



Concerns over Hit-and-Run Law

For Prelims: [Bharatiya Nyaya Sanhita 2023](#), [Indian Penal Code, 1860](#), [National Crime Records Bureau](#)

For Mains: Bharatiya Nyaya Sanhita 2023, Government Initiatives Related to Criminal Justice System, Issues Arising Out of Design & Implementation of Policies

Source: [TH](#)

Why in News?

The recent protests by transporters and commercial drivers in states like Maharashtra, Chhattisgarh, West Bengal, and Punjab shed light on the contentious **Section 106 (2) of the [Bharatiya Nyaya Sanhita, 2023 \(BNS\)](#)**.

- This section, which stipulates **severe penalties for hit-and-run incidents**, has become a focal point of discontent among the driving community.
- The countrywide truckers' strike has been called off after the government assured that it **would consult stakeholders before implementing** a contentious law against hit-and-run.

What is the Hit-and-run Law?

- **Provisions:**
 - The hit-and-run provision is part of the **Bharatiya Nyaya Sanhita (BNS)**, which is set to replace the colonial-era [Indian Penal Code, 1860](#).
 - Section 106 (2) of the BNS, 2023 **stipulates a penalty of up to 10 years in jail and a fine for fleeing an accident spot** and failing to report the incident to a police officer or a magistrate.
 - However, if the driver reports the incident immediately after the accident, they will be charged under Section 106(1) instead of Section 106(2). **Section 106(1) provides for a punishment of up to five years** for causing death by any rash or negligent act not amounting to culpable homicide.
- **Need:**
 - The new law comes in the backdrop of concerning figures related to road accidents in India.
 - In **2022, India recorded over 1.68 lakh road crash fatalities**, averaging 462 deaths daily.
 - India experienced a **12% increase in road accidents** and a 9.4% rise in fatalities, while global road crash deaths decreased by 5%.
 - On average, there are 19 deaths per hour due to road accidents in India, almost one death every three and a half minutes.
 - More than half of road fatalities occurred on national and State highways, which make up less than 5% of the total road network.
 - **India, with only 1% of the world's vehicles**, contributes to about **10% of crash-related deaths** and suffers an annual economic loss of **5-7% of its GDP** due to road crashes.
- **Principle Underlying the Law:**

- The [National Crime Records Bureau](#) recorded **47,806 hit-and-run incidents** which resulted in the deaths of 50,815 people in 2022.
 - Offenders have a **legal duty to report road accidents to the police** or magistrate, and there are **provisions to criminalize the omission of this duty**.
- The principle underlying **Section 106 (2) of hit-and-run law is to deter rash and negligent driving and to punish** those who flee the scene without reporting or helping the victims.
- The law reflects the legislative intent to **enforce moral responsibility** on the offender towards the victim.
 - Drawing parallels with existing laws, such as **Section 134 of the Motor Vehicles Act, 1988**, highlights the government's commitment to ensuring a prompt and responsible response from drivers in the aftermath of accidents.
 - Section 134 of the Motor Vehicles Act, 1988, **requires the driver of the vehicle to take all reasonable steps** to secure medical attention for the injured person unless it is **not practicable on account of mob fury or any other reason beyond his control**.

What are the Concerns of the Protesters?

- **Section 106 (2) of the BNS, 2023:**
 - Transporters and commercial drivers are demanding the **withdrawal or amendment of Section 106 (2) of the BNS, 2023**.
 - Protesters argue that the prescribed penalties, including a 10-year imprisonment and Rs. 7 lakh fine, are excessively severe.
 - The widely circulated view that Section 106 (2) of the BNS stipulates imprisonment of up to 10 years and a **fine of Rs. 7 lakh for fleeing an accident spot and failing to report the incident to a police officer/magistrate is grossly incorrect**.
 - While this Section discusses a maximum punishment of 10 years and a fine, there is **no actual mention in the BNS about the fine being Rs 7 lakh**.

Note

- **Section 161 of the [Motor Vehicles \(Amendment\) Act, 2019](#), provides compensation for victims of hit-and-run accidents.**
 - The compensation for death is Rs 2 lakh and for grievous hurt, it is Rs 50,000. Unlike Section 106 (2) of BNS, the compensation in this case is not recoverable from the drivers.
- **Challenging Conditions:**
 - They argue that the **penalty is excessive** and fails to consider the challenging work conditions of drivers, such as **long driving hours and difficult roads**.
 - Transporters also argue that accidents may be caused by **factors beyond the driver's control**, such as **poor visibility due to fog**, and **fear of mob violence against drivers** if they stop to assist at accident sites.
 - The fear of violence further complicates the decision-making process for drivers in the aftermath of accidents.
- **Perceived Unfair Blame:**
 - Drivers argue that they are **often unfairly blamed for accidents**, irrespective of the actual circumstances.
 - The legislation's punitive approach may exacerbate this perception of unfairness and contribute to a negative impact on the transport industry.
- **Possible Misuse by Authorities:**
 - They are concerned that the law may be **abused by law enforcement agencies** and that the harsh penalties could hurt the transport industry as a whole.
- **Unfair Treatment and Limited Categorization:**
 - The current legislation raises concerns about the **fairness of penalties** imposed on truck drivers and individual vehicle drivers,
 - For instance, an exception has been made under **106 (1) of the BNS for doctors** in the event of rash or negligent acts, where the **punishment will be up to two**

years with a fine.

- This limited categorisation is problematic and is against the **principles of equality**, as the liability of a wide variety of people working in other sectors also needs to be moderated.
- **Lack of Differentiation:**
 - Section 106(2) lacks differentiation between **rash and negligent driving**, which are two distinct types of offences with different degrees of liability.
 - They also contend that the **section does not consider the contributory factors in negligent acts**, such as the behaviour of commuters, road conditions, lighting on the road, and other similar factors, which may affect the driver's responsibility.
 - Applying one clause to all situations may **unfairly prejudice drivers** in different circumstances.

Way Forward

- Initiate **comprehensive consultations with stakeholders**, especially drivers and transport associations, to address concerns and gather diverse perspectives.
 - Establish a **clear and standardized protocol for emergency response**, emphasizing the importance of prompt reporting **without exposing drivers to potential violence**.
- The current hit-and-run law under Section 106 (2) of the BNS **does not differentiate** between different types and outcomes of accidents.
 - The law should be categorised in different scales based on liabilities, such as death, grievous hurt, simple hurt, or minor injuries, and the punishment should be **commensurate** with the offence.
- The law should also **clarify** the reporting procedure and the evidence required for the drivers to prove their innocence or mitigating factors.
- The road accidents resulting in **minor injuries ought not to be equated with criminal acts**, but rather impose **alternative measures** such as community service, revoking of driving licences, or mandatory driving retests.
- Invest in improved road infrastructure, visibility measures, and safety features to mitigate accidents and reduce the likelihood of hit-and-run incidents.
- Study and incorporate successful models and best practices from other countries with effective hit-and-run legislation, adapting them to the Indian context.

Legal Insights: [Hit and Run Law](#)

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Bilkis Bano Case and Remission

For Prelims: Bilkis Bano Case and Remission, Grant of Remission, 2002 Riots, [Supreme Court](#), [Central Bureau of Investigation](#), [Article 72](#).

For Mains: Bilkis Bano Case and Remission, Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Why in News?

Recently, the [Supreme Court](#) has nullified the **Gujarat government's decision** to grant Remission to 11 convicts involved in the gangrape of Bilkis Bano and the murder of seven of her family members during the [2002 Riots in the state](#).

What is the Background of Bilkis Bano Case?

- During 2002 Gujarat riots, Bilkis Bano, a pregnant woman at the time, was **subjected to a brutal gangrape**, while seven members of her family, including her three-year-old daughter, were killed by a mob during the riots.
- Following extensive legal proceedings, the [Central Bureau of Investigation \(CBI\)](#) investigated the case.
- In 2004, SC **moved the trial from Gujarat to Mumbai after Bilkis faced death threats**; directed the central government to appoint a special public prosecutor.
- In 2008, a Mumbai court convicted 11 individuals for their involvement in the gangrape and murder, marking a significant step towards justice for Bilkis Bano.
- However, **in August 2022, the Gujarat government granted remission to these 11 convicts**, leading to their release. This decision sparked controversy and legal challenges due to concerns regarding the authority and jurisdiction responsible for granting such remissions.

What is the SC's Ruling Nullifying Gujarat Government's Remission Grant?

- **Lack of Authority and Concealed Facts:**
 - The Court emphasized that the **Gujarat government lacked the authority** or jurisdiction to issue the remission orders.
 - Under **Section 432 of the CrPC**, state governments do have the power to suspend or remit a sentence. But the court noted that Section 7(b) of the law clearly states that the **appropriate government is the one in whose jurisdiction the offender is sentenced**.
 - It pointed out that the **decision to grant remission should be within the domain of the state** where the convicts were sentenced, not where the crime occurred or where they were imprisoned.
- **Criticism of the Remission Process:**
 - The Court highlighted **serious flaws in the remission process**, mentioning that the orders lacked proper consideration and were obtained through the concealment of facts, constituting fraud upon the court.
- **Overreach and Unlawful Exercise of Power:**
 - The Court **criticized the Gujarat government's overreach**, asserting that it unlawfully exercised power that rightfully belonged to the Maharashtra government in issuing remission orders.
- **Directives and Rejection of Liberty Plea:**
 - Rejecting the convicts' plea to **protect their liberty**, the Court directed them to surrender to jail authorities within two weeks.

What is Remission?

- **About:**
 - Remission is the **complete ending of a sentence at a reduced point**. Remission is distinct from both furlough and parole in that it is a reduction in sentence as opposed to a break from prison life.
 - In remission, **the nature of the sentence remains untouched, while the duration is reduced** i.e., the rest of the sentence need not be undergone.
 - The effect of the remission is that the prisoner is given a certain date on which he shall be released and in the eyes of the law he would be a free man.
 - However, in case of breach of any of the conditions of remission, it will be cancelled, and

the offender has to serve the entire term for which he was originally sentenced.

▪ **Constitutional Provisions:**

- Both the President and the Governor have been vested with sovereign power of [pardon](#) by the Constitution.
- Under [Article 72](#), the President can grant pardons, reprieves, respites or remissions of punishment or suspend, remit or commute the sentence of any person.
 - This can be done for any person convicted of any offence in all cases where:
 - The punishment or sentence is by a court-martial, in all cases where the punishment or
 - The sentence is for an offence under any law relating to the Union government's executive power, and in all cases of death sentences.
- Under [Article 161](#), a Governor can grant pardons, reprieves, respites or remissions of punishment, or suspend, remit or commute the sentence.
 - This can be done for anyone convicted under any law on a matter which comes under the State's executive power.
- The scope of the pardoning power of the President under Article 72 is wider than the pardoning power of the Governor under Article 161.

▪ **Statutory Power of Remission:**

- The [Code of Criminal Procedure \(CrPC\)](#) provides for remission of prison sentences, which means the whole or a part of the sentence may be cancelled.
- Under Section 432, the 'appropriate government' may suspend or remit a sentence, in whole or in part, with or without conditions.
- Under Section 433, any sentence may be commuted to a lesser one by the appropriate government.
- This power is available to State governments so that they may order the release of prisoners before they complete their prison terms.

▪ **Landmark Cases of Remission:**

- **Laxman Naskar v. State of West Bengal (2000):**
 - In this case, SC stipulated the factors that govern the grant of remission namely:
 - Whether the offence is an individual act of crime without affecting the society at large?
 - Whether there is any chance of future recurrence of committing crime?
 - Whether the convict has lost his potentiality in committing crime?
 - Whether there is any fruitful purpose of confining this convict any more?
 - Socio-economic condition of the convict's family.
- **Epuru Sudhakar v. State of AP (2006):**
 - SC held that [judicial review](#) of the order of remission is available on the following grounds:
 - non-application of mind;
 - order is mala fide;
 - order has been passed on extraneous or wholly irrelevant considerations;
 - relevant materials kept out of consideration;
 - order suffers from arbitrariness.

Note

- **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments, and disqualifications.
- **Commutation:** It denotes the substitution of one form of punishment with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.
- **Respite:** It denotes awarding a lesser sentence in place of one originally awarded due to some special fact, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a stay of the execution of a sentence (especially that of death) for a temporary period. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

Antimicrobial Resistance

For Prelims: [National Centre for Disease Control \(NCDC\)](#), [Antimicrobial Resistance \(AMR\)](#), [World Health Organization \(WHO\)](#), [One Health Approach](#), Indian Council of Medical Research (ICMR).

For Mains: Antimicrobial Resistance, Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Source: [TH](#)

Why in News?

Recently, a survey conducted by the [National Centre for Disease Control \(NCDC\)](#) highlighted several key findings regarding the prescription and use of antibiotics in hospitals amidst growing concerns about [Antimicrobial Resistance \(AMR\)](#).

What are the Key Findings of the Survey?

- **Preventative Use of Antibiotics:**
 - Over half of the surveyed patients (55%) were prescribed antibiotics for prophylactic indications, meant to prevent infections, rather than for therapeutic purposes (45%) to treat infections.
- **Antibiotic Prescription Patterns:**
 - Only a small fraction (6%) of patients **were prescribed antibiotics** after a confirmed diagnosis of the **specific bacteria causing their illness** (definitive therapy), while the majority (**94%**) **were on empirical therapy**, based on the doctor's clinical assessment of the likely cause of the illness.
- **Lack of Specific Diagnosis:**
 - **94% of patients received antibiotics** before a definitive medical diagnosis was confirmed, highlighting the **prevalent use of antibiotics** without precise knowledge of the infection's cause.
- **Variation Among Hospitals:**
 - There were wide variations in antibiotic prescription rates among the hospitals, ranging from **37% to 100% of patients being prescribed antibiotics**.
 - A significant proportion (86.5%) of the prescribed antibiotics were administered through the parenteral route (not orally).
- **Drivers of AMR:**
 - The NCDC survey notes, that one of the main drivers for the development of antibiotic resistance is **the excessive and inappropriate use of antibiotics**.

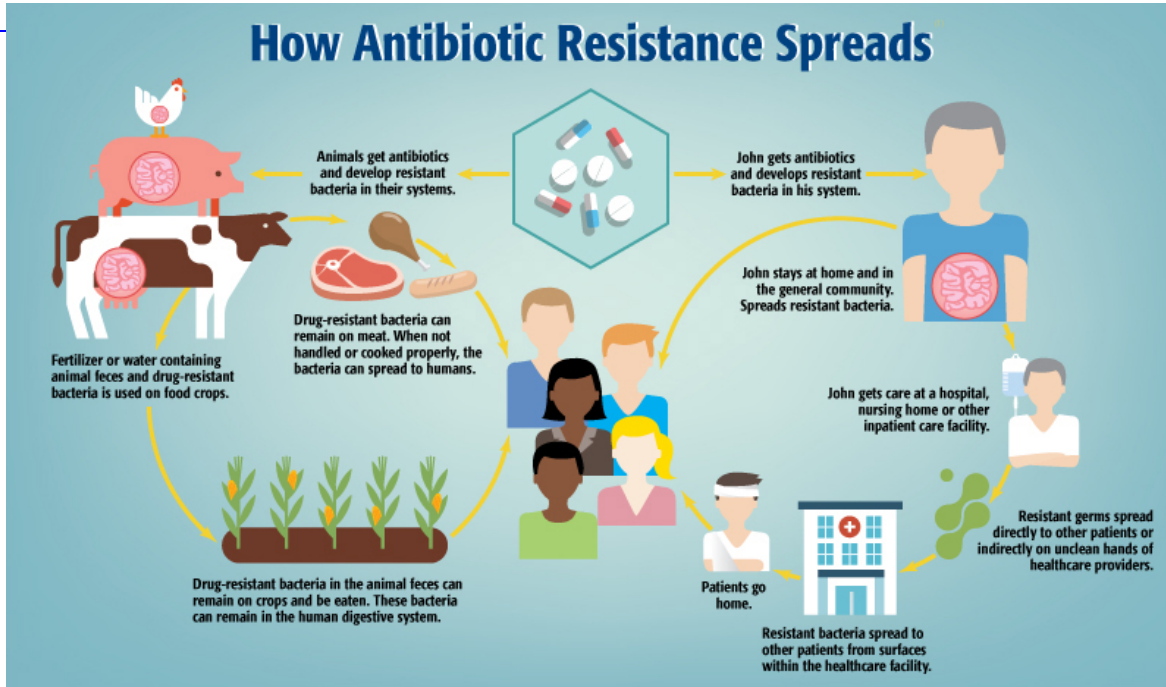
What is Antimicrobial Resistance (AMR)?

- **About:**
 - Antimicrobial resistance is the **resistance acquired by any microorganism (bacteria, viruses, fungi, parasites, etc.)** against antimicrobial drugs (such as antibiotics,

antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.

- As a result, standard treatments become ineffective, infections persist, and may spread to others.
- It is a **natural phenomenon** as bacteria evolve, making drugs used to treat infections less effective.
- Microorganisms that develop antimicrobial resistance are sometimes referred to as **“superbugs”**.
- The [World Health Organization \(WHO\)](#) has identified AMR as one of the top ten threats to global health.

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What are the Reasons for the Spread of AMR?

- **High Prevalence of Communicable Diseases:** High burden of communicable diseases, such as tuberculosis, diarrhoea, respiratory infections, etc. that require antimicrobial treatment.
- **Overburdened Public Health System:** This limits the laboratory capacity for etiology-based diagnosis and appropriately targeted treatment.
- **Poor infection Control Practices:** Hygiene lapses in hospitals and clinics facilitate the spread of resistant bacteria.
- **Injudicious use:** Overprescribing by doctors under pressure from patients (often self-medication), incomplete antibiotic courses, and broad-spectrum antibiotics used unnecessarily create selective pressure for resistant bacteria.
 - **Easy Access:** Unregulated over-the-counter availability and affordability of antibiotics fuel self-medication and inappropriate use.
- **Lack of Awareness:** Low public understanding of AMR and proper antibiotic use encourages misuse.
- **Limited Surveillance:** Lack of adequate monitoring systems makes it difficult to track and understand the scope of AMR.

What are the Implications of the Spread of Antimicrobial Resistance?

- **Healthcare Impact:**
 - AMR can render previously effective antibiotics **ineffective against bacterial infections**. This complicates the treatment of common illnesses like pneumonia, urinary tract infections, and skin infections, leading to prolonged illnesses, more severe symptoms, and increased mortality rates.
- **Increased Healthcare Costs:**

- Treating resistant infections **often requires more expensive and prolonged therapies**, increased hospital stays, and sometimes more invasive procedures. This leads to higher healthcare costs for individuals, healthcare systems, and governments.
- **Challenges in Medical Procedures:**
 - AMR makes **certain medical procedures riskier**. Surgeries, cancer chemotherapy, and organ transplants become more hazardous due to the increased risk of infections that are resistant to standard antibiotics.
- **Limitations in Treatment Options:**
 - As resistance grows, the **available arsenal of effective antibiotics diminishes**. This limitation in treatment options may lead to a scenario where previously manageable infections become untreatable, reverting medicine to a pre-antibiotic era where common infections could be fatal.



What are the Measures Taken to Address AMR ?

- **Indian:**
 - **National Programme on AMR containment:** Launched in 2012. Under this programme, AMR Surveillance Network has been strengthened by establishing labs in State Medical College.
 - **National Action Plan on AMR:** It focuses on **One Health approach** and was launched in April 2017 with the aim of involving various stakeholder ministries/departments.
 - **AMR Surveillance and Research Network (AMRSN):** It was launched in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country.
 - **AMR Research & International Collaboration:** [Indian Council of Medical Research \(ICMR\)](#) has taken initiatives to develop new drugs /medicines through international collaborations in order to strengthen medical research in AMR.
 - ICMR along with Research Council of Norway (RCN) initiated a joint call for research in antimicrobial resistance in 2017.
 - ICMR along with the Federal Ministry of Education and Research (BMBF), Germany has a joint Indo-German collaboration for research on AMR.
 - **Antibiotic Stewardship Program:** ICMR has initiated antibiotic stewardship program (AMSP) on a pilot project across India to control misuse and overuse of antibiotics in hospital wards and ICUs.
 - DCGI has banned 40 Fixed Dose Combinations (FDCs) which were found inappropriate.
- **Global Measures:**
 - **World Antimicrobial Awareness Week (WAAW):** Held annually since 2015, WAAW is a global campaign that aims to raise awareness of AMR worldwide and encourage best practices among the general public, health workers and policymakers to slow the development and spread of drug-resistant infections.
 - **The Global Antimicrobial Resistance and Use Surveillance System (GLASS):** WHO launched the GLASS in 2015 to continue filling knowledge gaps and to inform strategies at all levels.
 - GLASS has been conceived to progressively incorporate data from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain, and the environment.
 - **Global Point Prevalence Survey Methodology:** To deal with the challenge of limited information on **how antibiotics are prescribed and used at the patient level**, WHO has introduced the global point prevalence survey methodology to understand the prescribing patterns in hospitals, with repeated surveys showing the changes in antibiotic use over time.
 - Few studies have been conducted in India using this methodology.

Way Forward

- **Public Education Campaigns:** Inform the public about AMR, its dangers, and how to prevent it. This can be done through mass media, community outreach programs, and educational materials in local languages.

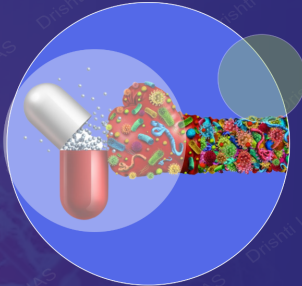
- **Antibiotic Stewardship Programs:** Implement programs in hospitals and clinics to track and optimize antibiotic use, ensuring they are prescribed only when necessary and for the shortest effective duration.
- **Regulation of Antibiotic Sales:** Implement stricter regulations on the sale of antibiotics over the counter, requiring prescriptions for all antibiotics.
- **Expand AMR Surveillance:** Establish a **nationwide AMR surveillance system** to track the prevalence and spread of resistant bacteria in humans, animals, and the environment.
- **Develop New Technologies:** Explore the potential of new technologies, such as **phage therapy**, to address AMR challenges.

Drishti IAS

ANTIMICROBIAL RESISTANCE

The ability of microorganisms to resist the effects of antimicrobial drugs



CAUSES OF ↑ AMR

- Poor infection control/sanitation
- Antibiotic overuse
- Genetic mutations of microbe
- Lack of investment in R&D of new antimicrobial drugs

Microbes that develop AMR are called 'Superbugs'

RECOGNITION BY WHO

- Identified AMR as **one of the top 10 threats** to global health
- Launched **GLASS** (Global Antimicrobial Resistance and Use Surveillance System) in 2015

IMPACTS OF AMR

- ↑ Risk of spreading infections
- Makes infections harder to treat; prolonged illness
- ↑ Healthcare costs

INDIA'S INITIATIVES AGAINST AMR

- Surveillance of AMR in microbes causing **TB, Vector Borne diseases, AIDS etc.**
- **National Action Plan on AMR** (2017) with One Health approach
- **Antibiotic Stewardship Program** by ICMR

New Delhi metallo-β-lactamase-1 (NDM-1) is a bacterial enzyme, emerged from India, that renders all current β-lactam antibiotics inactive

EXAMPLE

- Carbapenem antibiotics stop responding due to AMR in *K. pneumoniae*
- AMR Mycobacterium tuberculosis causing Rifampicin-Resistant TB (RR-TB)
- Drug-resistant HIV (HIVDR) making antiretroviral (ARV) drugs ineffective

UPSC Civil Services Examination, Previous Year Questions (PYQ)

Prelims

Q. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India? (2019)

1. Genetic predisposition of some people
2. Taking incorrect doses of antibiotics to cure diseases
3. Using antibiotics in livestock farming
4. Multiple chronic diseases in some people

Select the correct answer using the code given below.

- (a) 1 and 2
 (b) 2 and 3 only
 (c) 1, 3 and 4

(d) 2, 3 and 4

Ans: (b)

Mains

Q. Can overuse and free availability of antibiotics without Doctor's prescription, be contributors to the emergence of drug-resistant diseases in India? What are the available mechanisms for monitoring and control? Critically discuss the various issues involved. **(2014)**

Debt Sustainability and Exchange Rate Management

For Prelims: [International Monetary Fund](#), Exchange Rate Dynamics, Credit Ratings, Interlinked Factors Related to India's Rising Debt Levels, [Tax evasion](#), [Fiscal Responsibility and Budget Management Act, 2003](#), IMF's Classification of Stabilised Arrangement

For Mains: IMF's Projections Related to India's Economic Outlook, Measures that India can take for Sustainable Debt Management

[Source: TH](#)

Why in News?

The [International Monetary Fund \(IMF\)](#) recently released its annual Article IV consultation report on India, addressing **critical issues concerning the [nation's debt sustainability](#) and [exchange rate management](#)**.

What are IMF's Projections Related to India's Economic Outlook?

- **Debt Sustainability:** The IMF flagged concerns about **India's long-term debt sustainability**.
 - It projected that India's general government debt, encompassing both the Centre and States, could potentially **escalate to 100% of GDP by fiscal year 2028**, particularly under adverse circumstances.
- **Debt Management Challenges:** The report highlighted the **necessity for more prudent debt management practices**, emphasizing the crucial need for **financing to achieve climate change mitigation goals** and enhance resilience against natural disasters.
 - The **Indian Finance Ministry contested the IMF's debt projections**, dismissing them as a worst-case scenario rather than an imminent reality.
- **Exchange Rate Dynamics:** The IMF reclassified India's de facto exchange rate regime to "**stabilized arrangement**" from "**floating**" for December 2022 to October 2023
 - This reclassification reflects observations about **controlled fluctuations in the rupee's value** due to interventions by the RBI.
- **Stagnant Credit Ratings:** Despite being lauded as the fastest-growing major economy, **India's sovereign investment ratings** have remained stagnant for a considerable period.
 - Agencies like Fitch Ratings and S&P Global Ratings have maintained **India's credit rating at 'BBB- with stable outlook' since 2006**, citing concerns about weak fiscal performance, burdensome debt, and low per capita income.

What is the Global Debt Landscape ?

- **Rising Global Debt:** Globally, public debt has surged dramatically, surpassing **USD 92 trillion in 2022**, a more than fourfold increase since 2000, outpacing the growth of global GDP.
 - According to the UN, in 2022, 3.3 billion people live in countries that spend more on interest payments than on education or health.
 - Developing countries accounted for almost 30% of the total, of which roughly 70% is attributable to **China, India and Brazil**, largely driven by diverse factors like the **pandemic, cost-of-living crisis, and climate change**.
- **Debt Asymmetry Between Developed and Developing Nations:** Developing countries, including those in **Africa**, contend with substantially higher borrowing costs compared to developed nations.
 - This disparity in borrowing rates compromises debt sustainability for developing nations, leading to **increased interest spending relative to public revenues**.

What is India's Current Debt Scenario?

- **Government Current Debt Levels:** The central government's debt stood at **₹155.6 trillion, approximately 57.1% of GDP by March 2023**. Meanwhile, State governments carried a debt of about **28% of GDP**.
 - As stated by the Finance Ministry, India's public debt-to-GDP ratio is **81% in 2022-23**. This is way higher than the levels specified by the FRBM target.
 - The 2018 amendment to the FRBM Act specified debt-GDP targets for the Centre, States and their combined accounts at **40%, 20% and 60%, respectively**.
- **Interlinked Factors Related to India's Rising Debt Levels:**
 - **High Fiscal Deficit:** The government consistently spends more than it earns, leading to the deficit being financed through borrowing. This deficit can arise due to:
 - **High Expenditure Commitments:** Social welfare programs, **subsidies**, and defense spending significantly contribute to government outlays.
 - **Slow Revenue Growth:** Tax reforms haven't sufficiently boosted revenue collection, creating a **revenue-expenditure gap**.
 - **Global Geopolitical Events:** Events like the **Russia- Ukraine war** and rising commodity prices can lead to economic disruptions and higher import costs, forcing the government to borrow to maintain stability.
 - **Informal Economy and Tax Leakage:** India's large informal economy poses challenges for efficient tax collection.
 - **Tax evasion and lack of formalization in sectors like agriculture** and small businesses limit revenue generation, potentially forcing the government to rely on debt financing.
 - **Guarantees and Contingencies:** Government guarantees for loans taken by **public sector entities or contingent liabilities**, like potential losses from **public-private partnerships**, substantially add to the debt indirectly.
 - **Exchange Rate Fluctuations:** Fluctuations in exchange rates **impact the cost of servicing foreign currency-denominated debt**, potentially increasing the overall debt burden.
- **Legislation for Debt Management in India:**
 - **Fiscal Responsibility and Budget Management Act, 2003 (FRBM Act):** FRBM Act is an Indian law enacted to bring financial discipline to the government's fiscal operations and to reduce the **country's fiscal deficit**.
 - **FRBMA** aimed for specific debt-GDP targets for the Centre and States.
 - However, disruptions induced by the **pandemic** contributed significantly to elevated debt-GDP ratios, surpassing the specified thresholds.
 - Also, despite several years since its enactment, the Government of India has struggled to meet the FRBM Act targets.

What Differentiates Floating Exchange Rate Dynamics from Stabilized Arrangement?

- **Floating Exchange Rate:**
 - **Market-Driven:** Currency value is **determined solely by supply and demand in the foreign exchange market**, with minimal government intervention.
 - **High Volatility:** The exchange rate can fluctuate significantly in response to economic news, events, or market sentiment.
 - **Promotes Flexibility:** Businesses and individuals can **adjust to changing economic conditions** through market-determined exchange rates.
- **Stabilized Arrangement:**
 - **More Managed than Purely Floating:** The government or central bank may intervene in the foreign exchange market **occasionally to smooth out excessive volatility** or maintain a target range for the currency.
 - **Moderate Volatility:** Aiming for greater stability than a pure float, but still accepting some degree of fluctuation.
 - **Offers Predictability:** Businesses and individuals can plan with a more stable exchange rate environment.
- **IMF's Classification of Stabilised Arrangement:**
 - The **IMF** classifies an exchange rate regime as a stabilized arrangement when it determines that the **exchange rate has not moved beyond a 2% band in 6 months** and that this stability has **resulted from market interventions rather than market conditions**.

What Measures can India Take for Sustainable Debt Management?

- **Short Term: Fiscal Consolidation:**
 - **Targeted Reforms: Streamlining subsidies, reforming public sector enterprises, and reducing administrative inefficiencies and strict adherence to FRBM Act targets** can free up resources for debt repayment and productive investments.
 - **Improved Tax Efficiency:** Strengthening tax administration and **tackling tax evasion** can significantly boost revenue without excessive borrowing.
- **Long Term Growth-Oriented Strategies:**
 - **Skill Development and Education:** Investing in [human capital](#) through education and [skill development](#) programs enhances productivity and competitiveness, leading to higher economic growth and improved tax collection.
 - **Export Promotion:** Diversifying export markets, **incentivizing [high-value exports](#)**, and addressing competitiveness challenges can boost foreign exchange earnings, potentially reducing the need for external debt.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q. Consider the following statements: (2018)

1. The Fiscal Responsibility and Budget Management (FRBM) Review Committee Report has recommended a debt to GDP ratio of 60% for the general (combined) government by 2023, comprising 40% for the Central Government and 20% for the State Governments.
2. The Central Government has domestic liabilities of 21% of GDP as compared to that of 49% of GDP of the State Governments.
3. As per the Constitution of India, it is mandatory for a State to take the Central Government's consent for raising any loan if the former owes any outstanding liabilities to the latter.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only

(d) 1, 2 and 3

Ans: C

Mains:

Q. Public expenditure management is a challenge to the Government of India in the context of budget-making during the post-liberalization period. Clarify it. **(2019)**

Concerns Over Existing Examination System

For Prelims: [New Education Policy 2020](#), [National Testing Agency \(NTA\)](#)

For Mains: Challenges in the current examination system, Issues Arising Out of Design & Implementation of Policies

Source: [TH](#)

Why in News?

In the ever-evolving landscape of education, the **examination system** plays a pivotal role in shaping learning outcomes and determining the credibility of academic certifications.

- However, **recurrent scandals, inconsistent standards**, and a pervasive focus on rote memorization have raised concerns about the **effectiveness of the existing examination system in India**.

What are the Concerns Regarding the Existing Examination System in India?

- **Credibility and Educational Standards:**
 - Scandals during examination seasons **impact the credibility of examination boards**.
 - Lack of credibility affects educational standards as teaching aligns with examination patterns, often promoting rote learning.
- **Short-Term Memorization:**
 - Midterms, semester exams, and unit tests provide a lighter schedule but encourage **short-term memorization**.
 - Students often study for marks, forgetting the learned content soon after exams.
 - Education should focus on **long-term learning**, internalizing knowledge rather than short-term memorization.
 - The system needs to be practical, testing students' abilities effectively.
- **Assessment Quality:**
 - The validity and comparability of the summative examination across **institutions are meaningless today**. There are complaints that examination boards **test only memory, leading to students being coached to memorize** answers rather than develop higher-order thinking.
 - Additionally, question papers often have grave flaws such as language errors, irrelevant questions, and errors in conceptualization.
 - The examination system is **prone to cheating and malpractices**, such as **copying, leaking, impersonation**, etc.

- This undermines the credibility and quality of the assessment and the education system.
- **Decentralised System:**
 - India has numerous higher education examination systems with **diversified modes of assessment**, including 1,100 universities, 50,000 affiliated colleges, and 700 autonomous colleges.
 - The total student enrolment exceeds 40.15 million, showcasing the vastness of the higher education sector.
 - Additionally, there are 60 school boards for secondary and higher secondary education, certifying over 15 million students annually.
 - Secrecy and standardization are considered hallmarks of good examination boards, but **secrecy without proper checks leads to scandals**.
 - **Uniformity in examinations**, while seeking consistency, can **hinder experimentation in assessment and curriculum**.
 - This poses a notable risk to the credibility of education. Balancing **standardization with room for innovation** is essential for a dynamic and effective education system.
- **Impact on Employability:**
 - Employers rely on their **assessments rather than institutional certifications** for evaluating candidates.
 - The emphasis on higher order learning is crucial for employability, yet institutional examinations often fall short.
 - This in turn has created a **coaching market** for competitive examinations and skilling.

What Steps Can Be Taken to Address the Challenges in the Examination System?

- **Ensuring Learning Outcomes:**
 - Specify **minimum standards of learning outcomes** to provide a clear benchmark.
 - Encourage academics across disciplines to contribute to curriculum design, pedagogy, and assessment systems.
- **Subject and Skill-Specific Assessments:**
 - Incorporate subject-specific and skill-specific assessment processes to ensure a comprehensive evaluation.
 - Expect university degrees and school board **certificates to truly reflect the learning achievements of students**.
 - Advocate for comprehensive and challenging assessments that distinguish students based on their academic attainments.
 - Emphasize continuous assessment throughout the course, with teacher involvement and student participation.
 - Make summative assessment and evaluation transparent by implementing checks and balances.
- **Leverage Technology for Credibility:**
 - Utilize technology in assessments to enhance credibility, standardizing question papers and evaluations.
 - Explore **market-available software solutions** for both centralized and distributed assessment systems.
- **External Audit of Assessment Systems:**
 - Conduct regular external audits of assessment systems in universities and school boards.
 - Establish benchmark principles and standards for **audit reports, ensuring reliability and consistency**.
 - Grade examination boards based on transparency, reliability, and consistency, reflecting these aspects in audit reports.
- **Transparency Measures for Students:**
 - Implement measures for transparency, allowing students to access the evaluation process and address grievances.

Initiatives Related to Education

- [Right To Education Act of 2009.](#)
- [New Education Policy 2020.](#)
- [Sarva Shiksha Abhiyan \(SSA\).](#)
- [Rashtriya Madhyamik Shiksha Abhiyan.](#)
- [Rashtriya Uchhatar Shiksha Abhiyan \(RUSA\).](#)
- [National Testing Agency \(NTA\)](#)
- [National Curriculum Framework.](#)

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. Which of the following provisions of the Constitution does India have a bearing on Education? (2012)

1. Directive Principles of State Policy
2. Rural and Urban Local Bodies
3. Fifth Schedule
4. Sixth Schedule
5. Seventh Schedule

Select the correct answer using the codes given below:

- (a) 1 and 2 only
(b) 3, 4 and 5 only
(c) 1, 2 and 5 only
(d) 1, 2, 3, 4 and 5

Ans- (d)

Mains

Q1. How have digital initiatives in India contributed to the functioning of the education system in the country? Elaborate on your answer. (2020)

GI Tags for Over 17 Products

[Source: IE](#)

Why in News?

Recently, over 17 products from Odisha, Arunachal Pradesh, West Bengal, and J&K have received the [Geographical Indication \(GI\)](#) tag.

What Products have Received the GI Tags from Odisha?

▪ **Kapdaganda Shawl:**



- Woven and embroidered by the **women of the Dongria Kondh tribe**, a [Particularly Vulnerable Tribal Group \(PVTG\)](#) in the Niyamgiri hills in Odisha's Rayagada and Kalahandi districts, the shawl reflects the rich tribal heritage of the Dongria Kondhs.

▪ **Lanjia Saura Painting:**



- The art form belongs to the Lanjia Saura community, a PVTG largely **residing in the Rayagada district**.
- These paintings are in the form of **exterior murals painted on the mud walls of homes**. White paintings figure over a crimson-maroon background.

▪ **Koraput Kala Jeera Rice:**

- The black-coloured rice variety, also known as the **'Prince of Rice'**, is famous for its aroma, taste, texture and nutritional value.
- Tribal farmers of the Koraput region have preserved the rice variety for around 1,000 years.

▪ **Similipal Kai Chutney:**

- The chutney made with **red weaver ants is a traditional delicacy** of the tribals in Odisha's Mayurbhanj district. These ants are found in the forests of Mayurbhanj, including in the Similipal forests.

▪ **Nayagarh Kanteimundi Brinjal:**

- This Brinjal is **known for its prickly thorns on the stems** and the whole plant. The plants are resistant to major insects and can be grown with minimal pesticide.

▪ **Odisha Khajuri Guda:**

- Odisha's **"Khajuri Guda" or jaggery** is a natural sweetener extracted from date palm trees and has its origin in the Gajapati district.

▪ **Dhenkanal Magji:**

- It is a **type of sweet made from cheese** from buffalo milk, with distinct characteristics in

terms of appearance, taste, flavour, shape, and size.

What are the other Products Which Received GI Tag?

State	Product Name	Brief Explanation
Arunachal Pradesh	Wancho Wooden Craft	Ethnic wood craft integral to Wancho tribes, used for decoration and gifting, historically used in various aspects of their community life.
	Adi Kekir	Ginger variety from Arunachal Pradesh.
West Bengal	Tangail Saree	Saree style originating from Bengal with distinct weaving patterns.
	Garad Saree	Saree, known for its unique texture and appearance, is a traditional attire from Bengal.
	Korial Saree	Saree variety is recognized for its weaving style and traditional significance in Bengal.
	Kalo Nunia Rice	Rice variety from West Bengal.
	Sundarban Honey	Honey sourced from the Sundarbans area of West Bengal.
Gujarat	Kachchi Kharek	Product of date palm harvested at Khalal (fresh stage), which are bold, crisp and sweet.
Jammu Kashmir	Ramban Anardana	Ramban Anardana, locally referred to as Dhruni, is an important fruit tree growing wild in hilly tracts and forests of J&K.

What is a Geographical Indication (GI) tag Tag?

▪ About:

- A GI tag is a **name or sign used on certain products** that correspond to a specific geographical location or origin.
- The GI tag ensures that only the **authorised users or those residing in the geographical territory** are allowed to use the popular product name.
 - It also protects the product from being copied or imitated by others.
- A registered GI is valid for 10 years.
- GI registration is overseen by the Department for Promotion of Industry and Internal Trade under the Ministry of Commerce and Industry.

▪ Legal Framework and Obligations:

- The [Geographical Indications of Goods \(Registration and Protection\) Act, 1999](#) seeks to provide for the registration and better protection of geographical indications relating to goods in India.
- It is governed and directed by the [WTO Agreement on Trade-Related Aspects of Intellectual Property Rights \(TRIPS\)](#).
 - Furthermore, the significance of protecting industrial property and geographical indications **as integral components of intellectual property** is acknowledged and emphasised in Articles 1(2) and 10 of the Paris Convention.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q1. Which of the following has/have been accorded 'Geographical Indication' status? (2015)

1. Banaras Brocades and Sarees
2. Rajasthani Daal-Bati-Churma

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (c)

Q2. India enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999 in order to comply with the obligations to (2018)

- (a) ILO
- (b) IMF
- (c) UNCTAD
- (d) WTO

Ans: (d)

Counter-Drone Technology and UAV Development

[Source: TH](#)

Why in News?

The [Defence Research and Development Organisation \(DRDO\)](#) has made substantial strides in developing a **comprehensive counter-drone system**, as well as focusing on the advancement of **high-endurance Unmanned Aerial Vehicles (UAVs)**.

What are the Recent Developments in Counter-Drone Technology and UAV Development?

- **Counter-Drone Technology Development:**
 - DRDO has developed a comprehensive anti-drone system encompassing **detection, identification, and neutralization of drones**.
 - The technology is capable of **countering attacks, soft kill and hard kill of all types of drones**, including micro drones.
 - Also, the technology has been transferred to private companies like **BEL, L&T, and Icom** for mass production
- **UAV Development:**
 - **Tapas MALE UAV:** The **Tapas Medium Altitude Long Endurance (MALE) UAV developed for Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) applications** is in an advanced stage of developmental trials.
 - **Lithium Ion-based battery** with indigenous battery management system has been developed by the DRDO in association with a private vendor and is **being used on Tapas UAV**.
 - **Archer UAV:** Short-range armed UAV Archer is under development for **reconnaissance, surveillance, and low-intensity conflict scenarios**, with developmental flight trials in progress.

DRONE TECHNOLOGY



Drone is a pilotless flying machine, using aerodynamics for lift, can operate autonomously or remotely, and may carry lethal or nonlethal cargo.

COMPONENTS

- Unmanned aircraft (UA)
- Control system (ground control station - GCS)
- Control link (specialized datalink)
- Other related support equipment

CLASSIFICATION

(as per Drone Rules, 2021)

- Nano: <250 gm
- Small: 25 kg to 150 kg
- Micro: 250 gm to 2 kg
- Large: >150 kg
- Mini: 2 kg to 25 kg

APPLICATIONS

- Mapping & Surveying (asset inspection, roof inspections)
- Agriculture (bird control, crop spraying & monitoring etc)
- Multispectral/thermal/NIR cameras, Aerial Photo/ videography and Live streaming events
- Emergency Response (search and rescue, marine rescue, fire fighting)
- Disaster (zone mapping, disaster relief etc)
- Mining
- Monitoring Poachers
- Meteorology, Aviation, Payload carrying

DRONES IN DEFENCE

Purpose

- Surveillance and Reconnaissance
- Search and Rescue
- Maritime Surveillance
- Combat Drones
- Offensive (heterogeneous SWARM drones)
- Counter-Terrorism Operations

India's Counter-Drone System

- Indrajaal (India's inaugural autonomous drone-defense dome)
- Procurement of combat-capable Heron drones from Israel
- Acquisition of MQ-9B Armed Drones from the US

RELATED REGULATIONS

- Aircraft (Security) Rules, 2023
- Drones Rules, 2021 and Drone (Amendment) Rules, 2022

INDIA'S INITIATIVES

- Digital Sky Platform
- No-Permission-No-Takeoff (NPNT) framework
- PLI Scheme for Drones
- Drone Shakti Scheme

ISSUES

- Increased risk of armed attacks
- Data security
- Cheaper cost enables a larger population to procure drones
- Use of drones in warfare (remote warfare)
- Procurement by non-state actors can pose serious threats
- Ease in delivering mass destruction weapons



What is the Defence Research and Development Organization?

- About:** DRDO is the **R&D wing of the Ministry of Defence, Govt of India**, with a vision to empower India with **cutting-edge defense technologies** and a mission to achieve **self-reliance in critical defense technologies**.
 - Core Principle:** "**Balasya Mulam Vigyanam**" (Science is the source of strength)
- Foundation:** Established in **1958** by amalgamating existing establishments from the **Indian Army and Directorate of Technical Development & Production**.
- Significant Contributions:** Developed strategic systems and platforms like **Agni and Prithvi series of missiles**, **Tejas (Light Combat Aircraft)**, **Pinaka (Multi-barrel Rocket Launcher)**, **Akash (Air Defence System)**, radars, and electronic warfare systems.

UPSC Civil Services Examination, Previous Years Questions (PYQs)

Q1. What is "Terminal High Altitude Area Defense (THAAD)", sometimes seen in the news? (2018)

- (a) An Israeli radar system
- (b) India's indigenous anti-missile programme
- (c) An American anti-missile system

(d) A defence collaboration between Japan and South Korea

Ans: c

Q2. With reference to Agni-IV Missile, which of the following statements is/are correct? (2014)

1. It is a surface-to-surface missile.
2. It is fuelled by liquid propellant only.
3. It can deliver one-tonne nuclear warheads about 7500 km away.

Select the correct answer using the code given below:

- (a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans: (a)

India-Myanmar Free Movement Regime Likely to End

The Government of India is planning to end the [Free Movement Regime](#) along the international border with [Myanmar](#) and initiate a comprehensive smart fencing system throughout the entire stretch.

- The **Free Movement Regime (FMR)**, implemented in 2018, allows people residing on either side of the India-Myanmar border to venture **16 km** into each other's territory without visa.
 - They can cross over, **on production of a border pass** with one-year validity and can stay up to two weeks.
- The border between India and Myanmar runs for **1,643 km** in the **4 states of Mizoram, Manipur, Nagaland, and Arunachal Pradesh.**



Read more: [India-Myanmar Relations](#)

Awards for Excellence in Public Administration 2023

The Scheme and Web-portal for **Prime Minister's Awards for Excellence in Public Administration 2023** was launched recently by the [Department of Administrative Reforms & Public Grievances](#).

- The Award Scheme has been **redesigned to spotlight the District Collector's performance** by targeting individual beneficiaries and employing a saturation approach in implementation.
- It aims to honor civil servants' contributions under two categories: 10 awards for the **Holistic Development of Districts** across 12 priority sectors and **6 awards for Innovations spanning Central Ministries/Departments** and various States and Districts.
- The scheme's goal is to foster **healthy competition, innovation, replication**, and the establishment of best practices.
- It prioritizes **good governance, qualitative accomplishments, and enhancing last-mile connectivity** over solely achieving quantitative targets.

Read more: [Need to Restructure the District Collector's Role](#)

Floods in Telangana Reveal Paleolithic Tools

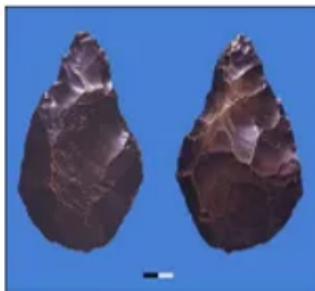
The recent [floods](#) in the **Mulugu district of Telangana** has led to a fresh discovery of **paleolithic quartzite tools**. The tools or hand axes were found in the **sand bed of a stream** that dried up after the flood.

- The hand axes were found in the stream between **Gurrevula and Bhupatipuram villages** in Mulugu district.
 - According to paleontologists, the **stone axe** belongs to the **Lower Paleolithic period** and is about 30 lakh years old.
- The **Paleolithic Age** dates back to approximately **33 lakh years BC**, spanning 10,000 years. Paleolithic hunter gatherers used heavy quartzite and large tools for woodcutting and hunting animals for sustenance.
- Also, in 1863, [East India Company's](#) Geological Survey team discovered a paleolithic site at **Attirampakkam near Madras** (present-day Chennai).
 - Since then, Paleolithic culture has been labeled as **Madras Hand-Axe Industry or Madrasian Culture**.

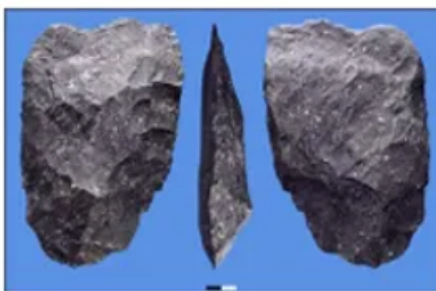
Tools of Paleolithic Era



Chopper



Handaxe



Cleaver

Warmest Year on Record 2023

2023 emerges as the warmest year on record, surpassing the 2016 record, with significant implications for [global climate patterns](#) and [extreme weather events](#).

- 2023 was **1.48°C warmer than the average** of the 1850-1900 pre-industrial level.
 - Approximately 50% of days were **more than 1.5°C** warmer than the same baseline.
- Record temperatures in 2023 led to widespread [heatwaves](#), [floods](#), [droughts](#), and [wildfires](#).
 - Marine heatwaves were observed in various regions, including the [Mediterranean](#), [Gulf of Mexico](#), [Indian Ocean](#), [North Pacific](#), and **much of the North Atlantic**.
- The onset of [El Niño in 2023](#) played a role in exacerbating temperature extremes.
 - El Niño is a natural weather phenomenon that **warms the surface waters in the eastern Pacific Ocean**, which contributes to higher global temperatures.

Read more: [The 1.5°C Warming Target and Climate Projections](#)
