



23/06/24 - 29/06/24



C.A. SHORTS

GAGAN - THE DESERVING INDIA

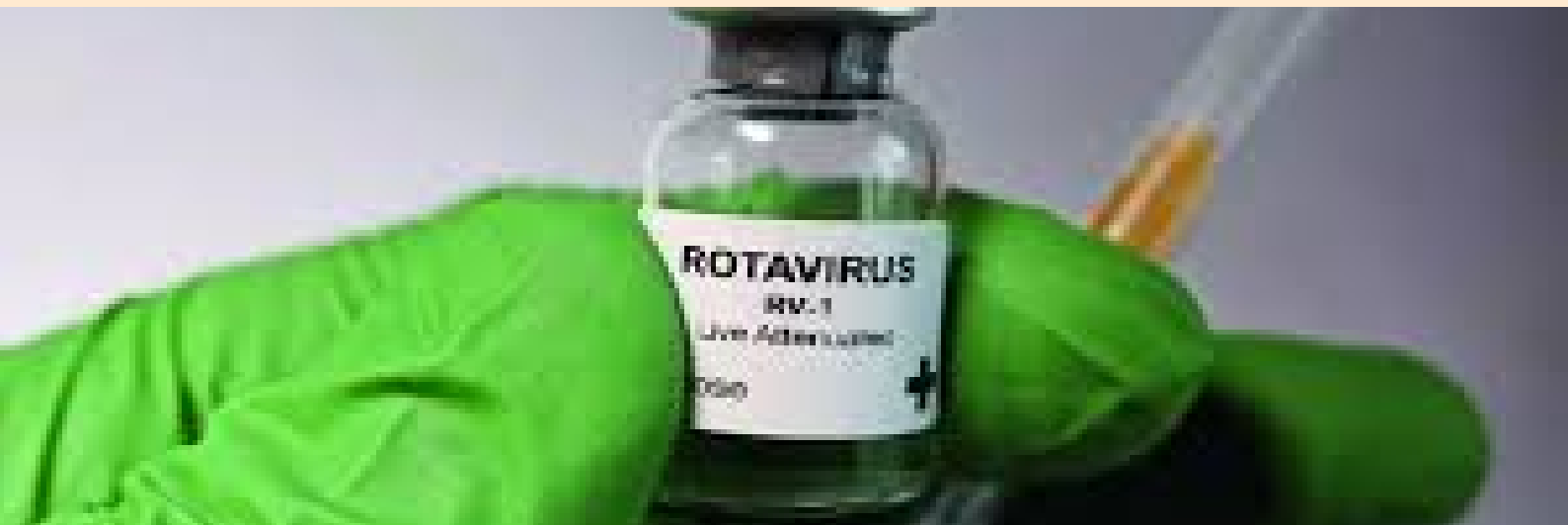




WHAT CAN THE RAILWAYS DO TO STOP ACCIDENTS?

Train Accident and Initial Response:

- On June 17, a train accident near New Jalpaiguri in West Bengal killed 10 people and injured over 40.
- The Railway Board initially blamed the goods train loco pilot for disregarding safety rules, later rescinded.
- **Signal Failure and Safety Procedures:**
- Signal failures are rare, and during such events, trains are operated under caution with specific procedures, including issuing a TA-912 notice.
- The collision occurred due to a manual clearance of two trains in the same block section due to automatic signaling malfunction.
- **Human Failure and Safety Recommendations:**
- Human failure is often cited as a major reason for train accidents.
- Committees recommend the creation of an independent Railway Safety Authority and prioritizing safety regulations and investments in newer technologies like the anti-collision device, Kavach.



ROTAVIRUS VACCINE: TORTURED DATA ANALYSES RAISE FALSE SAFETY ALARM

- Two other self-controlled case series studies published in July 2020 and January 2021 also did not find Bharat Biotech's Rotavac vaccine to be associated with increased risk of intussusception after any dose

Criticism of Dr. Puliye's Paper:

- Dr. Gagandeep Kang criticized Dr. Jacob Puliye's reanalysis of rotavirus vaccine safety, accusing him of cherry-picking data to show the vaccine is unsafe.
- Study Details and Findings:
 - Dr. Kang's study was an extensive post-licensure surveillance of 589 infants across 27 hospitals in 10 Indian states, monitoring for intussusception risk after the Rotavac vaccine.
 - The study found no increased risk of intussusception due to vaccination, consistent with other studies.
- Disputed Reanalysis and Data Interpretation:
 - Dr. Puliye's reanalysis, which shortened the observation period and found higher risk in the high-risk periods, was criticized for misrepresenting the data.
 - Dr. Kang highlighted that natural intussusception peaks later and that the pattern observed in vaccinated children did not differ from the natural occurrence.



PM MODI LIKELY TO SKIP SCO SUMMIT IN KAZAKHSTAN; XI, PUTIN, SHARIF MAY ATTEND

Modi to Skip SCO Summit:

- Prime Minister Narendra Modi will likely skip the SCO Summit in Kazakhstan, with External Affairs Minister S. Jaishankar expected to attend in his place.
- Modi's absence is attributed to the upcoming Parliament session in India, which coincides with the summit dates.
- Implications and Context:
- Modi's absence raises questions about India's commitment to the SCO, especially given the presence of other international leaders like Putin and Xi Jinping.
- The SCO Summit will include discussions with leaders from Russia, China, Central Asia, and Pakistan, among others.
- Geopolitical Tensions:
- India's relations with China and Pakistan have been strained due to border conflicts and terrorism issues, respectively.
- Since the military standoff at the LAC and the Galwan clashes in 2020, Modi has not had a bilateral meeting with Xi Jinping.
- The ongoing Russia-Ukraine conflict has also complicated India's discourse with Moscow.



NUCLEAR STUDY PROVIDES MAJOR UPDATE ON PLUTONIUM ISOTOPE FISSION

Researchers have reported the results of the first attempt to measure the PFNS of induced fission in Pu-240 with neutrons of energy greater than 0.85 MeV. They found significant deviations from values predicted by models, with implications for reactor design, radiation shielding, and nuclear medicine

THE GIST

A part of the fission energy carried away by neutrons is called the prompt fission neutron spectrum. 'Prompt' stands for neutrons Pu-240 might emit right after it has captured a neutron with the energy to destabilise it

Pu-240 undergoes spontaneous fission, and emits alpha particles. The isotope is considered a contaminant of weapons-grade plutonium, where its composition by weight is restricted to under 7%. Researchers also reported a higher-than-expected rate of second-chance fission of Pu-240. They also reported finding signs of 'a smaller contribution from third-chance fission' but added that this 'was difficult to observe in the data directly'



WHAT ARE THE DUTIES OF A SPEAKER?

THE GIST

- The President has appointed seven-time MP Bhartruhari Mahtab as the 'Speaker pro tem' of the 18th Lok Sabha.
- Article 94 of the Constitution states that the Speaker of the Lok Sabha shall not vacate his/her office until immediately before the first meeting of the Lok Sabha after its dissolution.
- The Deputy Speaker is an important constitutional officer who steps in during the vacancy or absence of the Speaker.

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HOW CREDIT CARD HELPS YOU TO BUILD CREDIT SCORE

While loans are need-based and carry high interest charges, credit cards can help you build a strong credit profile without any hefty charges and save on spends in the form of reward points

Start Early for a Strong Credit Profile:

- Beginning your credit journey early helps build a strong credit profile over time, which is beneficial for achieving future financial goals like buying a home or car.

Responsible Credit Card Use:

- Using credit cards responsibly, such as making timely payments and keeping a low credit utilization ratio (CUR), is essential for building and maintaining a good credit score. Entry-level or secured credit cards are good options for beginners.

Regular Monitoring and Management:

- Regularly checking your credit score and report helps track growth and identify errors. Always pay the total amount due on your credit card to avoid interest charges and debt accumulation.



APPLE BECOMES THE FIRST TARGET OF EU'S NEW DIGITAL COMPETITION RULES AIMED AT BIG TECH

- **Charges Against Apple:** EU regulators have charged Apple under the Digital Markets Act (DMA) for preventing app makers from directing users to cheaper alternatives outside its App Store.
- **Regulatory Investigations:** The DMA aims to prevent tech giants from dominating digital markets. The EU is investigating Apple for other practices, including restricting iPhone users' choice of web browsers, with similar probes involving Google and Meta.
- **Potential Consequences:** Apple faces pressure from both the EU and the U.S. regarding its competitive practices. If found non-compliant by March 2025, Apple could be fined up to 10% of its global revenue, amounting to billions of euros.



THE NITI AAYOG'S PROJECT IN GREAT NICOBAR

THE GIST

On June 17, the Congress party demanded an “immediate suspension” of all clearances granted to NITI Aayog’s mega project on Great Nicobar island in light of “violations of due process, legal and constitutional provisions protecting tribal communities, and the project’s disproportionate ecological and human cost.

In March, 2021, NITI Aayog unveiled a ₹72,000 crore plan called ‘Holistic Development of Great Nicobar Island at Andaman and Nicobar Islands’.

The project requires the diversion of about 130 sq. km of forest land and the felling of around 10 lakh trees. In January, 2021 the Indian government denotified two wildlife sanctuaries – the Galathea Bay wildlife sanctuary and the Megapode Wildlife Sanctuary – to make way for the project.



INDIA, PHILIPPINES REDISCOVERING EACH OTHER, BRAHMOS A GAME CHANGER: ENVOY

- **BrahMos Missile Deal:** The Philippines has inducted BrahMos cruise missiles from India, marking a significant milestone in their defense relationship. This \$375-million deal is seen as a game changer for the Philippines, enhancing its defense and deterrent capabilities.
- **Strengthening India-Philippines Relations:** The deal represents a renaissance in India-Philippines relations, showcasing India's rising defense capabilities and its first overseas export of the BrahMos missile. This strengthens bilateral ties and expands India's international defense footprint.
- **Defense Cooperation Framework:** The defense cooperation between the two countries is supported by a 2006 MoU and a 2017 reinforcement focusing on industry and logistics. This framework facilitates government-to-government procurement and underpins the modernization of the Philippines armed forces, currently in Phase 3 modernization (Horizin-3)



BRAINS THAT DON'T SEE IN GREYSCALE FIRST OVER-RELY ON COLOURS

THE GIST

- Visually impaired children taking part in the study could recognise colour images and discs. But they had a tough time recognising black and white images. Children without any impairment had trouble neither with colour nor greyscale images
- When children under treatment first experienced normal vision, their eyes had developed enough to see colours as well, so they skipped the greyscale phase. Their brain processed black and white images differently as a result
- Researchers used deep convolutional neural networks as a brain proxy. The network that mimicked visual development among children under treatment fared worse at identifying greyscale images



ANALYSING MAHARASHTRA'S WATER CRISIS

The Maharashtra government has declared many parts of the State to be drought-hit. This situation is in sharp contrast with the State's coastal areas, where rainfall has often been in excess.

Long-standing government support for sugarcane pricing and sales has expanded water-intensive sugarcane irrigation, restricting the irrigation of more nutritious crops.

In a low-rainfall region, managing water demand includes practising water-efficient irrigation, cultivating drought-resistant crops, and diversifying livelihoods. We must also control sugarcane production, if not reduce it.

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K-SHAPED RECOVERY FUELLING SIMILAR TREND IN INFLATION: HSBC

- An uneven K-shaped recovery in economic growth is also fuelling a similar trajectory for inflation dynamics, with food and rural price rise outpacing the inflation in other goods and services, and that faced by urban consumers, respectively, HSBC researchers said on Tuesday.
- There has been much debate over India's post-pandemic recovery being driven by demand for higher-end goods and services. Apart from the dichotomy between rural and urban inflation, and food prices compared with other goods, HSBC pointed to goods inflation being higher than that for services.
- "Perhaps inflation and growth dynamics were never meant to differ," HSBC's chief economist for India and Indonesia Pranjul Bhandari wrote. "The same shocks that are driving the variance in growth, like the pandemic and climate change, hurting some groups more than others, are also likely driving the variance in prices," Ms. Bhandari added.



MULTI-OMICS' IS TRANSFORMING HOW INDIA SPOTS AND TREATS TB, CANCERS

- Researchers are building datasets to address health problems at the individual level. They have extracted more value from these data using AI and machine learning, and combining their output with proteomic, transcriptomic, and epigenomic information to develop 'multi-omics' approaches
- Genomic Initiatives: India has made significant strides in genomics with projects like 'Genome India' and 'IndiGen', aimed at sequencing genomes from diverse ethnic groups to develop reference genomes and create affordable screening approaches for genetic diseases.
- Disease-Specific Consortia: Various consortia have been established to tackle specific health issues such as tuberculosis, rare genetic disorders, and cancers. These efforts include extensive genomic sequencing, data analysis, and the development of targeted treatments and diagnostic tools.
- AI and Multi-Omics: Artificial intelligence (AI) and machine learning (ML) are being integrated with genomic research to analyze large datasets, predict disease risks, develop diagnostics, and formulate personalized treatments. Multi-omics approaches are combining data from genomics, proteomics, and other fields to provide comprehensive insights into disease mechanisms and treatment strategies.



THE ROW OVER DELHI'S WATER CRISIS

THE GIST

- New Delhi depends heavily on its neighbouring States of Himachal Pradesh, Uttarakhand, Punjab, Haryana, and Uttar Pradesh to fulfil its drinking water needs.
- Delhi's Water Minister Atishi has claimed that Haryana is purposely blocking water, in an already difficult situation due to the heat, which is resulting in the residents of Delhi being forced to go waterless for days.
- The Delhi government had moved the Supreme Court to seek a direction to Haryana to supply more water to the crisis-hit national capital on May 31.

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TELCOS BID ₹11,340 CR. FOR SPECTRUM

- **Bharti Airtel's Dominant Spending:** Bharti Airtel Ltd. was the top spender in the latest spectrum auction, bidding ₹6,856.76 crore out of a total of ₹11,340.78 crore, mainly to renew expiring spectrum. In contrast, Reliance Jio Infocomm Ltd. bid ₹973.62 crore and Vodafone Idea Ltd. (VIL) bid ₹3,510.40 crore.
- **Auction Details:** The auction covered the 900MHz, 1800MHz, 2100MHz, and 2500MHz bands. No bids were placed for the 800MHz, 2300MHz, 3300MHz, and 26GHz bands due to the recent 5G spectrum auction. A total of 141.4MHz (26.5%) was sold from the remaining 533.6MHz spectrum left unsold from the 2022 auctions.
- **Strategic Acquisitions:** Bharti Airtel's CEO Gopal Vittal emphasized that the acquisitions would enhance indoor coverage. VIL highlighted its renewal and enhancement of the 900MHz spectrum in various circles to improve the 4G experience for its customers.



HEALTHCARE PROVIDERS NEED TO PAY GREATER ATTENTION

- **An audit of 100 consent documents from different hospitals revealed that almost all the documents lacked around one-third of the essential medical information they needed.**
- **When a doctor faces litigation for negligence or complications, the consent proves that the patient was counseled regarding the complications and consented with full knowledge.**
- **Informed consent is a moral imperative. This is especially relevant in cases where loss of life is extremely likely because of the patient's delicate condition**



SUDAN IS CURRENTLY FACING A SEVERE FOOD CRISIS

Sudan's population is facing severe levels of acute food insecurity, significantly worsened by the ongoing conflict. According to a United Nations report, approximately 25.6 million people are affected by this crisis.

- **Widespread Food Insecurity:** Over 50% of Sudan's population, around 25.6 million people, are experiencing high levels of acute food insecurity. This is the worst level recorded by the Integrated Food Security Phase Classification (IPC)
- **Conflict and Displacement:** Sudan has been embroiled in conflict since April 2023, involving forces loyal to army chief Abdel Fattah al-Burhan and the paramilitary Rapid Support Forces (RSF) led by Mohamed Hamdan Daglo. This conflict has resulted in tens of thousands of deaths and has displaced millions of people
- **Humanitarian Crisis:** The ongoing war has triggered one of the world's most severe humanitarian crises. The conflict has led to the collapse of health services, water contamination, and poor sanitation and hygiene conditions, further exacerbating the food insecurity situation



REASI AND THE ISSUE OF CROSS-BORDER TERROR

- Reasi, a district in Jammu and Kashmir, is strategically significant due to its proximity to the Line of Control (LoC) with Pakistan. This makes it a vulnerable target for cross-border infiltration by terrorists. The rugged terrain and dense forests provide cover for militants attempting to cross the border and infiltrate into Indian territory, exacerbating security challenges
- Since the late 1980s, there have been numerous instances of terrorist activities, including attacks on security forces, civilians, and infrastructure. This long-standing conflict has resulted in significant loss of life and disruption of daily life in the region.
- To combat the threat of cross-border terrorism, Indian security forces have implemented various measures, including increased surveillance, intelligence operations, and military presence along the LoC. Efforts such as the construction of border fences, deployment of advanced monitoring technologies, and coordination between local and national security agencies have been crucial in addressing the infiltration attempts and ensuring the safety of the residents in Reasi

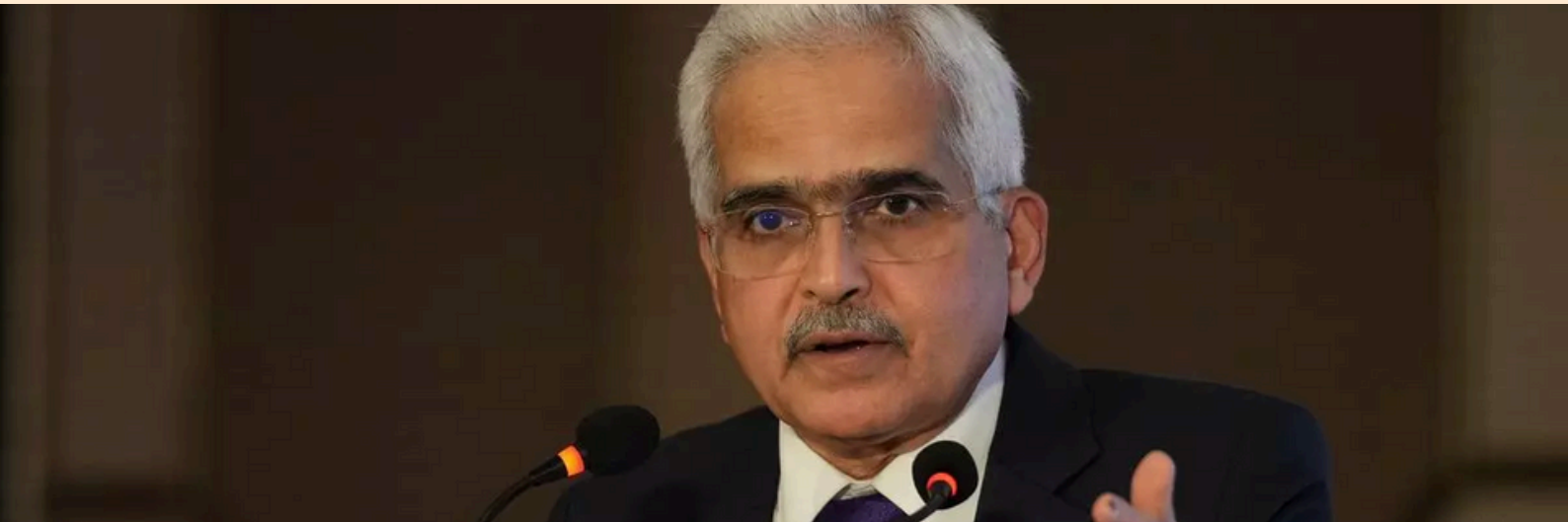


COAL, ELECTRICITY BUOY CORE OUTPUT

Output Growth: India's eight core infrastructure sectors saw growth ease to 6.3% in May from 6.7% in April, with coal and electricity production rising significantly while cement and fertilisers contracted.

Sector Performance: Electricity generation increased by 12.8%, and coal production grew by 10.2% year-on-year in May, driven by higher demand due to the heatwave. Natural gas and steel production also saw rises of 7.5% and 7.6%, respectively.

Revised Estimates: The Commerce and Industry Ministry revised April's Index of Core Industries (ICI) growth to 6.7% from an earlier estimate of 6.2%, reflecting higher-than-expected growth in electricity and steel production.



NEED TO ELIMINATE BIASES IN ALGORITHMS AS AI ON THE RISE: RBI GOVERNER

- Reserve Bank of India (RBI) Governor Shaktikanta Das on Friday emphasised on the need to eliminate biases in algorithms as the use of artificial intelligence (AI) and machine learning (ML) is on the rise.
- Delivering the inaugural address at the 18th Statistics Day Conference organised by the RBI, he said the use of statistics had been ever growing as a preferred tool for drawing inferences in diverse fields and the discipline had moved beyond collection of facts to focus more on interpretation and drawing inferences, taking into account levels of uncertainty.
- RBI has ventured into AI/ML analytics in multiple areas. Under the RBI's aspirational goals for 'RBI@100', Mr. Das said the central bank was aiming to develop cutting edge systems for high frequency and real-time data monitoring and analysis.



BIDEN, TRUMP CLASH IN PRESIDENTIAL DEBATE

- **Debate Dynamics:** Joe Biden and Donald Trump engaged in a heated first debate, marked by personal insults and a lack of handshaking, with muted microphones and no live audience at CNN headquarters in Atlanta.
- **Key Arguments:** Biden criticized Trump's moral character and economic record, mentioning Trump's civil penalties and alleged comments about fallen soldiers. Trump attacked Biden's economic and international policies, calling the past four years a decline for the U.S.
- **Performance and Reactions:** Biden, reportedly having a cold, delivered hesitant responses, while Trump, with his bombastic style, aimed to capitalize on Biden's faltering delivery. Former Biden communications director Kate Bedingfield described Biden's performance as disappointing.