

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination



2nd Week

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Features :

Arranged as per syllabus Topics
Most complete coverage of major
News Papers editorials

Index

GS Paper 1	3
Subject: History	3
Topic: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues	3
On Tamil indentured labour in Sri Lanka	3
Subject: Indian Society	4
Topic: Salient features of Indian Society, Diversity of India	4
Evolution of Hindi language	4
GS Paper 2	5
Subject: Indian Polity	5
Topic: Functions and responsibilities of the Union and the States	5
Criminal Justice System	5
Subject: Governance	7
Topic: E-governance – applications, models, successes, limitations, and potential	7
What is e-FIR?	7
Subject: Social Justice	8
Topic: Issues relating to Education	8
Vocational education should be an integral aspect of schooling	8
Topic: Issues relating to poverty and hunger	9
PMGKAY extension	9
On the Poshan Tracker – Mother, child and the Poshan Tracker	11
Topic: Issues relating to Health	12
TB in India: A fight to the end	12
Impact of social media on mental health	14
Threats of Antimicrobial Resistance (AMR)	15
Subject: International Relations	16
Topic: India and its neighbourhood - relations	16
On India-Bhutan Relations – Closer together	16
Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India’s interests	17
On the India-UK Trade Deal – Prospects & challenges	17

Supreme Court's MFN verdict.....	19
GS Paper 3	20
Subject: Indian Economy.....	20
Topic: Mobilization of resources	20
India Finance Report on NBFCs	20
SC Ruling on Insolvency and Bankruptcy Code of India.....	21
On Tax demands from the Gaming industry – On gaming industry rules	22
Topic: Government Budgeting.....	24
On the issues with Old Pension Scheme – Pension bloat.....	24
Topic: Growth and employment.....	25
On Rural Economic Distress – RBI governor's growth optimism masks rural distress	25
Subject: Agriculture	26
Topic: Food security & Food processing and related industries in India.....	26
Food safety.....	26
Subject: Science & Technology	27
Topic: Developments and their applications and effects in everyday life.....	27
Basics of electricity transmission	27
On regulating AI – World leaders have a long road ahead.....	29
Subject: Environment	30
Topic: Environmental pollution and degradation.....	30
On noise pollution due to firecrackers – More light, less sound.....	30
Air Pollution in Indian cities.....	31
Subject: Internal Security.....	33
Topic: Basics of cyber security	33
ICMR data breach	33

GS Paper 1

Subject: History

Topic: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues

On Tamil indentured labour in Sri Lanka

News: This article discusses the history of indentured labour under British rule. It also highlights the challenges faced by them, especially that faced by the Tamil indentured labour in Sri Lanka.

2023 marks the 200th year of the arrival of Tamil indentured labour in Sri Lanka (in November 1823).

How did the concept of indentured labour begin?

A wave of liberal humanism swept through Europe in the 18th century. As a result, the British banned slavery in their colonies, only to replace it with another kind of bondage, termed “**indentured labour**”. Labour crisis following the abolition of slavery in British colonies led to a soaring demand for workers from India to work on plantations and infrastructure projects in the Caribbean, Fiji, Réunion, Malaysia, Singapore and Sri Lanka.

What were the challenges faced by indentured labour?

- Misleading promises:** They were misled about the work they would undertake, the wages they would receive, the quarters where they would live, and even the countries they were sailing to.
- Debt burden:** Most laborers reached their destination deep in debt, as they had to pay for their extremely high fare.
- Lack of access to basic facilities:** They were to reside in squalor, with no access to sanitation, running water, medical facilities or schools for their children.

What led to an increase in the requirement of indentured labour in Sri Lanka?

In the 1870s, the rapid spread of a fungal disease led to a blight that caused the disappearance of coffee from Sri Lankan plantations, paving the way for **tea**, whose estates increased manifold. While coffee requires only 3 workers for every 10 hectares of cultivation, tea requires at least 8, and as such, demands more field labour. This led to an **increase in the requirement of workers**. Along with the shortfall caused by the **abolition of slavery**, and led to a massive, organized transfer of Indian Tamils to Sri Lanka.

What were the challenges faced by Tamils in Sri Lanka?

Along with the usual challenges of indentured labour, Tamils faced the following as well:

1. Colonial practices and policies deemed them “foreigners”, thus rendering them **stateless** (under Sri Lanka’s Citizenship Act of 1948) and **prevented assimilation**.
2. **Women tea-pluckers** worked all day in the plantations **without any toilet facilities**.
3. System of sub-contractors called **kanganies**, labour recruiters and overseers played a dominant role in the **exploitation** of Indian labourers on plantations. The vague contracts led to greater abuse.
4. The Plantation Tamils **could not buy land and build houses**, for colonial laws restricted landholding to those “domiciled” in Ceylon only.

Subject: Indian Society

Topic: Salient features of Indian Society, Diversity of India

Evolution of Hindi language

News: The article discusses the evolution of Hindi, highlighting its openness to diverse influences and its role as a voice against oppression and injustice. It's in the light of recent controversies and efforts to purify it by removing Persian and Arabic elements.

What is the nature of language according to Bhartrihari?

Bhartrihari, was a famous philosopher. He pointed out following features of a language:

1. Language to be dynamic and ever-changing.
2. "Dhwani" or sound arbitrarily assigns meanings to words, leading to their fluidity. Words don't have fixed meanings. They change and evolve over time.
3. Despite similarities, each word is unique, with no exact synonyms existing.

In short, Bhartrihari viewed language as a living entity, constantly redefined by those who use it, with the capacity to evolve.

About Hindi language:

Hindi's name comes from the Persian word 'Hind' linked to the Indus River area. Article 343(1) of the Indian Constitution declares Hindi in the Devanagari script as the official language of the Union. This was established on September 14, 1949, a day now celebrated as Hindi Day, and the language is also recognized by the United Nations. Its influence stretches beyond India's borders, finding official and regional recognition in countries like Fiji, Suriname, Guyana, Mauritius, and Trinidad & Tobago. The Central Hindi Directorate ensures the language's growth and regulation, reflecting the depth of India's linguistic and cultural landscape

For information about various constitutional provision related to language in India [read here](#)

How did the Hindi language evolve in India?

1. **The Impact of Historical Forces:** Hindi's evolution was significantly shaped by colonial encounters and the Indian national awakening. Intellectuals, from the Hindi region, were inspired by reform movements in Bengal to modernize the language.
2. **Fusion with Other Dialects and Languages:** Khari Boli Hindi, the basis of modern Hindi, drew from dialects like Braj Bhasha, Awadhi, and Bhojpuri. It also integrated words from Sanskrit, Arabic, and Persian, reflecting its adaptive nature.
3. **The Hindi-Urdu Division:** A political campaign to replace Urdu with Hindi in Bihar and the United Provinces sparked a divide, falsely presenting Hindi and Urdu as separate languages for Hindus and Muslims, respectively. This led to movements to 'Sanskritize' Hindi.
4. **Enduring Eclecticism:** Despite attempts to standardize and 'purify' Hindi, it retained its eclectic character. Influential literary figures from other linguistic backgrounds, including Urdu and Punjabi, continued to enrich Hindi literature.

What is Hindi's role in social protest?

1. **Foundation in Protest:** Hindi emerged from a background of resistance and has maintained that role. It became a means to challenge colonial power and advocate for national awakening.
2. **Literature as Dissent:** Writers like Premchand, who initially wrote in Urdu, and Rahi Masoom Raza, author of "Aadha Gaon," have used Hindi to express themes of social justice and unity, thus participating in the larger narrative of protest through their works.
3. **Reflecting Plurality and Protest:** Hindi has allowed writers from many different backgrounds to use their writing to challenge social injustice. Like Krishna Sobti from Punjab.
4. **Hindi's Emancipatory Role:** Throughout its evolution, Hindi has maintained its core purpose of challenging injustice and promoting the welfare of various groups.

GS Paper 2

Subject: Indian Polity

Topic: Functions and responsibilities of the Union and the States

Criminal Justice System

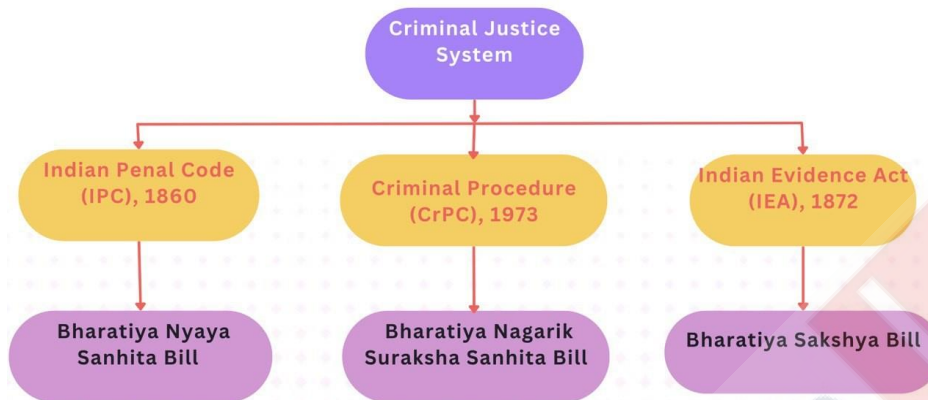
News: The article discusses three new Indian Bills that aim to modernize the country's criminal justice system by replacing existing laws. These Bills focus on updating legal provisions and ensuring they align with modern practices and norms.

What is the core criminal justice system in India?

The core criminal justice system in India is currently based on three main laws: the Indian Penal Code (IPC), 1860, the Code of Criminal Procedure (CrPC), 1973, and the Indian Evidence Act (IEA), 1872. These

laws form the foundation of how crimes are defined, prosecuted, and tried in India. To modernize this system, the government has introduced three new Bills. The Bharatiya Nyaya Sanhita Bill is set to replace the IPC; the Bharatiya Nagarik Suraksha Sanhita Bill will take the place of the CrPC; and the Bharatiya Sakshya Bill is aimed at replacing the IEA.

Indian criminal justice system replacement



What is the need of modernizing the criminal justice system in India?

- 1. Modernizing Jurisprudence:** The replacement of India's criminal justice system signifies an update to modern legal standards. For example, the Bills introduce community service as a punishment, reflecting a shift towards a more reformative approach.
- 2. Aligning with Supreme Court Rulings:** The new legislation aligns with key Supreme Court decisions, such as the decriminalization of adultery and same-sex relations, ensuring the legal system is consistent with contemporary judicial interpretations.
- 3. Addressing Overlaps with Special Laws:** The replacement helps eliminate inconsistencies and duplications with specific laws. An example is the removal of IPC provisions on weights and measures, avoiding overlap with the Legal Metrology Act, 2009.
- 4. Updating Definitions and Illustrations:** The Bills update terms like 'unsound mind' to 'mental illness', aligning with modern medical understanding as per the Mental Healthcare Act, 2017. However, they still retain some outdated illustrations, indicating a need for further modernization.
- 5. Ensuring Fairness and Efficiency:** Parliament aims to create a criminal justice system that is fair, just, and efficient, catering to the needs of a modern society.

What are the challenges in replacing the criminal justice system in India?

- 1. Balancing Civil and Criminal Laws:** The challenge is to appropriately differentiate and integrate civil law aspects within the criminal justice system. Criminal law typically addresses offenses against society or the state, while civil law focuses on individual losses. But CrPC also covers post-divorce maintenance for spouses and children.
- 2. Reformative vs Punitive Approach:** The Bills introduce community service as punishment but retain trials for non-compoundable minor offences (such as keeping an unauthorized lottery office, which carries a maximum penalty of six months imprisonment), indicating a struggle to balance reformative and punitive elements.
- 3. Consistency in Sentencing:** Providing consistent sentencing, especially when the range is wide (like the up to 10-year imprisonment for deceiving a woman into cohabitation), is a complex issue.

4. **Updating Age and Gender Laws:** The Bills need to address modern norms regarding age thresholds for criminal responsibility and update gender-related offences, evidenced by the non-inclusion of marital rape as an offence.

Subject: Governance

Topic: E-governance – applications, models, successes, limitations, and potential

What is e-FIR?

News: This article discusses the concept of e-FIR. It also highlights the benefits and challenges associated with e-FIRs and suggests steps to tackle the same.

What is an e-FIR?

The concept of 'e-FIR' includes obtaining information/complaint through electronic means using a common national portal and then getting the information/complaint signed by the complainant physically within a stipulated time to convert the complaint into an actual FIR. Read more about **First Information Report (FIR)** [here](#).

What does the Law Commission say about e-FIR?

Law Commission of India Report No. 282 recommended that “in cases **where the accused is not known**, registration of an e-FIR should be allowed for all cognisable offences”.

If the **accused is known**, as a preliminary step, registration of an e-FIR may be allowed for cognisable offences wherein the punishment provided under the Indian Penal Code (IPC) and other laws is up to 3 years.

In other cases (punishable with more than 3 years of imprisonment), the conventional method prescribed under the IPC needs to be followed.

In the next step, the police officer is required to get the signature of the complainant within 3 days to register an e-FIR. Otherwise, the e-FIR shall not be registered.

Read about **Cognizable Vs Non-Cognizable Offences** [here](#).

What are the benefits of e-FIR?

First, the police will have to take cognisance of the complaint as the system will automatically generate receipt. This will ensure almost free registration of crime. **Second**, the police will not be able to change the contents of the complaint.

What are the issues with the debate around e-FIR?

1. **Lack of clarity and awareness:** The Commission has not clarified the concept of an 'e-FIR' in detail. The procedure in the report is given only for cases where the accused is known.
2. **State models not discussed:** Though the Commission mentioned that 8 States are lodging an e-FIR, it did not discuss any of the models adopted by those States.
3. **No automatic registration of FIR:** 'e-FIR' does not mean an automatic registration of an FIR using electronic means.
4. **Lack of e-authentication technique:** In case a paper-based signed complaint is to be replaced by an equivalent document in electronic form, one must affix electronic signature or use an e-authentication technique, for instance, like the one notified in the IT Act, 2000. However, the Commission has not discussed using the 'e-authentication technique or digital signature' as defined in the IT Act, 2000, for signing complaints.

What should be done?

1. **Mandating an e-authentication technique:** It would be better if the use of an e-authentication technique is mandated for the verification of complainant.
2. **Immediate registering of an e-FIR through e-authentication** (and not the current delay of 3 days, which may impact the case).

Subject: Social Justice

Topic: Issues relating to Education

Vocational education should be an integral aspect of schooling

News: The article discusses the inclusion of Vocational Education in India's new National Curriculum Framework, starting from early schooling. This initiative is designed to equip students for work and life, giving it the same importance as traditional subjects and tailoring it to fit local needs and resources.

What is the National Curriculum Framework?

The National Curriculum Framework (NCF) serves as an educational blueprint in India, revised five times—in 1975, 1988, 2000, 2005, and 2023. It aligns with the New Education Policy (NEP) 2020 to reform school education.

In 2023, the latest update integrates Vocational Education (VE) into the school curriculum, which is a shift from the National Policy on Education (1986), which limited VE to the Higher Secondary Stage.

To embed VE in the school system, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 4.0 has been initiated (2023 budget), mandating CBSE schools to create skill hubs, following the directives of the 2020 National Education Policy.

9 PM Compilation for the Month of November [Second Week] 2023

Earlier, vocational training in India only comprised full-time programs via ITIs under National Council for Vocational Training (NCVT) recognition and part-time courses through state boards and universities.

For more information on **National Education Policy 2020**, [read here](#)

How will vocational education (VE) be taught?

Until grade 5, children will develop basic work capacities through play. For instance, they might learn to safely use a tool or focus on completing a task.

In grades 6-8, students get hands-on experience with a variety of vocations via projects.

By grades 9-10, students learn specific vocations, treated with equal importance as traditional academic subjects.

In the final school years, **grades 11-12**, there's an option to specialize in chosen vocations.

What are the benefits of integrating vocational education (VE) into schools?

1. **Preparation for Employment:** VE equips students with practical skills needed for jobs right after school, increasing their employment prospects.
2. **Life Skills Development:** Even for those not immediately entering the workforce, VE imparts crucial life skills like critical thinking and problem-solving.
3. **Broad Educational Foundation:** VE being given equal importance to other subjects ensures a well-rounded education. For instance, students learn to value all types of work, from manual to intellectual.
4. **Local Relevance:** The choice of VE subjects is made based on local needs and job opportunities, making education more relevant to the students' own communities.
5. **Social Equality:** Integrating VE combats societal and educational biases, promoting equality and respect for all kinds of work.

What are the challenges of integrating vocational education (VE) into schools?

1. **Practical Implementation:** Implementing VE requires careful planning on how to include it practically within the existing school system.
2. **Societal Perceptions:** There's a challenge to change the societal view that VE is lesser than mainstream education.
3. **Philosophical Bias:** Overcoming the bias in the education system that has historically seen VE as non-essential or less intellectual is a challenge.

Topic: Issues relating to poverty and hunger

PMGKAY extension

News: This article discusses the impact of the recently proposed extension of PMGKAY on India's food subsidy bill. It also highlights the challenges associated with this extension.

9 PM Compilation for the Month of November [Second Week] 2023

Recently, the PM announced an extension of the PM Garib Kalyan Anna Yojana (PMGKAY), providing free food grain to 810 million beneficiaries, for **5 more years**.

What is PMGKAY?

PMGKAY is a free food grain scheme that covers **over 57% of India's population**. Under PMGKAY, started in April 2020 in the wake of the COVID pandemic, each beneficiary got **free 5 kg of food grain per month**, in addition to the PDS scheme (an extra 5 kg of food grain per month supplied at a heavily subsidised price). Its current annual cost (or food subsidy bill) would be over **~ Rs. 2 trillion (Rs. 2 lakh crore)**, and it should increase in the next 5 years.

What will be the impact of this on India's food subsidy bill?

The food subsidy bill is certain to rise due to the following:

1. **Downward revision of Central Issue Price:** The **central issue price** was last revised in 2013. With this announcement, the issue price has been abolished.
2. **Upward revision of MSP:** There is continuous **pressure to raise the MSP for agricultural crops**, raising FCI's economic costs in procuring grains every year for the central pool.
3. **Higher procurement by FCI:** Even though the annual requirement for the PDS is estimated at 50-60 million tonnes, FCI's procurement is on the higher side to prevent any supply shortages.

What are the issues with this extension?

1. **Poor Targeting:** According to a World Bank report, India's poverty level declined to **10%** in 2019. In contrast, PMGKAY covers **57%** of India's population.
2. **Leakages and diversions of food:** According to the **Shanta Kumar Committee**, **nearly 50%** of the foodgrains are siphoned off from PDS system (**NSSO, 2011**).
3. **Issue of freebies:** Free schemes once announced do not have a sunset clause (an ending date).

What should be done?

1. **Rectifying inclusion and exclusion errors:** The urgent need is to redefine the number of beneficiaries that are truly deserving of a free food grain supply scheme.
2. **Revision of central issue price:** The government must revise the central issue price for food grain, fixed more than 10 years ago. This can decrease the government's food subsidy bill.
3. **Explore alternatives:** A better option could be a **direct cash transfer** to the deserving beneficiaries, equivalent to the cost that the government incurs on procuring them.

Terminology used:

Central Issue Price: It is the price at which foodgrains under NFSA are being made available to the beneficiaries (Subsidized prices of Rs. 3/2/1 per kg for Rice, Wheat and Coarse-grains (Nutria-cereals) respectively).

Sunset clause: It is a part of a law or rule that states it will expire on a specific date unless lawmakers decide to keep it going. Many laws don't have this, so they can last indefinitely.

On the Poshan Tracker – Mother, child and the Poshan Tracker

News: This article discusses the important features and significance of the Poshan Tracker. It also highlights challenges that will need to be tackled in order to ensure its success and suggests steps for the same.

A detailed article on **India's hunger situation** can be [read here](#).

What is the Poshan Tracker?

The rollout of the **Poshan Tracker** represents the largest mobile-phone nutrition monitoring system in the history of global health.

The Poshan Tracker is a **centralised ICT-enabled platform**, developed to **promote transparency and accountability** of nutrition service delivery, as part of the new **Poshan 2.0 guidelines**.

Its features include:

- i. **Last-mile delivery of nutritional services**
- ii. **Real-time feedback loop** for frontline functionaries to prevent malnutrition by better identifying, targeting and monitoring of ICDS services.
- iii. **Precursor for targeted investments** in healthcare for women and children.

More on the **Poshan 2.0 Scheme** [here](#).

What is the significance of the Poshan Tracker?

1. **Universal uptake** – Anganwadi workers are using the app across **all states and Union territories**.
2. **Massive scale** – Real-time monitoring of **more than 50% children** in the country is being undertaken. Moreover, 94% of beneficiaries have been Aadhar verified.
3. **Holistic coverage** – It captures 3 more indicators.
 - a. Anganwadi infrastructure.
 - b. Beneficiaries of take-home rations and hot cooked meals.
 - c. Monitoring of nutritional outcomes.
4. **Highly detailed data (or Granularity):** The granularity of Poshan Tracker data is key in addressing the huge variability in malnutrition rates estimated through household-level surveys.
5. **Better utilisation:** It makes beneficiary-wise data that is observed on the ground, available for decision-makers for local and timely action.
6. **Accuracy:** The app automatically calculates nutritional levels based on the WHO growth charts. It can reduce errors in their manual calculations.
7. **Timeliness:** It avoids paper-based reporting, enabling real-time transmission of data. For instance, it is easier to retrieve information from it as compared to bulky paper-based registers.

What are the challenges associated with the Poshan Tracker?

1. **Quality of data:** Doubts about data quality have been identified as a major hindrance to using nutrition monitoring data for informed nutritional policies.
2. **Limited Window of data utilisation:** Global experience shows that decision-makers do not place a high value on data that are 3-5 years old.

What needs to be done?

1. **Feedback mechanisms:** It must be ensured that the Poshan Tracker is **routinely updated** based on the feedback of Anganwadi workers to **improve user-friendliness**.
2. **Skill-building and technical assistance:** It will be needed to ensure the sustainability of this new monitoring system.
3. **Investments in service delivery:** Adequate investments in delivering essential services when malnutrition is detected.

Topic: Issues relating to Health

TB in India: A fight to the end

News: The article discusses India's tuberculosis (TB) situation, with a particular emphasis on the findings and suggestions presented in the WHO report. It highlights the high number of TB cases in 2022 and notes some progress in reducing TB mortality and improving case detection. Additionally, the article discusses challenges such as multi-drug resistant TB and underscores the significance of the WHO's recommendations in addressing these issues.

What is TB?

Tuberculosis (TB) is an infectious airborne bacterial disease caused by Mycobacterium tuberculosis. It most commonly affects the lungs but can also damage other parts of the body.

For more information on TB [read here](#)

What are the findings of the WHO report on the TB situation in India?

Positive Findings:

1. **Mortality and Incidence Reduction:** The WHO report acknowledges a reduction in TB mortality and incidence in India over the past eight years, indicating progress. For instance, India recorded a staggering 28 lakh TB cases in 2022.
2. **Improved Case Detection:** The report highlights improvements in India's TB case detection system, ensuring more timely diagnosis and treatment. This progress is essential in addressing the TB burden.
3. **TB Reporting Resilience:** Despite challenges during the COVID-19 pandemic, India's TB reporting rebounded to 2019 levels, demonstrating the resilience of surveillance programs.

Negative Findings:

9 PM Compilation for the Month of November [Second Week] 2023

1. **Multi-Drug Resistant TB Challenge:** The report mentions that India faces a substantial challenge with multi-drug resistant (MDR) TB, with only slightly over half of the estimated 1,19,000 new cases reported annually.
2. **Undiagnosed Cases:** The WHO report raises concerns about the possibility that some "new cases" might actually be undiagnosed patients from the pandemic years.
3. **Missed Elimination Target:** Despite progress, India is likely to miss its target of eliminating TB by 2025.

What are the suggestions provided in the WHO report on the TB situation in India?

1. **Utilize Molecular Diagnostics:** The WHO recommends the use of molecular diagnostic tests for TB, similar to those used for COVID-19 detection. These tests have been effective in the pandemic and can be repurposed for TB diagnostics, as they provide more accurate results.
2. **Address MDR TB Epidemic:** The report suggests improving prescription practices, drug quality, and completion of medications to tackle the MDR TB epidemic effectively.
3. **Enhance Patient Care:** TB treatment is challenging, with side effects like nausea and jaundice. The report emphasizes the need for dedicated and caring physicians to support patients throughout their treatment, improving treatment completion rates.

What steps have been taken to combat TB in India?

India has taken significant steps to combat tuberculosis (TB) as part of its National Strategic Plan (NSP) for TB Elimination:

1. **Setting Ambitious Targets:** India aims to eliminate TB by 2025, five years ahead of the global goal. The NSP targets no more than 44 new TB cases or 65 total cases per lakh population by 2025.
2. **Expanded Testing:** The government has increased access to molecular test kits like CB-NAAT and TureNat across all districts, facilitating faster and more accurate TB diagnosis.
3. **Community Engagement:** Ni-Kshay Mitras engage in community programs, offering nutritional support to TB patients.
4. **Free Medication:** Essential medicines like Bedaquiline and Delamanid are provided free by the government for TB treatment.
5. **Vaccine Research:** Ongoing research on vaccines such as Immuvac and VPM1002 demonstrates India's commitment to finding more effective ways to combat TB.

For additional details on the government's efforts to combat TB in India, [read here](#)

Impact of social media on mental health

News: The article discusses lawsuits against Meta regarding Instagram affecting young users' mental health. Meta is accused of creating addictive platforms that harm teens. There's pressure globally for more social media regulation, and Meta may face heavy fines.

Background:

In 2017, London teen Molly Russell took her own life after viewing self-harm content on social media. The issue of social media's impact on youth mental health was later spotlighted in "The Social Dilemma," a 2020 Netflix show.

On 30th September 2023, a London coroner ruled that the exposure to harmful social media content had contributed to her death "in a more than minimal way." This ruling marks a potentially unprecedented acknowledgement of the direct impact social media can have on child safety.

What is the issue with social media?

Harmful Effects on Youth: Meta's social media platforms, particularly Instagram, are accused of damaging teens' mental health.

Addiction and Exploitation: Lawsuits allege that Meta's platforms are designed to be addictive, making young users spend more time online. This is due to the exploitation of the brain's dopamine responses, which are tied to the rewarding feeling from likes and interactions.

What are government actions in this regard?

Numerous lawsuits have been filed against Meta over issues potentially harmful to youth, which may lead to hefty fines, while President Biden's call for regulation and global attention from the UK, EU, and India signal a tightening grip on social media practices.

What should be done?

1. **Reform Business Models:** Considering a shift from an advertising-based model to a subscription model, similar to what OpenAI uses for ChatGPT. It could reduce the dependence on data monetization and user engagement for profit.
2. **Tools and Support:** Meta should continue developing and implementing tools that support teens and their families in navigating social media safely.
3. **Accountability and Transparency:** Social Media Platforms should be held accountable for the content hosted and the psychological effects of their algorithms on young users.
4. **Global Cooperation:** Meta might need to work with global regulators proactively to manage the concerns around social media's impact on youth.

Threats of Antimicrobial Resistance (AMR)

News: The article discusses the global commitment to fight Antimicrobial Resistance (AMR) during India's G20 presidency, highlighting the need for research, prevention, and equitable access to treatments. It emphasizes the necessity of global and local actions, including stronger surveillance, responsible antibiotic use, and international collaboration.

What is Antimicrobial Resistance (AMR)?

Antimicrobials are agents intended to kill or inhibit the growth of microbes. They include antibiotics, fungicides, antiviral agents and parasiticides.

AMR occurs when microbes such as bacteria, viruses, parasites and fungi become resistant to antimicrobial treatments to which they were previously susceptible.

Superbugs are strains of micro-organisms that are resistant to most of the medications.

For more details on AMR [read here](#)

What are the implications of AMR?

High Mortality: AMR is currently linked to approximately 4.95 million associated deaths annually.

Health Threat: AMR jeopardizes the treatment of infectious diseases, cancer care, and transplant success due to increased difficulty in treating resistant infections.

What initiatives have been taken to address AMR?

1. **National Action Plan on Antimicrobial Resistance (2017-21):** It highlighted the importance of sanitation initiatives such as the Swachh Bharat Abhiyan, which can indirectly reduce the need for antibiotics by preventing infections.
2. **The National Health Policy 2017:** It provides specific guidelines for the prudent use of antibiotics, including **restrictions on over-the-counter sales** and limitations on antibiotic usage in livestock, aiming to control the misuse and overuse of antibiotics.
3. **Adoption of the Muscat Manifesto:** Manifesto stressing the need for enhanced political commitment to implement **One Health actions** to control AMR. India pledged to decrease antimicrobial usage in agriculture by up to 50% by 2030 and to stop using medically important antimicrobials in animals and food production.
4. **Reporting to WHO GLASS:** India is strengthening the engagement of its private sector in reporting antimicrobial use and resistance to the **WHO Global Antimicrobial Resistance and Use Surveillance System (GLASS)**.

For more details on **India's initiatives to address AMR**, [read here](#)

What is the Delhi Declaration, and how will it be helpful in tackling AMR?

The Delhi Declaration is an agreement by countries during India's G20 presidency focusing on strengthening health systems to fight health challenges like AMR.

It would be helpful in tackling AMR through:

9 PM Compilation for the Month of November [Second Week] 2023

1. **Combating AMR with a Unified Approach:** The Declaration commits to the One Health approach and enhancing pandemic preparedness, crucial for tackling the complex issue of AMR.
2. **Prioritizing AMR:** The Declaration seeks to reduce the estimated 4.95 million deaths associated with AMR, akin to diseases like HIV/AIDS.
3. **Supporting Low-Income Countries:** It aims to provide equitable access to medical resources, essential for countries with higher AMR death rates, like those in Sub-Saharan Africa and South Asia.
4. **Implementing National Action Plans:** The Declaration encourages the adoption and implementation of National Action Plans, drawing from India's efforts like the NAP-AMR for research and surveillance.
5. **International Collaboration and Funding:** It proposes an international funding mechanism for AMR research and development and promotes patent reforms to make treatments more affordable.

What should be done to combat AMR?

1. **Reform Antibiotic Patents:** Discuss patent reforms to enhance innovation while maintaining new antibiotics' affordability, looking at models like the Medicines Patent Pool.
2. **Engage Academia and CSOs:** Involve academic institutions and civil organizations in research, education, and policy advocacy for AMR containment.
3. **Support Global Health Infrastructure:** Pledge support for equitable access to medical resources in Low- and Middle-Income Countries, recognizing the shared risk AMR poses.
4. **Educate the Public:** Increase awareness of the risks associated with the overuse of antibiotics.

Subject: International Relations

Topic: India and its neighbourhood - relations

On India-Bhutan Relations - Closer together

News: This article discusses the outcomes of the recent meeting of India's Prime Minister and Bhutan's King Wangchuck.

A detailed article on **India-Bhutan relations** can be [read here](#).

What are the various development initiatives being planned by India and Bhutan?

1. **Rail Links:** Discussions are ongoing for establishing rail connections between Kokrajhar in Assam and Gelephu in Bhutan; and between Banarhat (West Bengal) and Samtse (Bhutan).
2. **Infrastructure Upgrades:** Checkpoints along the India-Bhutan border are being upgraded to facilitate easier trade and movement.
3. **Special Economic Zone:** Bhutan plans to set up a Special Economic Zone at Bhutan's southern border with Assam to drive growth and investment.

4. **Airport Development:** A new airport at Gelephu is proposed to increase accessibility and promote economic development.
5. **Energy Integration:** An 'energy exchange' is planned to share hydropower resources between Bhutan, Nepal, Bangladesh, and Sri Lanka, promoting intra-regional growth.

What are the implications of these initiatives?

1. **Regional Development:** The infrastructure projects like rail links could transform the economies of West Bengal, Bhutan's southern and eastern districts, and northern Bangladesh.
2. **Economic Diversification:** Bhutan's reliance on hydropower and tourism might reduce with the proposed Special Economic Zone and new trade routes.
3. **Reduced Emigration:** Enhanced job opportunities from these initiatives could stem the outflow of Bhutan's educated youth and professionals.
4. **Increased Exports:** The Preferential Trade Agreement with Bangladesh may raise the export of Bhutanese goods.
5. **Energy Distribution:** The energy exchange program aims to distribute Bhutanese and Nepali hydropower across the region, increasing revenues and energy security.
6. **Strategic Stability:** The projects serve as a strategic counter to China's influence and help secure India's northeastern corridor, contributing to regional stability.

Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

On the India-UK Trade Deal – Prospects & challenges

News: The article discusses the Free Trade Agreement (FTA) between India and the UK. It looks at how this deal could help various sectors by reducing tariffs, easing visa rules for Indian professionals, and addressing investment. It also highlights challenges like environmental standards and data protection.

What is the current status of India-UK trade relations?

India and the UK are finalizing a free trade agreement, expected to be signed by year-end. Bilateral trade between the countries exceeded \$44.3 billion in the 2022-23 financial year. India exported goods and services worth \$25.8 billion to the UK, enjoying an **\$8 billion trade surplus**.

What are the benefits of an FTA between India and the UK?

Benefits for India:

1. **Increased Export Competitiveness:** Indian exports facing high UK tariffs, such as textiles and apparel, will benefit from tariff elimination. These sectors contribute \$5 billion in exports and stand to become more competitive in the UK market.

9 PM Compilation for the Month of November [Second Week] 2023

2. **Services Sector Expansion:** Indian IT services could see growth with eased UK visa processes, crucial for the sector that caters significantly to the UK market.
3. **Investment Inflows:** The simultaneous negotiation of a Bilateral Investment Treaty (BIT) promises better investment protection, potentially leading to increased UK investment in India.

Benefits for the UK:

1. **Tariff Reduction in India:** UK products like cars and Scotch whisky, currently taxed heavily in India (100-125% for cars, 150% for whisky), could see reduced tariffs, lowering costs and enhancing their market position.
2. **Level-Playing Field:** The FTA aims to give UK companies access to India's government procurement market, leveling the playing field against Indian firms and opening new business avenues.
3. **Industrial Benefits:** UK exports such as silver, which faced a 12.5% tariff, and other heavily taxed goods, will gain from reduced Indian tariffs, increasing their competitiveness in the Indian market.

What are the challenges associated with this FTA?

1. **Tariff Negotiation Challenges:** Indian goods like pharmaceuticals, which already have zero tariffs, won't benefit from the FTA. While UK exports to India, such as cars and whisky, are highly taxed (cars at 100-125% and whisky at 150%), this may be reduced but not fully eliminated.
2. **Environmental and Labor Standards:** India is cautious about committing to stringent sustainability criteria and labor standards within the FTA, fearing they may become non-tariff barriers.
3. **Market Access and Equal Treatment:** The UK desires equal market access in all sectors, a demand that India is expected to resist. In particular, the competitive and restrictive nature of India's government procurement market may hinder UK firms seeking a level playing field.

What should be done?

1. **Negotiate Social Security Contributions:** A **totalization agreement** should be included to exempt Indian workers from UK social security payments, acknowledging their short stays.
2. **Treaty Alignment:** The FTA and BIT (Bilateral Investment Treaty) negotiations should be aligned to complement each other effectively.
3. **Safeguard Digital Economy:** India should maintain its stance on data protection to preserve its digital sovereignty, avoiding unfettered cross-border data flows.
4. **Prepare for Carbon Border Adjustment Mechanism:** India should negotiate FTA terms that consider the potential impact of the UK's proposed carbon border adjustment mechanism on Indian exports.

Terminology used:

Totalization Agreements: It serves as bilateral deals to stop double payment of social security taxes by workers abroad. They ensure that employees don't pay these taxes to both their home country and the country where they work on the same earnings.

Supreme Court's MFN verdict

News: This article discusses the issues with the recent Supreme Court verdict on the application of MFN status.

A detailed article on the **MFN verdict controversy** can be [read here](#).

Read more about **MFN Status** [here](#).

What are the issues with the ruling?

According to the author, the verdict has the following lacunae:

1. Harms Ease of Doing Business in India:

a. **Tax Burden:** This ruling will impose a tax burden estimated to be ₹11,000 crore on foreign investors.

b. **Retrospective application of laws:** It may also lead to opening past cases.

c. **Uncertainty in Tax Policy:** By both legislative and judicial pronouncements.

2. **Defeats the purpose of MFN status:** MFN status, by definition, refers to non-discriminatory standards in economic treaties. It ensures that future benefits given to a third country by one of the treaty-signing countries become automatically available to its treaty partners.

For instance, if country A and country B have signed a treaty and country A later signs a treaty granting certain benefits to country C, these benefits should automatically be made available to country B.

3. **Issues with the Doctrine of Dualism:** The Supreme Court had moved away from this principle in cases such as the *Vishakha* and *Puttaswamy* case. It meant that domestic law would be interpreted to not contradict India's obligations under international law.

This approach ensured that progressive international law is given effect by the courts to protect the rights of citizens even if there is no domestic law.

Terminology used:

Doctrine of dualism: It implies that international law is not enforceable domestically till it is transformed into municipal law through enabling legislation.

GS Paper 3

Subject: Indian Economy

Topic: Mobilization of resources

India Finance Report on NBFCs

News: The article covers a CAFRAL report on India's NBFCs, noting their improved capital and asset quality. It also expresses worry about increased bank funding for NBFCs, emphasizing potential systemic risks. This underscores the need for regulatory action due to recent monetary policy shifts and the NBFC sector's significance in India's economy.

What are NBFCs?

A Non-Banking Financial Company (NBFC) is a registered entity under the Companies Act, 1956, specializing in activities such as lending, investing in financial securities, leasing, and insurance. It excludes primary operations related to agriculture, industry, goods trading, or property transactions. NBFCs are commonly referred to as "shadow banks" because they operate similarly to banks but have fewer regulatory restrictions.

[Read more](#) about NBFCs.

What is CAFRAL?

Centre for Advanced Financial Research and Learning (CAFRAL) is an independent body established by the Reserve Bank of India. It conducts research and provides insights into India's financial sector, including non-bank financial companies (NBFCs). The CAFRAL report on India's NBFC sector reveals noteworthy trends:

- 1. Stronger Capital Position:** The report indicates a significant rise in the Capital to Risk-Weighted Assets Ratio (CRAR), soaring from 22.9% in 2019-2020 to 27.6% in 2022-23. This shows improved financial stability.
- 2. Enhanced Asset Quality:** Both gross and net non-performing asset (NPA) ratios have consistently decreased, indicating healthier loan portfolios.
- 3. Economic Importance:** The NBFC sector's vital role in supporting India's economy, particularly MSMEs, is emphasized. It served as a crucial support system post-2008 Global Financial Crisis, providing credit when banks struggled with NPAs.

What concerns does the CAFRAL report raise?

- 1. Rising Bank Financing for NBFCs:** The report is concerned about the increasing reliance of NBFCs on bank financing. This means that NBFCs are borrowing more from traditional banks to fund their operations. The concern here is that if these NBFCs face financial stress or defaults, it could

potentially impact the stability of the banking sector as well, leading to a broader financial crisis.

2. Systemic Contagion Risk: The report emphasizes the need for preventive measures to address the risk of systemic contagion. This means that problems in one NBFC could spread to other financial institutions or even the broader economy. For example, if one NBFC faces a crisis, it might trigger a chain reaction of financial problems across the sector, affecting the real economy and people's livelihoods.

3. Monetary Policy Shocks: The report recognizes the recent shifts in monetary policy, from loose to tight, in response to rising inflation. These abrupt policy changes can catch businesses off-guard and impact the sector.

Terminology used:

Capital to Risk-Weighted Assets Ratio (CRAR): It represents a bank's capital in relation to its risk. In essence, it measures a bank's capital against its risk-weighted assets and present liabilities. This ratio plays a crucial role in safeguarding depositors and enhancing the effectiveness and stability of global financial systems.

NPA: A non-performing asset (NPA) is a loan or advance where the borrower has not made the principal or interest payment for a duration of 90 days or more.

SC Ruling on Insolvency and Bankruptcy Code of India

News: The article discusses how India's Supreme Court upheld laws allowing creditors to claim personal guarantees from defaulting company owners, emphasizing the need to improve debt recovery systems.

What is the Insolvency and Bankruptcy Code (IBC)?

The Insolvency and Bankruptcy Code (IBC) is a legal framework in India, introduced in 2016 to address the rising issue of Non-Performing Assets (NPAs) and debt defaults. Its key aims include a) Revamping India's corporate distress resolution system. b) Consolidating laws for a time-bound resolution process. c) Shifting control from debtors to creditors.

Objectives of the Insolvency and Bankruptcy Code

- Consolidate and amend all existing insolvency laws in India.
- To simplify and expedite the Insolvency and Bankruptcy Proceedings in India.
- To protect the interest of creditors including stakeholders in a company.
- To revive the company in a time-bound manner.

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For more information on IBC, [read here](#)

What is the significance of the Supreme Court ruling on IBC?

9 PM Compilation for the Month of November [Second Week] 2023

1. **Upholds IBC Provisions:** The Supreme Court ruling supports the Insolvency and Bankruptcy Code's inclusion of personal guarantors, allowing creditors to claim from company owners' personal assets if their companies fail to repay debts.
2. **Closes Loopholes:** This decision plugs legal gaps, ensuring that company promoters can't easily avoid their debt responsibilities.
3. **Promotes Contract Sanctity:** The ruling reinforces the importance of respecting contractual obligations in the business world.

What are the challenges faced by IBC?

The IBC faces challenges in speed and efficiency. The resolution process is slow, averaging 724 days between April and September 2023, far beyond the 330-day limit set by the IBC.

For more details on **Challenges faced by IBC**, [read here](#)

What should be done?

1. **Speed Up Resolution Process:** The current average resolution time is 724 days, significantly more than the IBC's 330-day limit. This needs to be reduced to preserve company value.
2. **Increase Recovery Rates:** With only 5.2% recovery from personal guarantor cases, efforts must be intensified to improve this rate, making it closer to the 31.6% rate in corporate insolvency cases.
3. **Timely Appointments to NCLT:** The Government of India should focus on making timely appointments to the National Company Law Tribunal to handle cases more efficiently.

Key Terminology

- **Insolvency:** It is a situation in which a debtor is unable to pay his/her debts.
- **Bankruptcy:** It is a legal proceeding involving a person or business that is unable to repay their outstanding debts.
- **Liquidation:** It is a process of bringing a business/company to an end. It involves distribution of company's assets among creditors and other claimants.
- **Haircut:** It refers to the reduction in the value of an asset. For example, if haircut is 80%, then 80% of credit owed to its creditors will not get recovered.
- **Moral Hazard:** It is a situation where an economic actor has an incentive to increase its exposure to risk because it does not bear the full costs of that risk.

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On Tax demands from the Gaming industry – On gaming industry rules

News: The article discusses how Indian tax authorities have made huge and potentially unlawful tax demands on various entities over the years, including gaming companies. This is causing legal disputes and damaging India's reputation as an investment-friendly country.

What is online gaming?

An online game is available on the internet, accessed through a computer. Players make a deposit and aim to win prizes based on their performance.

What is the current legal status of the online gaming industry in India?

1. **“Game of skill” Vs “Game of chance”:** In India, skill games (like quizzes) are mostly legal (Public Gambling Act, of 1867) and one can bet on them. Chance games (like dice) usually aren't allowed for betting.
2. **Judicial view:** Supreme Court in the Chamarbaugwala case set a standard called 'preponderance of skill.' This test helps decide if a game is mainly about skill (which is usually legal) or mostly about luck (which could be banned). High Courts in various states have tried to stop online games that involve betting money.
3. **Federal jurisdiction:** State have the sole authority to create laws about betting and gambling, as granted by Entry No. 34 of List II in the Seventh Schedule of the Indian Constitution.
4. **Central Legislations:**

The **Indian Penal Code of 1860** can punish people for showing or promoting obscene content in public, which can include ads for gambling.

The **Prize Competitions Act of 1955** outlines what qualifies as a competition prize.

The **Lotteries Regulation Act of 1998** says lotteries in India are okay if the state government manages them and the draw is within the state.

Under the **Foreign Exchange Management Act of 1999**, sending lottery or race winnings abroad is illegal.

The **Information Technology Rules of 2011** forbid internet services from hosting gambling content.

Lastly, **the Income Tax Act of 1961 and Central goods and services (GST) Act, 2017**, ensures that legal gambling is taxed, adding to India's GDP.

What were the recent tax demands by the government from the gaming industry?

Indian law and court decisions traditionally exempt games of skill from being taxed as gambling.

However, gaming companies have been issued show-cause notices for a huge GST demand totaling Rs 1.5 lakh crore for the period between 2017-2022.

Tax authority demands 28% GST on the full amount pooled by gamers, not just on the service fee.

What are the issues with the gaming industry?

1. **Misclassification:** The gaming industry is inaccurately labeled as gambling by authorities, challenging the CGST Act 2017, and is burdened by a harsh 28% GST, which could cause business closures.
2. **Retrospective Taxation and Legal Volatility:** Unexpected backdated tax claims and legal inconsistencies, are creating a financially and legally unstable environment for gaming companies.
3. **Threat to the Emerging Industry:** The gaming industry's survival is at risk due to excessive tax demands, which not only threatens India's reputation as a secure investment destination but also

risks an industry exodus to unregulated foreign portals if tax standards don't align with global norms.

What should be done?

1. **Comprehensive Legislation:** There is a need for specific laws that clearly define the legality, taxation, and regulatory mechanisms for online gaming.
2. **Establishment of a Regulatory Authority:** A central Gaming Authority could monitor industry practices, classify games based on skill or chance, enforce consumer protection, and address potential issues related to crime and societal impact.
3. **Protection of Minors:** Enforcing age limits and verifying user age would prevent underage access to online gaming, especially games involving real money.
4. **Responsible Gaming Measures:** Limiting the amount and time spent on gaming, offering counseling services, and allowing players to self-exclude could mitigate addiction and financial ruin.
5. **Transparency and Fairness:** Removing anonymity and establishing a grievance handling mechanism would enhance user trust and fairness.

Topic: Government Budgeting

On the issues with Old Pension Scheme – Pension bloat

News: This article discusses the problems of returning to the Old Pension Scheme. A detailed article on the **Old Pension Scheme (OPS) vs National Pension System (NPS)** can be [read here](#).

In recent times the issue of Old Pension Scheme (OPS) vs National Pension System (NPS) has been a hotly debated topic. The demand for returning back to OPS is gaining traction. States such as Rajasthan, Chhattisgarh, Jharkhand, Punjab and Himachal Pradesh have already announced a shift back to the OPS.

What are the issues with the Old Pension System?

1. **Inequitable distribution of benefits:** Only **3.2% of the workforce** has a claim over **18% of government revenue**.
2. **Against fiscal prudence:** Fiscal prudence implies using limited resources for investments like health, education, law-and-order, roads, bridges, hospitals, etc. OPS imposes an unsustainable burden on the public exchequer.
3. **Unfunded Liability:** It means that no contribution is made by employees during their work lives but must be paid out of current government revenue.
4. **Constant Increment:** The OPS is both wage-indexed (i.e. linked to compensation of the existing workforce and hence hiked with each Pay Commission recommendation) and also indexed to inflation.
5. **Issue of inter-generational equity:** Future generations will be burdened with higher taxes to

service the debt incurred for pension payouts.

6. **Rising life expectancy of the population:** It will lead to a steady increase in pension emoluments.

Topic: Growth and employment

On Rural Economic Distress – RBI governor's growth optimism masks rural distress

News: The article discusses how the Reserve Bank of India may be overly optimistic about economic growth, despite evidence of struggling rural demand, poor agricultural conditions, and inflation which are affecting rural consumers more than those in urban areas.

What are the reasons for low rural demand?

1. **Climate and Agricultural Output:** Erratic monsoons and unseasonal rains have affected crop sowing and output, directly impacting rural incomes.
2. **Inflation's Impact:** Rural areas experienced higher inflation, with a September rate of 5.3% compared to urban inflation at 4.65%, squeezing rural consumers' budgets.
3. **Low Employment and Income levels:** The legacy of demonetization and the effects of the COVID-19 pandemic have continued to hurt rural income and employment recovery.

How is the RBI reacting to rural issues?

1. **Disregarding Rural Distress:** Despite various indicators of rural market weakness, RBI reports seem to overlook these, instead indicating a readiness for rural consumers to "join the party" of economic recovery.
2. **Contradiction in Data and Statements:** The RBI's statements about a decrease in joblessness and potential rural recovery conflict with data from market research and corporate reports that show ongoing rural consumption issues.
3. **MPC's Stance on Rural Demand:** In the minutes from the Monetary Policy Committee's (MPC) meeting, there was no significant mention of rural distress, suggesting that the RBI may not be fully acknowledging the rural sector's challenges in their policy discussions.

What should be done to address these challenges?

1. **Acknowledgment of Rural Distress:** RBI should openly recognize the specific challenges facing rural areas, instead of presenting an overly optimistic view of the economy.
2. **Targeted Monetary Policy:** The Monetary Policy Committee needs to consider the distributional effects of its policies and focus on how to support rural demand and mitigate inflation there.
3. **Data-Driven Policy-making:** Policymaking should integrate findings from market research and corporate insights which highlight persistent rural market weakness.

Subject: Agriculture

Topic: Food security & Food processing and related industries in India

Food safety

News: The article discusses how food safety has declined in India according to a recent report. Most states scoring lower in safety tests and having weak enforcement, even as the government promotes food industry investment.

What is the State Food Safety Index (SFSI)?

State Food Safety Index is an annual assessment released by the Food Safety and Standards Authority of India (FSSAI).

Started in: 2018-19

Purpose: It is a dynamic quantitative and qualitative benchmarking model that provides an objective framework for evaluating food safety across all States/UTs.

STATES WITH STEEPEST INDEX FALL		
State	2019	2023
Maharashtra	74	45
Bihar	46	20.5
Gujarat	73	48.5
Andhra Pradesh	47	24
Chhattisgarh	46	27

Source: SFSI reports; all scores out of 100

SAFETY MEASURE	
Parameter	Weight
Compliance	28
Consumer Empowerment	19
Human Resources and Institutional Data	18
Food Testing Infrastructure	17
Improvement in SFSI Rank (<i>added in 2023</i>)	10
Training and Capacity Building	8
TOTAL	100

Significance: The index is meant to create a competitive and positive change in the food safety ecosystem in the country. The step was also taken to galvanize states and union territories to work towards ensuring safe food for citizens.

What are the key findings of the SFSI 2022-23 Report?

The SFSI 2022-23 report highlights a concerning decrease in food safety across Indian states.

- Downward Food Safety Trend:** 19 out of 20 large Indian states saw their SFSI scores drop.
- Worsening Food Testing**

Infrastructure: Food testing infrastructure

average score across states sent from 13 to 7 out of 20.

- Compliance and Human Resources:** There was also a significant fall in compliance, human resources and institutional data scores.

What is the Government's Initiative for the Food Industry?

1. **PLI Scheme for Food Processing:** Government launched the Production Linked Incentive Scheme for the Food Processing Industry (PLISFPI) with a financial outlay of Rs. 10,900 crores.
2. **Support for SMEs:** Special emphasis is on SMEs with 16 applications approved for innovative and organic products, as well as **millet-based** products.
3. **Domestic Production:** Guidelines mandate that the manufacturing, including primary processing of eligible products, must occur in India, supporting local production and ensuring farmers, particularly small-scale, receive fair compensation.

What should be done?

1. **Efficient Regulatory Framework:** To ensure food safety and attract investment, states must urgently develop and enhance regulatory and enforcement mechanisms.
2. **Strengthen Food Testing:** The decline in food testing infrastructure scores necessitates investment in upgrading state food testing facilities.
3. **Investments in Infrastructure:** There is a need for continued and increased investment to address infrastructure deficiencies, like cold chains, to minimize waste and enhance efficiency
4. **Maintain Global Market Standards:** This is a necessity for India to remain competitive in the global market.

Subject: Science & Technology

Topic: Developments and their applications and effects in everyday life

Basics of electricity transmission

News: This article discusses the mechanism of electricity transmission. It also highlights the factors which determine transmission losses in power transmission.

A **Power supply system** has 3 broad components:

1. **Generation:** Electricity is generated at power plants as well as at smaller renewable-energy installations.
2. **Transmission:** It is transmitted using a distributed network of stations, substations, overhead and underground cables, and transformers.
3. **Distribution:** Finally, it is distributed to consumers in a standardised way.

A **Power Grid** performs the above 3 functions.

What is the role of a power grid?

A national power grid includes all 3 components: production, transmission and distribution. Apart from this, it also does the following:

1. **Storage of Energy:** Grids also have **storage facilities** that store electrical energy when there's a surplus supply and release it in times of deficit, such as in the case of renewable energy sources.
2. **Manage fluctuations in demand:** They also have **automated systems** which increase or decrease the output of power sources in response to fluctuating consumer demand.
3. **Handle emergency situations:** They are also **connected to sources like gas turbines** that can **provide power on short notice**, such as during emergencies.

How is power transmitted as part of a power grid?

Step I: From a **power station**, the wires are routed to **transformers** that step-up (increase) their voltage.

Step II: These wires eventually lead to **substations**.

Step III: **Distribution substations** step-down (decrease) the voltage in power lines and prepare them for consumption.

What factors do transmission losses of electricity depend on?

1. **Magnitude of Current and Voltage:** In any conductor, the **transmission efficiency is higher at lower current and higher voltage**. For this purpose, **transformers** are used. They increase the voltage and reduce the current before feeding into transmission lines and do the reverse when receiving current at the consumer-end.
2. **Characteristics of wire (Thickness and Cost):** The loss of energy through resistance in the wire can be controlled by adjusting the cable's **thickness**: the thicker it is, the less energy is lost. However, when the **cost** of the cable's material is high, the cables are thinner.
3. **Type of current (AC or DC):** An alternating current (AC) has **higher transmission efficiency** (compared to direct current (DC)). AC can be easily stepped up or down in voltage using transformers. Higher voltage AC for the same power transfer helps to reduce resistive losses. In DC systems, voltage conversion is more challenging.
4. **Frequency of AC:** When the AC frequency is higher, the amount of resistance to current in the wire increases.

What are the challenges of power transmission in India?

1. **Aging Infrastructure:** Many transmission and distribution lines and equipment in India are old and in need of modernization. This leads to energy losses due to inefficiencies in the system.
2. **Overloading and Unbalanced Loading:** Overloading transformers and unbalanced loading can lead to technical losses as well as reduce the lifespan of distribution infrastructure.
3. **Theft and Pilferage:** Unauthorized tapping and theft of electricity is a significant issue in many parts of India.
4. **Voltage Fluctuations:** Variations in voltage levels can result in energy losses, as excessive voltage can cause appliances to consume more power.
5. **Inadequate Investment:** Many DISCOMs face financial constraints that limit their ability to invest in modern technology and equipment.

Terminology used:

Insulators: Insulators in contact with the wires draw away some current if there is a surge of current in the line.

Dampers: Dampers prevent vibrations in the wires from affecting the towers' stability.

Switches: They are used to control the availability of current and to move currents between different lines.

Wide-area synchronous grid: If all the generators connected to a grid are producing an AC current at the same frequency.

Alternating Current: Alternating current (AC) is an electric current which periodically reverses direction and changes its magnitude continuously with time, in contrast to direct current (DC), which flows only in one direction.

On regulating AI – World leaders have a long road ahead

News: The article discusses the first global summit on AI safety held at Bletchley Park, where major agreements were made to address AI risks, but with varying opinions on the severity of these risks and the effectiveness of future regulations.

What is the Bletchley Declaration?

Overview: The Bletchley Declaration is an international agreement signed at the AI safety summit held at Bletchley Park, UK.

Purpose: The declaration aims to address the risks associated with the rapid development and deployment of AI technologies.

Signatories: There were 28 signatories to the declaration, indicating a commitment from a significant number of countries, though not the entire world.

Three key results came from the summit:

- 1.Tech Companies and Government Collaboration:** There was an agreement among tech companies to work with governments on the safety testing of advanced AI models.
- 2.International Declaration on AI Risks:** A declaration was made to address the potential risks associated with AI, particularly highlighting immediate threats such as the technology's misuse in electoral processes.
- 3.UN Support for Expert AI Panel:** The United Nations expressed its support for the establishment of an expert panel on AI, which would function similarly to the Intergovernmental Panel on Climate Change, to oversee AI safety protocols.

What are the concerns raised after the Bletchley Declaration?

- 1. Long-term Risks Consensus:** Founders and chief executives of major tech companies did not reach an agreement on the severity of long-term risks posed by AI.
- 2. Regulatory Challenges:** The rapid pace of AI development makes it difficult to establish effective regulatory measures, and there's a concern that regulations might not effectively control individual developers.

3. **Global Consensus Difficulty:** With AI's international spillovers, reaching a worldwide agreement on AI use and safety is complex, highlighted by the fact that only 28 countries signed the Bletchley Declaration.
4. **Equality in AI Development:** The declaration doesn't fully address how smaller countries will engage in AI development and regulation, despite stating that all countries have equal rights to develop and use AI.

What is the significance of the declaration?

1. **Global Dialogue Initiation:** The summit started a worldwide conversation on AI safety, signaling the beginning of international cooperation.
2. **Short-term Risks Agreement:** There was a consensus on immediate short-term risks, such as AI's role in manipulating elections and spreading misinformation.
3. **US-China Agreement:** It is a positive sign that typically competitive nations like the US and China are on the same page regarding AI safety concerns.
4. **India's Progressive Stance:** India's commitment to developing safe and trustworthy AI platforms suggests that it can be a significant player in shaping global AI standards.

Subject: Environment

Topic: Environmental pollution and degradation

On noise pollution due to firecrackers – More light, less sound

News: This article discusses India's noise pollution regulations in light of the rising challenge of noise pollution in India, especially due to firecrackers.

What are the regulations regarding noise pollution?

The **Noise Pollution (Regulation and Control) Rules 2000** under the **Environment Protection Act 1986** mandate that firecrackers cannot be used in '**silence zones**', and anywhere after **10 PM**.

From 6AM to 10PM, firecracker noise cannot exceed **75 dB**. The thresholds in commercial and residential areas are 65 dB and 55 dB, respectively.

The rules allow people to register a complaint if the noise overshoots by 10 dB during daytime. An increase of **10 dB implies a 10-fold increase** in acoustic pressure.

What are the issues with loud noise?

Noise pollution is a public health crisis. Research has found links between loud environments and **sleep disorders, stress, anxiety, hearing loss, and cardiac health**.

More than 80 dB in offices has been associated with **hypertension**.

Above **50 dB** at night, when the body is unaccustomed to loud noises, could **increase cortisol levels** ('stress hormone').

What are the causes of noise pollution?

1. **Horn usage:** Traffic noise has increased in cities where haphazard development has forced motorists to overuse horns.
2. **Religious occasions:** For instance, during Deepavali, firecrackers (even 'green' ones) routinely produce more than 90 dB of sound.

What are the issues with noise pollution regulation?

1. **Demarcation of zones:** Different loudness zones are also seldom publicly demarcated. Some places are both residential and commercial.
2. **Ambiguity of rules:** The rules are unclear about the sanctions to be meted out to offenders.
3. **Lack of enforcement.**

What should be done?

1. Governments must **prevent the production of firecrackers.**
2. Cities must **improve public access to noise data** and **adopt noise mitigation targets.**
3. In 2018, CSIR launched less harmful and less noisy 'green' crackers, whose use various statutory bodies have mandated.

Terminology used:

Silence zone: It is usually defined as areas around premises such as hospitals, educational institutions and courts. These are designated by State governments.

Air Pollution in Indian cities

News: These articles discuss the issue of air pollution in cities in India. It highlights the multiple issues behind the worsening of air pollution in Indian cities as well as the steps required to tackle these challenges.

A detailed article on **Air Pollution** can be [read here](#).

What is the status of air pollution in India?

According to Energy Policy Institute at Chicago (EPIC), out of the 50 most polluted cities in the world, **39 are in India.**

Not just in the Indo-Gangetic plains, air quality is worsening even in India's coastal cities.

An average Indian **loses 5.3 years of his life expectancy** due to air pollution. For the residents of Delhi, it is 11.9 years.

Why is the problem of air pollution worsening in Indian cities?

9 PM Compilation for the Month of November [Second Week] 2023

1. **Urban development strategy in India** – The current strategy focuses on real estate development, a widening of roads and allowing large fuel guzzling vehicles which are major reasons for increased pollution.
2. **Anthropogenic factors** – Road dust, polluting industrial units and vehicular emissions are key factors too.
3. **Expansion of 'Grey' infrastructure** – Water bodies, urban forests, green cover, and urban agriculture have all reported shrinkage, and “grey” infrastructure has seen rapid expansion.
4. **Crop residue burning** – During winter in North India, the burning of paddy straw (*parali*) is a major cause for smog (smoke and particulate matter).
5. **Land use change** – The handing over of open spaces to real estate developers and lack of any meaningful afforestation affects the city's ecology.
6. **Promoting car sales** – Widening roads induces people to buy more cars, thus leading to more pollution levels.
7. **Construction activities** – It contributes roughly 10% of air pollution in Delhi-NCR. There are hardly any steps being taken to monitor construction activities.
8. **Lack of people's participation in urban policy** – City residents hardly have any participatory role in the urbanisation process.
9. **Issues with CAQM** (Commission for Air Quality Management) – Its powers are limited to recommendations only.

What should be done?

1. **Alternative strategy of city building:** A “sustainable and ecological urbanization” is required.
2. **Focusing on public transport:** There needs to be **accessible and affordable public transport**, with investment in buses for towns and cities.
3. **Controlling private vehicular movement:** A congestion tax can be levied on private car owners. ‘Odd-even’ or a ‘no-car day’ can be put into practice. Transitioning to green vehicles is also important.
4. **Adoption of a Graded Response Action Plan:** These are different sets of actions that get activated based on the air quality air in Delhi. This mechanism must be adopted in other Indian cities too.
5. **Monitoring of industrial Pollution:** Real-time monitoring should be done alongwith street supervision by residents.
6. **Preserving urban commons:** These include ponds, water bodies, urban forests, parks, playgrounds.
7. **Strengthening urban governance:** Pollution guides and standard operating procedures for various departments and agencies must be made readily available to the people.
8. **Increasing Coordination:** Bodies such as the CAQM should ensure greater coordination and compliance.

Terminology Used:

Grey Infrastructure: It involves engineered assets that provide one or multiple services required by society, such as transportation or wastewater treatment.

Subject: Internal Security

Topic: Basics of cyber security

ICMR data breach

News: This article discusses the recent ICMR Data Breach and suggests steps individuals can take to safeguard themselves from cybersecurity threats.

A detailed article on the **ICMR Data Breach** can be [read here](#).

Recently, an American cyber security company said that personally identifiable information of 815 million Indian citizens, including Aadhaar numbers and passport details, were being sold on the dark web. The threat actors selling the data claimed it was sourced from the Indian Council of Medical Research (ICMR).

What is Personally Identifiable Information (PII)?

Personally Identifiable Information or PII is information that when used alone or with other relevant data, can identify an individual.

PII may be direct identifiers like passport information or quasi-identifiers that can be combined with other information to successfully recognise an individual.

What was the government's response?

India's IT Minister for State shared that Computer Emergency Response Team (CERT-In) is investigating reports of the data leak. He said the government ecosystem will take time to transition to a **bullet proof set-up**, one which manages data and keeps it in a safe and responsible manner. **UIDAI** says that all Aadhaar holders' data is safe and secure in the Central Identities Data Repository (CIDR) of UIDAI and that they have never been breached in all its years of existence. It further added that UIDAI uses advanced security technologies to keep data safe and keeps upgrading them to meet emerging security threats and challenges.

What can users do to safeguard their personal information?

1. Users should approach **emails for unknown sources with caution** as stolen information may be used to target users in **phishing campaigns**.
2. It is advised to **change existing user IDs and passwords** to ensure that stolen data cannot be used for launching cyberattacks.
3. Users should also implement **two-factor authentication** for all their accounts and **inform the authorities concerned** in case they notice any suspicious activity in their online accounts.