Prelim Bits 04-10-2023 | UPSC Daily Current Affairs

UMMEED

Recently, the Union Ministry of Education (MoE) released the draft guidelines for schools to prevent suicide among students.

- **UMMEED** - Understand, Motivate, Manage, Empathise, Empower, and Develop (UMMEED).
- **Released by** – Department of School Education, Ministry of Education.
- **Objectives -**
  - To *prevent suicides* among school students
  - To serve as *directions to schools* for enhancing sensitivity, understanding, and providing support in case of reported self-harm.
  - To *de-stigmatise mental health concerns* through storytelling, rallies, posters, exhibitions and other activities.
- These guidelines *align perfectly with the NEP's* (National Education Policy) vision of holistic education.
- **Plan of Action** – Setting up of ***School Wellness Teams*** (SWT), orientations, and immediate response to vulnerable students.
- **Composition of SWT –** School counsellors, students, teachers, supporting staff, a representative of the school management committee under the *leadership of the school principal*.
- **Functions of SWT** – It implements school activities in creating awareness about mental well-being.

References

1. The Indian Express | UMMEED guidelines
2. Hindustan Times| Draft norms to prevent suicides

World Bank Paper on Swachh Bharat Mission

Recently, a departmental working paper by the World Bank on the progress of the Swachh Bharat Mission - Gramin (SBM-G) was released.

- **SBM-G** - It was launched in 2014 as a flagship program *to eliminate open defecation in India by 2019*.
- **Data Sources** - It is observed from the National Family Health Surveys (NFHS), National Sample Surveys (NSS) and the National Annual Rural Sanitation Survey

(NARSS) and the SBM-G's own information system.

The NARSS was conducted across rural India from 2017-18 to 2019-20 by the Ministry of Drinking Water and Sanitation with World Bank support.

Key findings of the report

- It reported 4 main results after harmonizing definitions and measurements across all data sources.
- **Increased access** – A substantial increase in access to own or shared improved toilets in rural India *from 38% in 2012 to 90% in 2019-20* with the sharpest increase reported in the last 2 years.
- Coverage in terms of sanitation infrastructure is *nearly universal*.
- **Increased toilet usage** – There was significant increase especially for the poor and the socially disadvantaged groups, but *far from universal*.

- **Wide spatial variation** –It is seen in progress *across and within states regarding toilet usage*.
    - For Example: 6 states shows sustained decline, 7 states including Tamil Nadu shows uneven decline while 7 states shows steady performance.
- While the *performance of most low-income States were among the best*, richer States had mixed performances.
    - **For Example**: In Tamil Nadu, the amount of progress was found to be smaller than poorer States.
- **Declining trend** – The substantial gains in regular toilet use between 2014 and 2019 have slowed or are reversing in most states.
- While decline is seen in all groups, it is the *largest for SCs and STs*.
- **Challenges** – *Sustaining regular toilet use* remains a critical challenge.

References

1. The Hindu| World Bank Paper on SBM-G
2. WB| Progress on Sanitation in Rural India

International Criminal Court (ICC)

Recently, Armenia's Parliament has voted to join the International Criminal Court (ICC).

- **Establishment** – In 1998 under the "Rome Statute".
- **Headquarters** – Hague in Netherlands.

India, USA, China, Russia and Ukraine are not the member of ICC whereas

Britain, Japan, Afghanistan, and Germany are members of ICC.

- **Aim** - To end impunity through international criminal justice.
- **Jurisdiction** – It is limited to offences occurring after it came into effect on *July 1, 2002* and act as a *court of last resort.*
- **Functions** – It *investigates and also tries individuals* charged with the gravest crimes of concern to the international community.

Organs of ICC	Crimes within the jurisdiction of ICC
• Presidency • Judicial division • The office of the prosecutor • The Registry	• Genocide • War crimes • Crimes against humanity • Crime of aggression

- **Complementarity** - It is intended to *complement, not to replace, national criminal systems*.
- It prosecutes cases only when States do not are unwilling or unable to do so genuinely.
- **Cooperation** - It does *not have its own police force or enforcement body* and thus, it relies on cooperation with countries worldwide.
- This is for making arrests, transferring arrested persons to the *ICC detention centre in The Hague*, freezing suspects' assets, and enforcing sentences.
- **Relationship with UN** – While it is *not a United Nations organization*, it has a cooperation agreement with UN.

Rome Statute
• The treaty was adopted at the United Nations Diplomatic Conference of Plenipotentiaries held in Rome, Italy in 1998 and it came into force only in 2002. • The Statute aims at establishing an international platform to deal with the worst possible crimes and ensure that justice prevails. • The states that have signed the Rome Statute are party to it, and thus, bound by it as well. • There are a total of 123 states that have signed the Rome Statute. • ***India is not a member*** of Rome statute. • The Rome Statute established three separate bodies namely 1. **Assembly of States Parties** - Legislative body and regulates the management of ICC. 2. **International Criminal Court** - Foremost adjudicating authority 3. **Trust Fund for Victims** - It helps the victims in the restoration of their lives after being subjected to an atrocity.

- To know more about ICC, click here
- To know about Armenia Azerbaijan conflict, click here

References

1. The Hindu| Armenia to join ICC
2. ICC| International Criminal Court

Nobel Prize in Physics 2023

The 2023 Nobel Prize for Physics was shared by 3 scientists Pierre Agostini, Ferenc Krausz and Anne L'Huillie for their "experimental methods that generate attosecond pulses for the study of electron dynamics in matter."

- **Contribution** - They developed *methods to produce ultra-short pulses of light called as attosecond pulse* which enables to see directly into the super-fast world of electrons.

  Attosecond is billionth of a billionth of a second which is 1×10^{-18} of a second.

- **Contribution of Anne L'Huillier** – In 1987, *overtones (waves of light) were produced* by passing IR laser beam through a noble gas whose wavelength was an integer fraction of the beam.
- When multiple overtones were created in the gas, they began to interact with each other.
- When the peak of one overtone merges with the peak of other, it produces an overtone of greater intensity through constructive interference.
- But when the peak of an overtone merges with the trough of another, they cancel each other out, in destructive interference.
- This setup was fine-tuned which *created intense pulses of light each a few attoseconds long* (due to constructive interference) that doesn't last longer (due to destructive interference).
- **Contribution of Pierre Agostini** - In 2001, his research group *produced a series of 250-attosecond light pulses*, or a pulse train.
- **Contribution of Ferenc Krausz** - At the same time, his team developed a technique to *separate an individual 650-attosecond pulse* from a pulse train.
- Using that, the researchers were able to measure the energy of some electrons released by some krypton atoms.

Challenges in imaging electrons

- Electrons are the negatively charged sub atomic particles which zoom around the denser nucleus in an atom.
- They are lighter and interact faster, in the attosecond realm.
- Thus picturing of electrons was difficult through camera that doesn't have lower exposure in the order of attosecond.

References

1. The Hindu| Nobel Prize in Physics 2023
2. The Indian Express | Discovery of Attosecond

Microplastics in Clouds

Researchers in Japan have confirmed the presence of microplastics in clouds.

- **Observations** – They identified *9 different types of polymers* and *1 type of rubber in the airborne microplastics* ranging in size from 7.1 to 94.6 mm.
- 1 litre of cloud water contains 6.7 to 13.9 pieces of plastics.
- *Hydrophilic (water-loving) polymers were abundant* and thus play a significant role in rapid cloud formation and thus climate systems.

  Microplastics are plastic particles under 5mm which come from industrial effluent, textiles, personal care products and much more.

- **Impacts** – When they get exposed to UV radiation from sunlight, they degrade and contribute to greenhouse gasses.

Microplastics in Biosphere

- They have been *discovered inside fish in the deepest recesses* of the ocean peppering Arctic sea ice.
- They *blanket the snows on the Pyrenees Mountains* between France and Spain.
- Emerging evidence has linked microplastics to a range of *impacts in human health and in the environment*.
    - It can affect human lung, heart and can even lead to cancer.

References

The Hindu| Microplastics in Clouds

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