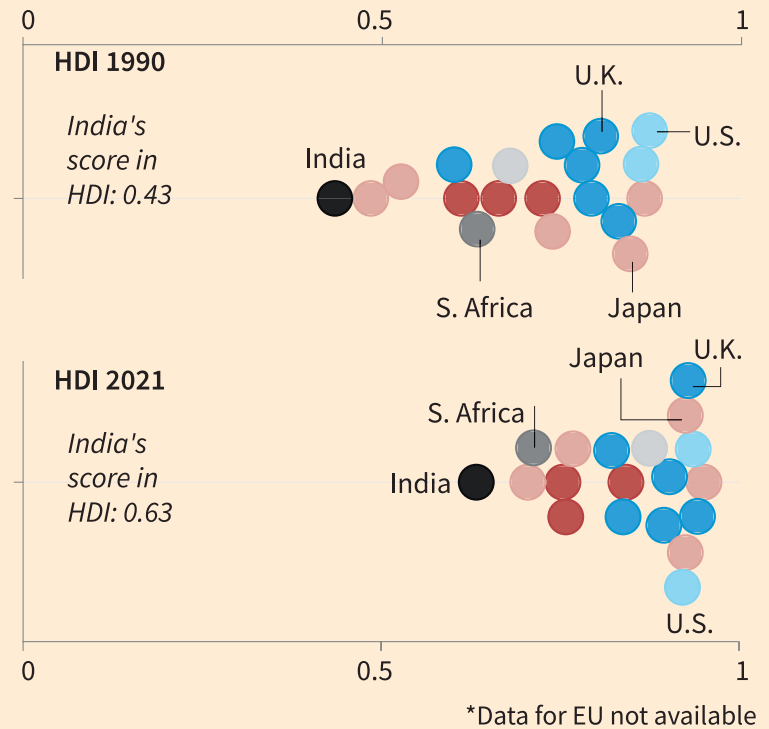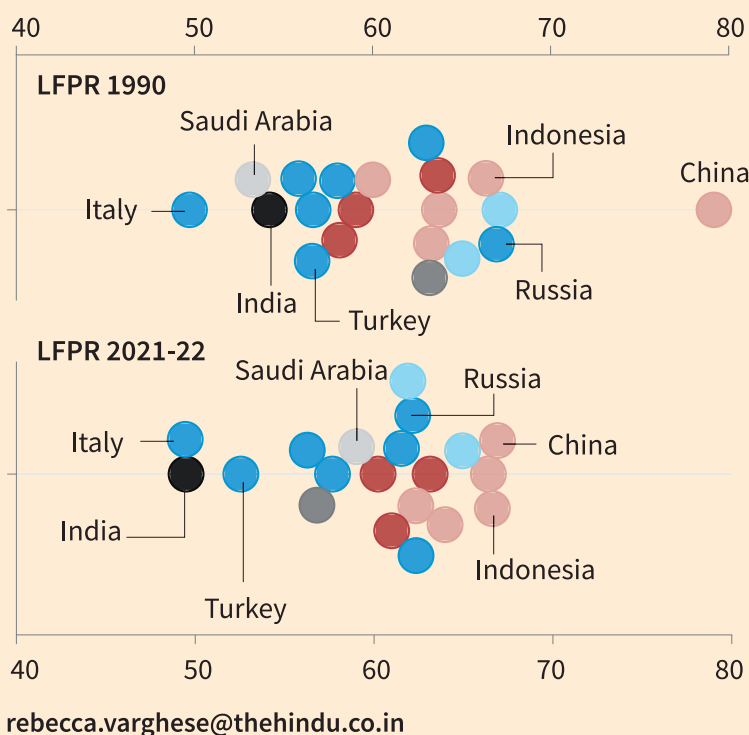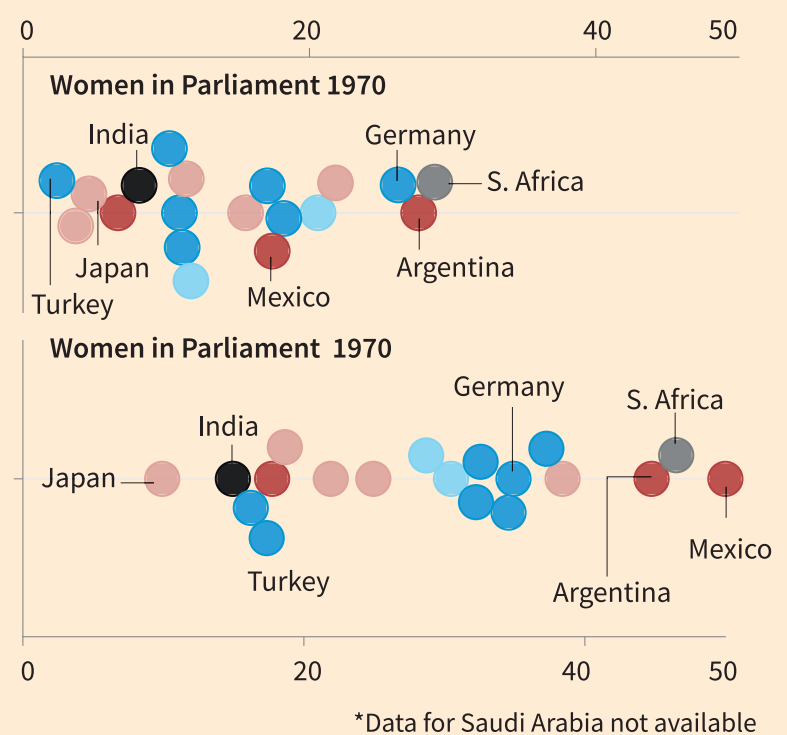
The tidal waters surge from the Pakistani side and, over the years, the channel is extending further on the Indian side. On the Pakistani side lies the Chini-Bandh (China Bund, just north of Bondho Dhoro), built with Chinese assistance to prevent the tidal waters from inundating areas on their side. On the Indian side, there is a desolate emptiness over the entire spread of the Harami Nala, except in the rear areas at considerable distance from the IB, where factories that have come up to produce salt, bromide and other chemicals carried by mineral-rich waters.

After 2014, the Narendra Modi government gave particular emphasis to border and coastal security. In the past nine years, the Ministry of Home Affairs has ramped up the creation of composite BOPs all along the border, including in the Creek and Harami Nala area. A modern composite BOP 1175 was constructed in 2016 and BOP 1170 in 2022. The construction of embankments and road infrastructure along the "vertical line" of the IB have enabled the new observation posts to come up between border pillars 1164 and 1153 in a manner that infiltration can be nipped in the bud at the entry points along the IB.

RAJNATH LAYS FOUNDATION STONE FOR NYOMA AIRFIELD NEAR THE LAC IN EASTERN LADAKH

CONTEXT: Defence Minister Rajnath Singh virtually laid the foundation stone for the Nyoma airfield in eastern Ladakh near the Line of Actual Control (LAC) and also inaugurated the crucial Nechiphu tunnel on the axis to Tawang in Arunachal Pradesh.

The Nyoma airfield, to be developed at a cost of approximately ₹200 crore, will boost air infrastructure in Ladakh and augment the IAF's capability along the northern border. The Defence Minister exuded confidence that the airfield, which will be one of the world's highest, would prove to be a game-changer for the armed forces. Once completed, in about two years, the runway will be able to accommodate all fighter jets of the IAF.

In all, Rajnath Singh inaugurated 90 infrastructure projects built by the Border Roads Organisation (BRO) at a cost of over ₹ 2,900 crore, across 11 States and Union Territories, which include two revamped airfields in Bagdogra and Barrackpore in West Bengal, two helipads, 22 roads and 63 bridges. Of these 90 projects, 36 are in Arunachal Pradesh; 26 in Ladakh; 11 in Jammu & Kashmir; five in Mizoram; three in Himachal Pradesh; two each in Sikkim, Uttarakhand and West Bengal; and one each in Nagaland, Rajasthan and Andaman & Nicobar Islands.
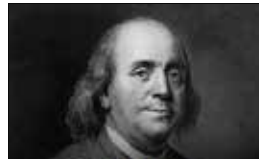
INTERNATIONAL RELATIONS

ANALYSING WHERE INDIA STANDS IN THE G20

Chart 1: The chart compares the GDP per capita (in $) of 19 regions (18 countries plus the EU) between 1970 and 2022

10   100   1,000   10,000   1,00,000

GDP per capita 1970

India

India's GDP per capita: $111.97

Indonesia   China   U.S.

GDP per capita 2022

China

India

India's GDP per capita: $2,388.62

Indonesia   U.S.

10   100   1,000   10,000   1,00,000

Data for Russia not available

Chart 2: The chart compares the Human Development Index (HDI) of 19 countries between 1990 and 2021

0   0.5   1

HDI 1990

U.K.

India's score in HDI: 0.43   India   U.S.

S. Africa   Japan

HDI 2021

Japan   U.K.

S. Africa

India's score in HDI: 0.63   India

U.S.

0   0.5   1

Data for EU not available

Chart 3: The chart compares LFPR in 20 regions between 1990 and 2021-22

40   50   60   70   80

LFPR 1990

Saudi Arabia   Indonesia

Italy   China

India   Russia

Turkey

LFPR 2021-22

Saudi Arabia   Russia

Italy   China

India

Turkey   Indonesia

40   50   60   70   80

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Chart 4: The chart compares the share of women in Parliament of 19 regions (18 countries + EU) between 1998 and 2022

0   20   40   50

Women in Parliament 1970

India   Germany

S. Africa

Japan   Argentina

Turkey   Mexico

Women in Parliament 1970

Germany   S. Africa

India

Japan

Turkey   Argentina   Mexico

0   20   40   50

Data for Saudi Arabia not available

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