

## UPSC Daily Current Affairs | Prelim Bits 06-07-2024

### Ban of Antibiotics

The Drugs Consultative Committee (DCC) recommends banning the import, production, distribution, and sale of antibiotics.

The DCC functions as the advisory committee to the Central Drugs Standard Control Organization (CDSCO).

- **Background** - DCC banned antibiotics ***Chloramphenicol and Nitrofurans***
- **Antibiotics**- An antibiotic is a type of antimicrobial substance active against bacteria.
- **AMR- Anti-Microbial Resistance** refer to the ability of microorganisms (such as bacteria, viruses, fungi, and parasites) to resist the effects of drugs designed to kill them or inhibit their growth.

Chloramphenicol	Nitrofurantoin
<ul style="list-style-type: none"> <li>• It is an antibiotic useful for the treatment of a number of <b><i>bacterial infections</i></b> including superficial eye infections, enteric fever, typhoid fever and central nervous system infections.</li> <li>• It is recognised by the WHO as a <b><i>Highly Important Antimicrobial (HIA)</i></b>.</li> </ul>	<ul style="list-style-type: none"> <li>• It is an antibiotic medication that is used for the treatment of uncomplicated <b><i>lower urinary tract infections</i></b>.</li> <li>• Its derivatives are classified as <b><i>Important Antimicrobials (IA)</i></b> by WHO.</li> </ul>

- **Recommendation**- The DCC members noted that chloramphenicol and nitrofurans are often misused in poultry and other animal feed supplements.
- This misuse can lead to antibiotic-resistant bacteria and exacerbate the global health issue of ***antimicrobial resistance (AMR)***.
- **Other banned antibiotics**- As per Coastal Aquaculture Authority (CAA) guidelines, ***20 antibiotics*** and other pharmacologically active substances are banned for use in shrimp aquaculture.
- This includes chloramphenicol and types of nitrofurans, including furaltadone, furazolidone, furylfuramide, nifuratel, nifuroxime, nifurprazine, nitrofurantoin and nitrofurazone.
- **Concerns**- In May 2023, Marine Products Export Development Authority (MPEDA) proposed a ban on the import and production of these drugs to the Department of Animal Husbandry and Dairying (DAHD).

Marine Products Export Development Authority (MPEDA), the nodal agency for the development of the seafood industry in India, especially focusing on exports

of marine products.

### Central Drugs Standard Control Organization

- The CDSCO is the Central Drug Authority for discharging functions assigned to the Central Government under the Drugs and Cosmetics Act.
- It is the National Regulatory Authority for the medical devices industry under the provisions of the Drugs & Cosmetics Rules.
- **Nodal Ministry-** Ministry of Health & Family Welfare.
- CDSCO, along with state regulators, is jointly responsible for the grant of licenses for certain specialized categories of critical Drugs.
- **Functions-** Regulatory control over the import of drugs, approval of new drugs and clinical trials.
- Approval of certain licences as Central Licence Approving Authority

### References

1. [Down to Earth | chloramphenicol and nitrofurans](#)
2. [CDSCO | Introduction](#)

### International Council on Monuments and Sites (ICOMOS)

*The Moidams of Assam have been recommended for UNESCO World Heritage status by ICOMOS.*

- **About-** ICOMOS is a global ***non-governmental organization*** dedicated to the conservation and protection of cultural heritage places.
- **Establishment-** In 1965, Warsaw, Poland.
- **Headquarters-** Paris.
- **Objective-** To promote the application of theory, methodology, and scientific techniques in the conservation of architectural and archaeological heritage.
- **Role-** It has a wide range of activities related to heritage conservation, including
  - Advising UNESCO on World Heritage ***nominations and management.***
  - Developing international standards, guidelines, and charters for conservation practice.
  - Conducting research, training, and capacity building in heritage conservation.
  - Advocating for the protection of cultural heritage at global, regional, and national levels.

### Moidams of Assam

- Moidams are significant cultural heritage sites found primarily in ***Assam.***
- **Period-** Between ***13<sup>th</sup> CE to 17<sup>th</sup> CE.***
- **History-** The Moidams situated in Charaideo are the burial grounds of ***Ahom kings and queens.***
- These are comparable to the pyramids of Egypt and substances of wonder seen through the brilliant architecture and expertise of the artisans and masons of Assam of

the medieval era.

- It is famously called as the ***Pyramids of Assam***.
- **Distribution-** Moidams are primarily associated with Assam and neighbouring regions influenced by the Ahom kingdom, such as parts of Arunachal Pradesh and Nagaland.
- **Construction-** Moidams are typically made of ***earth and stone***, sometimes reinforced with bricks or terracotta.
- **Management-** The site is jointly managed by 2 separate entities namely, the Archaeological Survey of India (ASI) and the Assam Government's Directorate of Archaeology (DoA).
- It is the only applicant from India which is set to be evaluated at the 46<sup>th</sup> ordinary session of the World Heritage Committee.



## References

1. [The Hindu | International Council on Monuments and Sites \(ICOMOS\)](#)
2. [ICOMOS | About](#)
3. [UNESCO | Moidams](#)

## AT1, Tier-II bonds

*Recently Bank of Baroda announced its board's approval to raise capital through Additional Tier 1 (AT1) and Tier 2 bonds.*

*A bond is a fixed-income investment that represents a loan made by an investor to a borrower, usually corporate or governmental.*

Feature	Additional Tier 1 (AT1) Bonds	Tier 2 Bonds
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<b>Definition</b>	AT1 bonds, also called perpetual bonds, carry no maturity date but have a call option.	Tier-2 bonds are a type of debt instrument banks issue to raise capital for their operations.
<b>Ranking in Capital Structure</b>	Higher risk, subordinated to Tier 2 and other senior debts.	Lower risk, subordinated to senior debts but senior to AT1 bonds.
<b>Coupon Rate</b>	Generally higher due to higher risk.	Generally lower compared to AT1 bonds.
<b>Call Option</b>	Often callable by issuer after 5-10 year.	Typically, callable by issuer after a specific period.
<b>Interest Payments</b>	Non-cumulative, can be skipped without default.	Cumulative, cannot be skipped without default.
<b>Conversion to Equity</b>	Can be converted to equity if bank's capital falls below a threshold	Not convertible to equity.

## References

1. [Business standard | AT1, Tier-II bonds](#)
2. [Livemint| Additional-Tier 1 bonds](#)

## Common Grass Yellow Butterfly

*For the first researchers have observed a significant migration of Common Grass Yellow at Mudumalai Tiger Reserve (MTR).*

- Grass Yellows are small butterflies easily identified by their bright **yellow wings**.
- **Scientific name-** Eurema hecabe.
- **Habitat-** It is found in a variety of habitats including open fields, gardens, and grasslands.
- **Distribution-** They are widely distributed butterfly species found across Asia, Australia, Africa and North America.
- They are often seen in large groups, and the females usually fly about by themselves to find nectar from a wide variety of plants.
- **Life Cycle-** It undergoes a complete metamorphosis consisting of egg, larval (caterpillar), pupal (chrysalis), and adult stages.
- **Ecological Significance-** As pollinators and prey for various predators, they play a role in their ecosystems.
- **Conservation status**
  - **IUCN** - Least Concern
  - **WPA, 1972** - Not listed



## References

1. [The New Indian Express | Common Grass Yellow](#)
2. [Mudumalaitigerreserve | Introduction](#)

## Poliovirus & Vaccines

*Vaccine hesitancy in major cities of Afghanistan and Pakistan is causing a resurgence of the poliovirus, posing a serious threat to the WHO's Global Polio Eradication Initiative.*

- Polio is a **highly infectious** viral disease caused by a human enterovirus called the poliovirus.
- **Vulnerable-** It largely affects children ***under 5 years of age***.
- **Types of polio**
  - **Abortive poliomyelitis-** causes flu-like and intestinal symptoms. It only lasts a few days and doesn't cause long-lasting issues.
  - **Non-paralytic poliomyelitis-** cause aseptic meningitis, a swelling of the area around brain.
  - **Paralytic poliomyelitis-** The poliovirus attacks brain and spinal cord. It can paralyze the muscles that allow to breathe, speak, swallow and move your limbs.
  - **Polioencephalitis-** It is a rare type of polio that mostly affects infants. It causes brain swelling.
- **Symptoms-** Between 70% and 95% of people infected with poliovirus don't have symptoms.

## Vaccines

- There are two types of vaccines used to prevent poliomyelitis (polio) i.e. ***Inactivated***

### ***polio vaccine (IPV) and oral polio vaccine (OPV).***

- The world has used both vaccines in the fight against polio.
- While some countries, such as ***Norway, Sweden, Finland, and Iceland***, relied exclusively on the IPV, most countries have used a combination of the two.

Feature	Inactivated Polio Vaccine (IPV)	Oral Polio Vaccine (OPV)
Type	Inactivated virus	Live attenuated virus
Administration	Injectable	Oral drops
Immune Response	Induces primarily humoral immunity	Induces both humoral and mucosal immunity
Global Use	Used in countries where wild poliovirus is eradicated	Used in countries where polio is endemic or recently eradicated
Current Usage	Used in polio eradication campaigns in developed countries	Used extensively in polio eradication efforts globally

- **Potency of OPV-** OPV offered several advantages over IPV.
- Firstly, it induced protection at the gut, the viral entry site, providing stronger immunity compared to IPV.
- Secondly, OPV was administered orally, eliminating the need for syringes and trained personnel for its delivery.
- **Concerns-** Despite successful efforts in many regions, particularly in Africa, these countries continue to struggle with the virus.
- There are concerns that the WHO may not meet its goal of ***global polio eradication by the end of 2024.***

### **References**

1. [The Hindu | Poliovirus & Vaccines](#)
2. [Clevelandclinic | Polio](#)