DAILY CURRENT AFFAIRS 21-04-2025

GS-2

1. **Article 142**

GS-3

2. **Type 5 Diabetes**
3. **Karad Sanitary Waste Management Model**
4. **Colossal Squid**

Article 142

Syllabus: GS-2; Indian Polity

Context

- A high-voltage constitutional debate has erupted as Vice President Jagdeep Dhankhar took aim at the Supreme Court's use of Article 142.
- Calling it a "nuclear missile against democratic forces" and likening it to a "super Parliament," Dhankhar accused the judiciary of overstepping its constitutional limits.

Article 142: Enforcement of Decrees and Orders of the Supreme Court

Purpose:

- Grants the Supreme Court (SC) the power to pass any order necessary to ensure **"complete justice"** in any pending case.
- It is a unique and extraordinary power that allows the SC to go beyond existing laws when required.

Key Features:

- **Binding on All Authorities:** Orders under Article 142 are enforceable throughout India.
- **Discretionary Power:** The SC can use it to fill legislative gaps or provide remedies when existing laws are inadequate.
- **Not Bound by Procedure:** The Court can ignore procedural formalities to ensure justice.

Examples of Use:

- **Bhopal Gas Tragedy (1989):** SC ordered compensation for victims beyond legal provisions.
- **Divorce by Mutual Consent (2017):** SC allowed waiver of the 6-month cooling period under Article 142.
- **Coal Block Allocation Scam (2014):** SC cancelled coal licenses using this power.
- **Liquor Ban (2016):** Ordered a ban on liquor shops near highways.

Criticism & Concerns:

- **Judicial Overreach:** Some argue it undermines the separation of powers by allowing judiciary to act like the legislature.

- **Lack of Clarity:** The term "complete justice" is subjective and open to interpretation.
- **Conflict with Laws:** Sometimes, SC orders may override statutory provisions (e.g., in NJAC Case).

Type 5 Diabetes

Syllabus: GS-3: General Science – disease.

Context:

- **The International Diabetes Federation (IDF)** has **officially recognised Type 5 Diabetes** as a **distinct form of diabetes**.
- This marks a significant step forward in **acknowledging and addressing a neglected condition**, primarily affecting vulnerable populations in the Global South.

What is Type 5 Diabetes?

- A **malnutrition-linked form of diabetes** seen **mainly in lean, undernourished adolescents and young adults**.
- **Cause**: Chronic malnutrition leads to **impaired insulin production**, not insulin resistance (as in Type 2).
- **Beta cell dysfunction** in the pancreas is the hallmark, resulting in **very low insulin levels**.
- **Often misdiagnosed** as Type 1 or Type 2 due to overlapping features but differing pathology.

Clinical Characteristics

Feature	**Type 5 Diabetes**
BMI	Very low (<18.5 kg/m^2)
Insulin levels	Severely low
Body fat	Substantially lower than Type 2 DM
Dietary intake	Poor in protein, fibre, micronutrients

Feature	Type 5 Diabetes
Autoimmune markers	Absent
Genetic markers	Not linked to known diabetes genes

Historical Background

- **1955**: First described in **Jamaica** as **"J-type diabetes"**.
- **1985**: WHO referred to it as **"Malnutrition-Related Diabetes Mellitus" (MRDM)**.
- **1999**: Term removed due to lack of conclusive evidence.
- However, **clinical evidence persisted**, with cases reported in:
    - **India, Sri Lanka, Bangladesh**
    - **Uganda, Ethiopia, Rwanda, South Korea**

Global Impact

- Estimated to affect **around 25 million people globally**.
- Largely seen in **Low- and Middle-Income Countries (LMICs)**.
- Long ignored due to lack of **targeted research and funding**.

Why It Matters

- Recognition brings:
    - Potential for **new treatment protocols**
    - **Increased awareness among clinicians**
    - Policy focus for **nutrition and preventive health** in at-risk regions
- Essential for **early diagnosis and management** to prevent complications.

Karad Sanitary Waste Management Model

Syllabus: GS-3: Environment - Waste Management

Context:

Karad city in Maharashtra's Satara district has become a national benchmark by achieving **100% safe segregation, collection, and disposal** of **sanitary and biomedical waste**.

About the Model:

A **comprehensive sanitary waste management system** that ensures:

- Safe segregation
- Effective collection
- High-temperature incineration

All aimed at **zero environmental contamination** and **enhanced public health**.

Key Components of the Model:

1. Collection Mechanism:

- **Red bins** installed at public toilets.
- Garbage collection vehicles equipped with **dedicated sanitary waste bins**.

2. Processing & Disposal:

- Waste sent to a **Common Biomedical Waste Treatment Facility (CBWTF)**.
- Facility operated by **Karad Hospital Association**.
- Waste incinerated at **temperatures up to 1200°C**.

3. Monitoring & Compliance:

- Real-time monitoring by the **State Pollution Control Board**.
- Ensures compliance with environmental norms and standards.

4. Community Engagement:

- **Women-led awareness campaigns** drive public participation.
- **Schools** equipped with **vending machines and incinerators** to manage menstrual waste.

5. Public-Private Partnership (PPP) Model:

- **Municipal council**: Handles collection and logistics.
- **Hospital association**: Manages incineration free of cost to citizens.
- Cost-effective and socially inclusive approach.

Significance of the Model:

- **Promotes hygiene and women's health**, especially menstrual hygiene.
- Ensures **environmental safety** by preventing unsafe disposal of biomedical waste.
- **Replicable and scalable** for other **small and medium towns**.
- A model for integrating **citizen participation, institutional support, and sustainable technology**.

Colossal Squid

Syllabus: GS-3; Wildlife – Marine Life.

Context:

For the first time in over a century, a **juvenile colossal squid was filmed alive** at a depth of **600 meters** in the **Southern Ocean**, marking a major breakthrough in deep-sea exploration.

About the Species:

- **Category:**
    - Largest known invertebrate

- Belongs to the class **Cephalopoda** (includes octopuses, cuttlefish, and squids)

- **Scientific Name:**
  - *Mesonychoteuthishamiltoni*
- **Habitat:**
  - Deep, cold waters of the **Southern Ocean**, especially around **Antarctica**

Key Features:

- **Physical Characteristics:**
  - **Length:** Up to **14 meters** (46 feet)
  - **Weight:** Up to **500 kilograms** (1100 pounds)
  - Possesses the **largest eyes** in the animal kingdom
  - **Tentacles:** Lined with **sharp, rotating hooks** for hunting and defense
- **Biological Traits:**
  - **Sexual Dimorphism:** Females are larger than males

- **Coloration:** Juveniles are transparent; darken as they mature

- **Food Habits:**
  - Carnivorous; feeds on:
    - **Patagonian toothfish**
    - Other squids
    - Occasionally **engages in battles with sperm whales**
- **Reproduction:**
  - Reproduces through **internal fertilization**
  - Specific mating behavior remains **unknown**

This discovery is not just a biological curiosity but contributes significantly to **deep-sea ecology**, **evolutionary biology**, and **climate change studies**, as the Southern Ocean plays a major role in global ocean currents and carbon storage.