



## **DAILY CURRENT AFFAIRS 29-09-2025**

### **GS-1**

1. What an empty plate of food should symbolize

### **GS-2**

2. BRICS

### **GS-3**

3. Nightmare Bacteria
4. New Ramsar Sites
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## **What an empty plate of food should symbolize**

**Syllabus: GS-1; Society- Poverty, Hunger**

### **Context**

- According to the article, **an empty plate should symbolise "a meal enjoyed, not resources squandered."**

### **The Problem: What the Empty Plate Currently Reveals**

The article argues that our current reality is the opposite. The "silent crisis" of food loss and waste means that for every full plate, there is an equivalent waste of resources. The empty plate, in this context, highlights a broken system where:

1. **Nutrition is Lost:** The food that could have fed people is lost before it even reaches a plate.
2. **Economic Value is Destroyed:** India suffers an annual loss of nearly ₹1.5 trillion, directly impacting farmer incomes.
3. **Climate is Harmed:** The decomposition of wasted food generates over 33 million tonnes of CO<sub>2</sub>-equivalent emissions in India alone, exacerbating the climate crisis.
4. **Resources are Wasted:** Every tonne of lost food represents squandered water, energy, and labour.

### **Key Distinctions Highlighted in the Article**

The article makes a crucial distinction between the sources of waste in different economies:

- **In India (and similar economies):** Losses occur **early in the supply chain**—during handling, storage, processing, and transportation due to "weak infrastructure."
- **In High-Income Countries:** Waste is primarily **consumer-driven**, happening at the retail and household levels.

### **The Path Forward: Making the Symbol a Reality**

The article proposes a multi-pronged approach to ensure an empty plate truly symbolises a meal enjoyed:

- **Infrastructure Investment:** Strengthening cold chains, modern storage (e.g., through PMKSY scheme), and transport.
- **Affordable Technology:** Adopting solar cold storage, moisture-proof silos, and crates for smallholders.
- **Digital Solutions:** Using IoT sensors, AI, and apps like the FAO Food Loss App (FLAPP) to track and prevent losses.
- **Circular Economy:** Redirecting surplus food to those in need and converting unavoidable waste into compost, feed, or bioenergy.
- **Shared Responsibility:** A collective effort from governments, businesses, civil society, and consumers is required.

In conclusion, the article uses the symbol of the empty plate as a call to action. It urges a transformation of the food system so that the emptiness represents successful nourishment and the end of a responsible journey from farm to fork, rather than a trail of loss and environmental damage.

## **BRICS**

### **Syllabus: GS-2: International Relations.**

#### **Context:**

- India and Russia recently discussed the creation of a **BRICS Grain Exchange** during high-level meetings.
- The idea was endorsed in the **BRICS Kazan Declaration (2024)** to promote a fair agricultural trading system.

#### **Objectives & Features**

- **Fair Pricing:** Create a transparent platform for grain trading among BRICS members.
- **Food Security:** Ensure reliable supply chains and reduce vulnerability to global disruptions.
- **De-dollarisation:** Reduce dependence on Western, dollar-dominated commodity exchanges.
- **BRICS Market Scale:** The bloc collectively accounts for a significant share of global grain production and trade.

- **Phased Approach:** Likely to start with major grains and expand gradually to other commodities.

### Challenges

- **Currency & Settlement**
  - Lack of consensus on trade currency (local/BRICS basket).
- **Governance Issues**
  - Risks of exporter dominance, price manipulation, lack of transparency.
- **Infrastructure Gaps**
  - Need for warehousing, logistics, customs integration, and standardization of quality norms.
- **Competition**
  - Existing domestic exchanges in BRICS countries already provide price discovery.
- **Divergent Interests**
  - Exporters may want higher prices; importers may resist.
- **Implementation Delays**
  - Designing rules, ensuring liquidity, and building trust may take years.

### Implications for India

- **Agricultural Diplomacy:** Strengthens ties with Russia and other BRICS nations.
- **Price Signals:** Can benefit Indian farmers and exporters with better global benchmarks.
- **Food Security:** Offers alternative trade routes in times of global shocks.
- **Strategic Autonomy:** Aligns with India's interest in reducing dollar-dependence.
- **Domestic Challenges:** Integration with MSP, procurement, and PDS requires careful calibration.

### Significance

- Enhances South-South cooperation.
- Counters dominance of Western commodity markets.
- Supports creation of alternative global institutions in trade and finance.

### Way Forward

- Begin with limited commodities and willing members.
- Develop robust governance and dispute resolution mechanisms.
- Build infrastructure for storage, logistics, and digital trading.
- Balance interests of exporters and importers for long-term sustainability.

## **Nightmare Bacteria**

### **Syllabus: GS-3: General Science – Bacteria.**

#### **Context:**

- The US CDC has reported that drug-resistant ‘nightmare bacteria,’ driven by the **NDM gene**, are spreading faster than ever in the United States.

#### **About Nightmare Bacteria**

- Term refers to **Carbapenem-resistant Enterobacteriaceae (CRE)**.
- Members: *Klebsiella pneumoniae*, *Escherichia coli* (E. coli).
- Resistant to **carbapenems**, which are “last-resort” antibiotics.
- Called “nightmare” due to:
  - Easy transfer of resistance genes to other bacteria.
  - Ability to cause **deadly infections** in bloodstream, lungs, and urinary tract.
  - **Extremely limited treatment options** as most antibiotics fail.

#### **Symptoms of CRE Infections**

- **Urinary Tract Infections (UTIs):** Burning sensation, constant urge to urinate, cloudy urine.
- **Bloodstream Infections:** High fever, rapid heartbeat, very low blood pressure.
- **Pneumonia/Lung Infection:** Cough, shortness of breath, chest pain.

#### **NDM-1 Gene**

- **Full form:** *New Delhi Metallo-beta-lactamase-1*.
- **Function:** Encodes beta-lactamase enzymes (**carbapenemases**) that break down carbapenems and other antibiotics.
- **Significance:**

- Renders bacteria resistant to a broad spectrum of antibiotics.
- Includes resistance even to drugs used against other **superbugs** like MRSA (*Methicillin-resistant Staphylococcus aureus*).
- First identified in a patient treated in New Delhi, hence the name.

### Global Concern

- WHO has listed **antimicrobial resistance (AMR)**, including CRE, as a top global health threat.
- Infections with CRE are associated with **high mortality rates**.
- Rising international spread highlights the **need for surveillance, antibiotic stewardship, and research into new drugs**.

## New Ramsar Sites

### Syllabus: GS-3; Ramsar Sites

#### Context

- **Two new wetlands** have received the **Ramsar tag**

#### About



#### 1. **Gokul Jalashaya** (Buxar, Bihar)

- Oxbow lake on the southern edge of the Ganga River.
- Acts as a **flood buffer** for nearby villages.
- Habitat for **50+ bird species**; supports local fishing, farming, irrigation.

## 2. Udaipur Jheel (West Champaran, Bihar)

- Oxbow lake adjoining **Udaipur Wildlife Sanctuary**.
- Home to **280+ plant species**, including the endemic *Alysicarpus roxburghianus*.
- Important wintering site for **35 migratory bird species**, including **vulnerable common pochard** (*Aythya ferina*).
- Faces threats from **illegal fishing & intensive agriculture** (fertilizers, pesticides).

### Know more

#### 1. What is a Ramsar Site?

- Ramsar Sites are wetlands of **international importance** designated under the **Ramsar Convention, 1971** (signed at Ramsar, Iran).
- Aim: **Conservation and wise use of wetlands** through local, regional, and national actions.
- The convention came into force in **1975**.
- India became a party in **1982**.

#### 2. Wetland – Definition (Ramsar)

- “Areas of marsh, fen, peatland, or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish, or salt, including areas of marine water up to a depth of 6 metres at low tide.”

#### 3. Criteria for Ramsar Site Selection

A site can qualify if it:

1. Represents a **unique, rare, or typical wetland type**.
2. Supports **vulnerable, endangered, or critically endangered species**.
3. Supports populations of **endangered communities**.
4. Supports **plant and/or animal species at critical life stages**.
5. Regularly supports **20,000 or more waterbirds**.
6. Regularly supports **1% of individuals of a waterbird species**.
7. Supports significant **fish populations** or is important for life cycles.
8. Supports **1% of individuals in a fish species**.
9. Supports **non-avian animal species at critical stages**.

#### 4. Global Status

- **Countries signed:** 172 (as of 2025).
- **Total Ramsar sites worldwide:** Over 2,500+.
- **UK has the maximum sites**, followed by **Mexico**.

#### 5. Ramsar Sites in India

- **India joined:** 1982.
- **First sites (1981):** Keoladeo National Park (Rajasthan) & Chilika Lake (Odisha).
- **India's total Ramsar Sites (2025): 82 sites** (including latest from Bihar).
- **Tamil Nadu** has the **highest number** of Ramsar sites.
- India has the **largest number of Ramsar sites in Asia**.

## **Central Water Commission**

**Syllabus: GS-3: Environmental Organisations/ Institutions.**

#### **Context:**

On 24th September 2025, the Central Water Commission (CWC), under the Ministry of Jal Shakti, organized a virtual workshop on *Technology for Efficient Water Management* as part of the **Sujalam Bharat Summit**, coordinated by NITI Aayog.

#### **About Sujalam Bharat Summit**

- A series of **six departmental summits** anchored by the **Ministry of Jal Shakti (MoJS)**.
- Aim: To bring **grassroots perspectives** into national and state-level policy frameworks.
- Focus: *Feedback from field-level stakeholders* (Gram Panchayats, Water User Associations, NGOs, and States).
- Vision: In alignment with **PM Modi's call for grassroots involvement in policymaking**.

#### **Major Themes Discussed**

- **Agricultural Efficiency**
  - Scaling up *micro-irrigation systems* in canal & groundwater-irrigated areas.
  - Promoting *precision agriculture* for climate resilience.



- Encouraging *crop diversification* to drought-resistant, low water-intensive crops.
- **Modernization & Automation**
  - *Modernization of tertiary canal systems.*
  - Use of **Remote Sensing & Artificial Intelligence (AI)** in:
    - Water resources planning.
    - Enhancing conveyance & distribution efficiency.
    - Leak detection & water quality monitoring.
- **Water Conservation & Accounting**
  - Promotion of *water-efficient appliances* in homes & industries.
  - Monitoring bulk water supply, reducing non-beneficial losses.
  - Emphasis on *water accounting* for allocation & soil moisture (green water) conservation.

#### About Central Water Commission (CWC)

- Premier technical organisation in the field of water resources.
- **Parent Ministry:** Ministry of Jal Shakti (Department of Water Resources, River Development & Ganga Rejuvenation).
- **Headquarters:** New Delhi.

#### Functions of CWC

- **Water Resource Development**
  - Formulates & coordinates schemes for **flood control, irrigation, drinking water, navigation, and hydropower.**
- **Project Implementation**
  - Conducts **surveys, investigations, construction, and execution** of water resource projects.
- **Technical Support**
  - Provides guidance to States on design, planning, and implementation of water-related schemes.
- **Data Collection & Research**
  - Maintains hydrological data, promotes water-use efficiency, and advances water management technology.

#### Structure of CWC

- **Headed by:** Chairman (Ex-Officio Secretary to the Government of India).
- **Three Wings:**
  - **Designs & Research (D&R)** – Engineering & design solutions.
  - **River Management (RM)** – Flood forecasting, river basin management.
  - **Water Planning & Projects (WP&P)** – Water planning, appraisal of projects.
- **Training Institute:** *National Water Academy (NWA), Pune* – trains engineers from central & state agencies in water resource management.