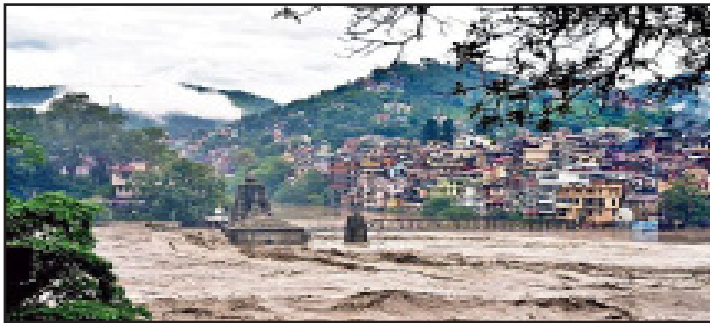




RAIN SHATTERS LIFE AT NORTH: 15 DEAD, SWATHES FLOODED



RACHANA T R

The death toll in North India has been increasing as the region faces relentless heavy rains, leading to landslides and flash floods. Himachal Pradesh, in particular, has been severely affected, with the highest number of reported fatalities at 91.

Himachal Pradesh have been witnessing landslides, flashfloods due to heavy rains. The landslides have blocked several roads, leaving people stranded. The rising water levels in the Beas River caused landslides and flash floods in various districts, leading to tragic loss of lives.

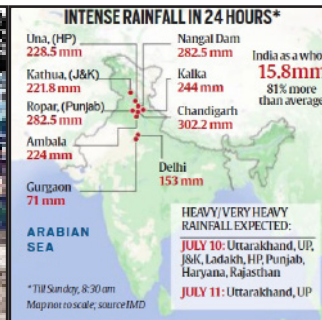
The 2023 Monsoon rain in Himachal Pradesh has brought severe Flash Floods in many regions causing unprecedented loss of lives and assets which are near impossible to recover.

In the Himalayas, there is a noticeable pattern of increased precipitation occurring in shorter periods of time. The IPCC (Intergovernmental Panel on Climate Change) 6 report has clearly stated that the Himalayas and coastal regions of India will be the hardest hit by climate change.

The India Meteorological Department (IMD) data shows that the normal rainfall during this period is expected to be between 720mm and 750 mm. However, in certain instances, it has exceeded 888 mm in 2010 and 926.9 mm in 2018.

In 2023, the precipitation in HP so far has been attributed to the combined effect of the South-West Monsoon with Western Disturbances. The total rainfall from June to date was 511 mm.

In addition, the state of Himachal Pradesh is grappling with the closure of over 1000 roads and the damage of more than 5000 water supply schemes.



As per IPCC VI report, the impact of climate change on Himalayas and coastal regions of India will be high. In the Himalayas, there is a noticeable pattern of increased precipitation occurring in shorter periods of time.

The IMD forecasts rainfall events well in advance, but it does not predict the quantum of rainfall — in fact, no meteorological agency does. The forecasts can be about light, heavy, or very heavy rainfall, but weather scientists do not have the capability to predict exactly how much rain is likely to fall at any given place.

While the overall amount of rainfall in India has not changed substantially, an increasing proportion of rainfall is happening in a short span of time. That means that the wet spells are very wet, and are interspersed with prolonged dry spells even in the rainy season. This kind of pattern, attributed to climate change, does suggest

that cloudburst events might also be on the rise.

ED Director Sanjay Mishra gets one-year extension



RACHANA T R

The Supreme Court Thursday allowed Sanjay Kumar Mishra to continue as the director of the Enforcement Directorate (ED) till September 15, instead of the earlier July 31 deadline.

A bench of Justices B R Gavai, Vikram Nath and Sanjay Karol said it was granting the extension in “larger public and national interest” but that Mishra would cease to remain ED chief from the midnight of September 15. The Centre had on Wednesday approached the Supreme Court seeking a tenure extension for Mishra till Oct- 15.

Before this, the Supreme Court had declared the two tenure extensions granted to Mishra beyond September 8, 2021 as “not valid in law”.

This led the NGO Common Cause to file a PIL seeking that the November 13, 2020 order be set aside since Mishra’s overall tenure of three years violated Section 25 of the CVC Act.

GST COUNCIL: 28% TAX ON ONLINE GAMING, CASINOS, HORSE RACING

RACHANA T R

The GST Council’s decision in its 50th meeting to change the online gaming industry’s tax incidence by imposing GST at 28 per cent of the total face value of a stake is akin to killing the goose that lays golden eggs. Currently, online gaming faces a GST liability of 18 per cent on gross gaming revenue, which is the fee charged by a platform to host a game. The sector itself has exploded in popularity in recent years — tens of millions of users, revenues of above Rs 17,000 crore and \$4 billion committed in

funding from marquee global investors including Peak XV (formerly Sequoia India) and Tiger Global.

Earlier, the ministerial panel had discussed the option of levying tax on gross gaming revenue or platform fee — the charge paid to avail the gaming services, but this did not find favour.

The uniform levy of 28% tax will be applicable on — The face value of the chips purchased in the case of casinos, The full value of the bets placed with the bookmaker/totalisator in the case of horse racing, and The full value of the bets placed in the case of online gaming.

The government will bring in amendments to the GST-related laws to include online gaming and horse racing as taxable actionable claims — goods under the CGST Act, 2017. So far, lottery, betting, and gambling were classified as actionable claims.

At present, most gaming companies were paying a tax of 18% applicable on the platform fees.

Let’s assume that the platform fee is 10%. So, for every Rs 100 deposited in the game, the platform makes Rs 10 and 18% GST on Rs 10 means that effectively, on every Rs 100, the GST is Rs 1.8.

Practically, it remains unclear how gaming platforms are expected to pay tax amounts that might be many times their actual revenue. It is also unclear if this tax liability is prospective or retrospective at this time. As a consequence, legitimate home-grown gaming platforms will most likely be forced to consider moving out of India to continue operations or shut shop entirely. It is unfortunate that just at a time when India is blossoming into a global centre for game development, retrograde taxation policies threaten to deal a body blow to the entire sector.

THE EDITORIAL PAGE

WEATHERING IT OUT

INTENSE RAINFALL MAY BE INEVITABLE, BUT THE TOLL CAN BE CURTAILED BY BUILDING CLIMATE RESILIENT AND FUTURISTIC INFRASTRUCTURE

For at least 10 years, rainfall patterns during the monsoon season have shown a distinct change. Most parts of the country witness intense bursts of rain, interspersed with relatively dry spells. In the past three days, for instance, the interaction of two climatic factors — good monsoon circulation and a western disturbance — has led to record-breaking rainfall that has, unfortunately, claimed the lives of at least 19 people, caused destruction and thrown life off gear in large parts of north India. Like in past instances of flooding, the authorities have focused on providing relief to those hit by the elements. Such efforts need to be stepped up. But it's high time attention is also given to addressing another imperative: A proactive policy against climate vagaries.

An Early Warning System (EWS) can be defined as a set of capacities needed to generate and disseminate timely and meaningful warning information of the possible extreme events or disasters (e.g. floods, drought, fire, earthquake and tsunamis) that threatens people's lives. The purpose of this information is to enable individuals, communities and organizations threatened to prepare and act appropriately and in sufficient time to reduce the possibility of harm, loss or risk.

Elements of Early Warning system(EWS) includes the following
Knowledge: Risk assessment provides essential information to set priorities for mitigation and prevention strategies and designing early warning systems.
Monitoring and Predicting: Systems with monitoring and predicting capabilities provide timely estimates of the potential risk faced by communities, economies and the environment.
Disseminating Information: Communication systems are needed for delivering warning messages to the potentially affected locations to alert local and regional governmental agencies. The messages need to be reliable, synthetic and simple to be understood by authorities and public.
Response: Coordination, good governance and appropriate action plans are a key point in effective early warning. Likewise, public awareness and education are critical aspects of disaster mitigation.

Role of early warning systems includes the following
 They prevent loss of life, as well as reducing the economic impact of natural hazards. Increasing the availability of multi-hazard early warning systems and disaster risk information is one of seven global targets set by The Sendai Framework for Disaster Risk Reduction 2015-2030. Warning to fishermen on coasts to not venture into seas.

Table : Central Agencies Designated for Natural Hazard-Specific Early Warnings

Hazard	Agencies
1 Avalanches	Snow and Avalanche Study Establishment (SASE)
2 Cyclone	India Meteorological Department (IMD)
3 Drought	Ministry of Agriculture and Farmers Welfare (MoAFW)
4 Earthquake	India Meteorological Department (IMD)
5 Epidemics	Ministry of Health and Family Welfare (MoHFW)
6 Floods	Central Water Commission (CWC)
7 Landslides	Geological Survey of India (GSI)
8 Tsunami	India National Centre for Oceanic Information Services (INCOIS)

What are India's Efforts in Managing Disaster?
 Establishment of National Disaster Reaction Force (NDRF): India has increasingly mitigated and responded to all types of disasters, including with the establishment of its National Disaster Reaction Force (NDRF), the world's largest rapid reaction force dedicated to disaster response.
 India's Role as a Foreign Disaster Relief: India's foreign humanitarian assistance has increasingly included its military assets, primarily deploying naval ships or aircraft to deliver relief. In line with its diplomatic policy of "Neighbourhood First," many of the recipient countries have been in the region of South and Southeast Asia.
 Contribution to Regional Disaster Preparedness: Within the context of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), Managing Climate Change related Disaster: India has adopted the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (2015-2030), and the Paris Agreement on Climate Change, all of which make clear the connections among DRR, Climate Change Adaptation (CCA), and sustainable development.

A complete and effective early warning system comprises four inter-related elements, spanning knowledge of hazards and vulnerabilities through to preparedness and capacity to respond. Best practice early warning systems also have strong inter-linkages and effective communication channels between all of the elements. These must be the basis for a good early warning system for various kinds of disasters.
 RACHANA TR

ARTIFICIAL SWEETENER: WHO PANEL SUGGESTS TO CUT DAILY INTAKE

RACHANA T R

The cancer research arm of the World Health Organization (WHO), the International Agency for Research on Cancer (IARC), is reportedly set to list the artificial sweetener aspartame as "possibly carcinogenic to humans." If confirmed, would go against previous studies that have found no evidence of harm caused by aspartame.

Aspartame is widely used as a sugar substitute in various food and beverage products, including diet soft drinks, chewing gum, and breakfast cereals. The IARC's assessment does not take into account safe consumption levels, which are determined by the Joint Organization Expert Committee on Food Additives (JECFA) and national regulators. Other examples of artificial sweeteners are: Sucralose, Saccharin, Stevia, Neotame.

Artificial sweeteners have gained popularity among calorie-conscious individuals seeking low-calorie options. However, recent studies have raised concerns about their long-term effectiveness for weight loss and potential health risks. The World Health Organization (WHO) has released recommendations against the use of artificial sweeteners for weight control and prevention of lifestyle diseases. Artificial sweeteners are sugar substitutes that are used as alternatives to natural sugars. These sweeteners are chemically synthesized and provide a sweet taste without the high calorie content of regular sugar. They are commonly used in various food and beverage products, including diet sodas, sugar-free desserts, and low-calorie snacks.

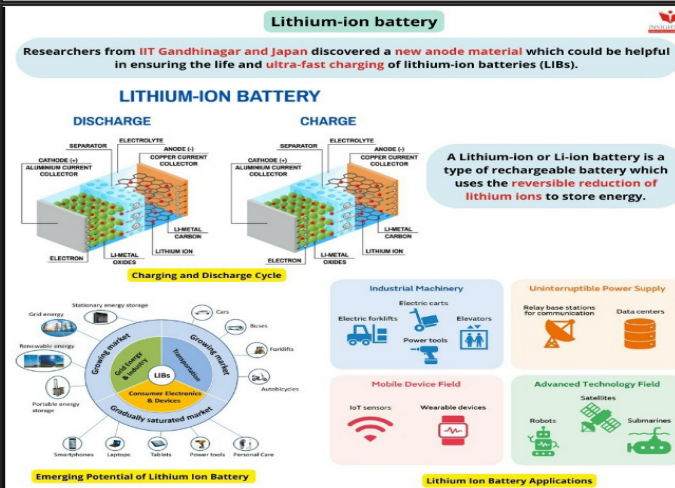
Benefits: Artificial sweeteners offer benefits for weight management, diabetes control, tooth decay prevention, and provide safe options for individuals with phenylketonuria (PKU), a genetic disorder, due to their low or zero-calorie content, minimal impact on blood sugar levels, non-fermentable nature, and absence of phenylalanine.
Negative Impacts: Controversial Health Effects: Some studies suggest potential negative health effects of artificial sweeteners, such as an increased risk of metabolic disorders, and disrupted gut microbiota. However, scientific evidence remains inconclusive.
Digestive Issues: Some people may experience digestive discomfort, such as bloating, gas, or diarrhea, after consuming products containing artificial sweeteners.
 What are the Key Findings from the WHO Report?

Findings: WHO advises against using artificial sweeteners as a means of achieving weight control or reducing the risk of non-communicable diseases. While short-term use may result in weight loss and reduced body mass index (BMI), long-term consumption of artificial sweeteners has been associated with weight gain. Some studies suggest a potential connection between artificial sweeteners and bladder cancer and preterm birth in pregnant women.

Higher intake of artificial sweeteners, particularly in beverages and added to foods, is associated with an increased risk of type-2 diabetes, cardiovascular disease (including stroke and hypertension), and preterm birth. WHO Recommendations: Instead of relying solely on non-sugar sweeteners, the WHO recommends considering other methods to reduce the intake of free sugars, such as consuming naturally occurring sugars from fruits or opting for unsweetened food and beverages. Example - Diet Colas: Diet colas, marketed as zero-calorie alternatives to regular colas, use artificial sweeteners to achieve the zero-calorie claim. The intense sweetness of artificial sweeteners can alter taste perception, making normal sweets seem less sweet and potentially leading to cravings for more sugary foods. Special attention is given to erythritol, which should be avoided due to its potential health risks.

THE PROBLEM WITH BATTERY ELECTRIC VEHICLES

Battery electric vehicles are at the heart of the government’s push for net zero. However, what has worked for Norway and China may not be as successful in India’s peculiar conditions. While there is little debate that electrification is the future, the roadmap remains unclear



Lithium-ion battery

Researchers from IIT Gandhinagar and Japan discovered a new anode material which could be helpful in ensuring the life and ultra-fast charging of lithium-ion batteries (LIBs).

LITHIUM-ION BATTERY

DISCHARGE **CHARGE**

A Lithium-ion or Li-ion battery is a type of rechargeable battery which uses the reversible reduction of lithium ions to store energy.

Charging and Discharge Cycle

Lithium ion Battery Applications

- Stationary energy storage
- Cars
- Aviation
- Trains
- Autobicycles
- Portable energy storage
- Smartphones
- Laptops
- Tablets
- Tools
- Personal Care

Industrial Machinery

- Electric carts
- Electric forklifts
- Power tools
- Elevators

Uninterruptible Power Supply

- Relay base stations for communication
- Data centers

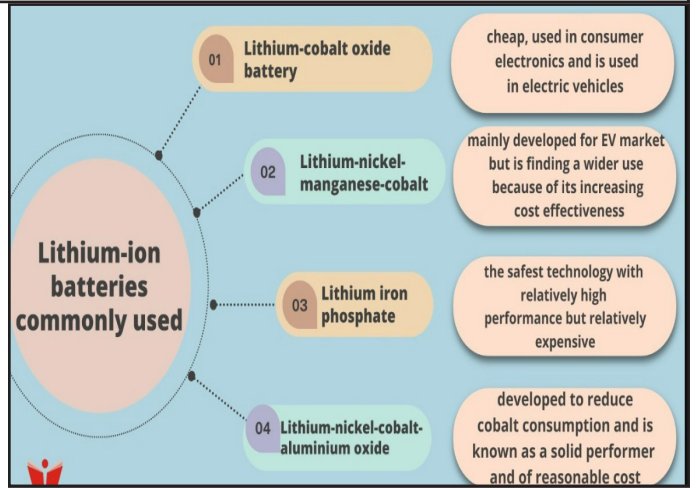
Mobile Device Field

- IoT sensors
- Wearable devices

Advanced Technology Field

- Satellites
- Robots
- Submarines

Emerging Potential of Lithium Ion Battery



Lithium-ion batteries commonly used

- 01 Lithium-cobalt oxide battery**
cheap, used in consumer electronics and is used in electric vehicles
- 02 Lithium-nickel-manganese-cobalt**
mainly developed for EV market but is finding a wider use because of its increasing cost effectiveness
- 03 Lithium iron phosphate**
the safest technology with relatively high performance but relatively expensive
- 04 Lithium-nickel-cobalt-aluminium oxide**
developed to reduce cobalt consumption and is known as a solid performer and of reasonable cost

RACHANA T R

Recently, the United Kingdom (UK) has decided to ban the sale of new petrol and diesel cars by 2030. Also, as part of its green agenda, the UK strives to establish the enabling infrastructure for electric vehicles (EVs).

Such a big move that could have a ripple effect on the green movement around the world. In India, the government is also keen on replacing fossil fuel-driven vehicles with EVs. In 2017 began by setting an ambitious target of 100% electric cars by 2030. However, due to resistance from the automotive industry and fears of job losses forced the government to lower the target. Thus, without government supporting investment in EV infrastructure upfront and passing the buck to the automotive industry and consumers, it would be difficult to bring transformation in the mobility sector.

India’s Necessity For EVs, Controlling Pollution: According to the International Council for Clean Transportation (ICCT), an estimated 74,000 premature deaths were attributable to air pollution from transportation tailpipe emissions in India in 2015. Also, many top polluted cities in the world are from India. For example, New Delhi.

Mitigating Climate Change: In December 2019, in the Climate Risk Index 2020 released by the environment think tank, Germanwatch, India’s rank has worsened from the 14th spot in 2017 to 5th in 2018 in the global vulnerability ladder. This makes it all the more reason for India to make electric cars and vehicles a priority in the fight against the reliance on fossil fuels.

Sustainable Energy Options: Shifting towards EVs will help India to reduce oil dependency while solving the challenge of energy scarcity and moving towards renewable and clean sources of energy. Associated Challenges,

Lack of Battery Cell Manufacturing: There is a complete absence of primary battery cell manufacturing in India which poses the risk of increasing trade deficit. At the moment, most manufacturers rely on batteries imported from Japan, China, Korea and Europe.

RACHANA T R

Building Charging Infrastructure: Another big challenge is the development of charging infrastructure which will need to be combined with existing refuelling stations and at alternative locations closer to homes.

Limited Grid Capacity: According to a Niti Aayog report, India’s EVs market needs a minimum of 10 GW of cells by 2022, which would need to be expanded to about 50 GW by 2025.

However, currently, India is able to add only 20 GW every year to its grid for all of our other increasing energy needs. Thus, the fulfilment of the requirement of 10GW additional capacity only for EVs would be a huge task.

Local Issues: Bringing transportation decisions closer to the people is understandable and necessary. Transport challenges such as congestion, affordability, infrastructure and transit systems availability are localized issues, impede the standardization of EVs.

Also, it will be a challenge to create a competitive advantage in electric vehicle manufacturing, or even a market for them, given that India does not have the infrastructure or deep pockets like China (world’s current leader in electric mobility).

Current Policy of Indian Government FAME Scheme: The Indian government has created momentum through its Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles schemes that encourage, and in some segments mandates the adoption of electric vehicles (EV), with a goal of reaching 30% EV penetration by 2030. If these aims are realised by 2030, they will generate an estimated saving of up to 474 Millions of tonnes of oil equivalent (Mtoe) and 846 million tonnes of net CO2 emissions over their lifetime.

Fiscal Incentives: Various fiscal demand incentives have been put in place to spur the production and consumption of EVs and charging infrastructure - such as income tax rebates, exemption from customs duties, etc.

Operationalizing mass transition to electric mobility for a country of 1.3 billion people is not an easy feat. Thus, a strong common vision, an objective framework for comparing state policies and a platform for public-private collaboration are needed industrial hubs.

Data protection Bill may lower age of consent, ease related norms

RACHANA T R

The upcoming data protection Bill could empower the central government to lower the age of consent from 18, and also exempt certain companies from adhering to additional obligations for protecting kids’ privacy if they can process their data in a “verifiably safe” manner. In the 2022 draft, the definition of a child was an “individual who has not completed eighteen years of age.”

Personal data is information that relates to an identified or identifiable individual. Businesses as well as government entities process personal data for delivery of goods and services. Processing personal data allows understanding preferences of individuals, which may be useful for customisation, targeted advertising, and developing recommendations. Processing personal data may also aid law enforcement. Unchecked processing may have adverse implications for the privacy of individuals, which has been recognised as a

fundamental right. It may subject individuals to harm such as financial loss, loss of reputation, and profiling.

As technologies like Artificial Intelligence advance and permeate various aspects of daily lives, the potential for extensive data collection, analysis, and manipulation grows exponentially. Without effective data protection measures, individuals’ personal information is at risk of being exploited, leading to privacy breaches, identity theft, and other malicious activities. An all-encompassing digital governance framework goes beyond just having a strong data protection law. It necessitates addressing various interrelated aspects like cybersecurity, competition, artificial intelligence, and more. The European Union’s strategy, which includes supplementary measures like the Data Act, Digital Services Act, Digital Markets Act, and the AI Act, offers valuable lessons in achieving comprehensive regulation in this regard.

SPORTS

Voluntary age rectification scheme ensures fairplay is beginning to be restored

It was the ultimate success of relentless, untiring parents of those that did not cheat. It also needed them to do detective work instead of focusing on their ward's badminton

RACHANA T R

Age-group national tournaments last winter were when matters came to a head. Parents of children playing in the right age bracket were aghast that the menace of age fraud was not only rampant but despite there being measures available to identify the cheats, nothing tangible was being done to stop the continuing fraud. It's when they wrote a detailed letter to the Badminton Association of India, pleading for urgent measures to be taken. The association took its time, but results are evident now. Over 100 players – their parents and coaches – have availed of the amnesty scheme window through which players have voluntarily rectified their ages to the correct birth date, without facing punishment. Sanctions will be applicable to those who get caught continuing with age fraud, also facing penal action. But it's the 100-plus that raises hope of a system clean-up as the amnesty deadlines may be extended in the coming days.



Sanctions will be applicable to those who get caught continuing with age fraud.

But December had thrown up a startlingly high number: 2192. As per a BAI list of December 2022, a total of 2192 players were playing with delayed birth certificates – where the registration date was 3-8 years after the date of birth. Registered using medical certificates, most claimed they were born at home. Some were later found with two birth certificates. These were pointers to age fudging and manipulation.

Tallying class of studying with age was a basic filter, for there would be curious questions of a player studying in Class 1 at age 2 or 3, or there was this other case of a player with fraud documents that pointed to them never having gone to school till Class 7. RTI enquiries exposed hundreds of such eye-popping occurrences all done to cheat at badminton. Some were even born in auto rickshaws, just so that the real hospital notifying dates didn't need to be revealed. But December had thrown up a startlingly high number: 2192. As per a BAI list of December 2022, a total of 2192 players were playing with delayed birth certificates – where the registration date was 3-8 years after the date of birth. Registered using medical certificates, most claimed they were born at home. Some were later found with two birth certificates. These were pointers to age fudging and manipulation.

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BAZBALL, ENGLAND LIVE TO FIGHT ANOTHER DAY



Chris Woakes and Mark Wood (right) celebrate after England won the third Test at Headingley. Reuters

I didn't realise that Woakes hasn't played a Test for so long, he is Mr. Consistent. Having someone who can bat like him batting at 8 helps us. Hope he can do something similar when he plays next

BEN STOKES
ENGLAND CAPTAIN



BRIEF SCORES: Australia 263 and 224 (Travis Head 77, Stuart Broad 3/45, Chris Woakes 3/68) lost to England 237 and 254/7 (Harry Brook 75, Zak Crawley 44; Mitchell Starc 5/78) by three wickets.