Prelim Bits 10-04-2022 & 11-04-2022 | Daily UPSC Current Affairs

Scheme on Fortified Rice

The Union Cabinet Committee on Economic Affairs approved a scheme to distribute fortified rice under government programmes by 2024.

> During his 2021 Independence Day speech, Prime Minister had announced that by 2024 fortified rice will be made available under every government programme to fight malnutrition.

- The Union Cabinet chaired by the Prime Minister has accorded its approval for supply of fortified rice throughout
    1. Targeted Public Distribution System (TPDS) under the National Food Security Act (NFSA),
    2. Integrated Child Development Services (ICDS),
    3. Pradhan Mantri Poshan Shakti Nirman - PM POSHAN [erstwhile Mid-Day Meal Scheme (MDM)] and
    4. Other Welfare Schemes (OWS) of Government of India in all states and union territories (UTs) in a phased manner.
- The entire cost of the scheme of Rs.2,700 crore will be borne by the Centre until it is fully implemented by June, 2024.
- The initiative will be implemented in 3 phases.

Phase	Coverage	Implementation target
1	Anganwadi centres under ICDS and PM POSHAN	March 2022, but is still under implementation
2	TPDS and other welfare schemes in all 291 aspirational districts as well as districts with high burden of stunting	March 2023
3	The remaining districts of the country	March 2024

- Food Corporation of India and the state agencies have already procured 88.65 LMT (lakh tonnes) of fortified rice for supply and distribution.
- A pilot for distribution of fortified rice through PDS was implemented for a period of three years from 2019-2020 across 11 States.

Fortification

- Food Safety & Standards Authority of India (FSSAI) defines fortification as **deliberately increasing** the content of essential **micronutrients** in a food so as
    1. To improve the nutritional quality of food and
    2. To provide public health benefit with minimal risk to health.

- **Technologies** - Various technologies are available to add micronutrients to regular rice, such as coating, dusting, and 'extrusion'.
- The last mentioned involves the production of fortified rice kernels (FRKs) from a mixture using an 'extruder' machine.
- Considered to be the best technology for India, it involves blending fortified rice kernels with regular rice to produce fortified rice.
- **Working of Extrusion Technology -** Dry rice flour is mixed with a premix of micronutrients, and water is added to this mixture.
- The mixture is passed through a twin-screw extruder with heating zones, which produces kernels similar in shape and size to rice.
- These kernels are dried, cooled, and packaged for use. FRK has a shelf life of at least 12 months.

  According to the Food Ministry, every second woman in the country is anaemic and every third child is stunted.

- **Guidelines -** As per guidelines of the Ministry of Consumer Affairs, Food and Public Distribution, the shape and size of the fortified rice kernel should "resemble the normal milled rice as closely as possible".
- According to the guidelines, the length and breadth of the grain should be 5 mm and 2.2 mm respectively.
- 10 g of FRK must be blended with 1 kg of regular rice.
- **FSSAI Norms** - According to FSSAI norms, 1 kg of fortified rice will contain the following: iron (28 mg-42.5 mg), folic acid (75-125 microgram), and vitamin B-12 (0.75-1.25 microgram).
- Rice may also be fortified with zinc (10 mg-15 mg), vitamin A (500-750 microgram RE), vitamin B-1 (1 -1.5 mg), vitamin B-2 (1.25 -1.75 mg), vitamin B-3 (12.5 -20 mg) and vitamin B-6 (1.5 -2.5 mg) per kg.
- To know more about Fortification of Rice, click here.

Reference

1. https://www.thehindu.com/news/national/cabinet-approves-distribution-of-fortified-rice-across-schemes/article65303222.ece
2. https://indianexpress.com/article/explained/what-is-fortified-rice-how-is-it-prepared-7860432/
3. https://swarajyamag.com/news-brief/cabinet-approves-distribution-of-fortified-rice-across-the-country

Status of India's Coastline

The Ministry of Earth Sciences informed the Lok Sabha about the status of the coastline of the Indian mainland.

- The National Centre for Coastal Research (NCCR) is monitoring shoreline erosion since 1990 using remote sensing data & GIS mapping techniques.
- [Chennai-based NCCR is an attached office of the Ministry of Earth Sciences (MoES). To know more about the NCCR, click here.]
- About 6,907.18 km long Indian coastline of mainland has been analysed from 1990 to 2018.
- Of the 6,907.18-km-long coastline of the Indian mainland,
    a. 34% is under varying degrees of erosion,
    b. 26% is of an accreting nature, and

c. The remaining 40% is in a stable state.

- In terms of percentage, **West Bengal,** which is located on the eastern coast of the country with a 534.35-km-long coastline, suffered erosion along about 60.5% of the coast over the period from 1990 to 2018.
- This is followed by **Kerala** on the west coast, which has 592.96 km of coastline and 46.4% of it faced erosion.
- Tamil Nadu, with a coastline of 991.47 km, recorded erosion along 42.7% of it.
- Gujarat, with the longest coastline of 1,945.6 km, recorded erosion along 27.06% of it.
- In the Union Territory of Puducherry, with a 41.66-km-long coastline, about 56.2% of its coast recorded erosion.

Indian National Centre for Ocean Information Services (INCOIS), an organisation under the MoES, has prepared an atlas of Coastal Vulnerability Index (CVI) maps for the entire coastline of India at a 1:100000 scale.

Policy on displacement

- The 15th Finance Commission had recommended the creation of a
  a. National Disaster Risk Management Fund (NDRMF) and State Disaster Risk Management Fund (SDRMF) comprising a mitigation fund at the national and State levels (NDMF/SDMF) &
  b. A response fund at the national and state levels for the award period from 2021-22 to 2022-26.
- The Commission has also made specific recommendations for 'Mitigation Measures to Prevent Erosion' under NDMF and 'Resettlement of Displaced People Affected by Erosion' under NDRF.

Reference

https://www.thehindu.com/todays-paper/tp-national/bengal-coast-faces-most-erosion/article65310043.ece

Standing Deposit Facility

While retaining the Fixed Reverse Repo Rate at 3.35%, the Reserve Bank of India (RBI) introduced the Standing Deposit Facility (SDF) at an interest rate of 3.75% to absorb excess liquidity to control inflation.

- The Standing Deposit Facility (SDF) is introduced nearly 8 years after the **Patel Committee** propagated an independent, transparent, non-collateralized concurrent offering.
- It will allow the banks to park their excess funds but without **any collateral** from RBI.
- It will be set at 25 basis points below the policy rate (Repo rate).
- The SDF will **replace the Fixed Rate Reverse Repo** (FRRR) as the floor of the Liquidity Adjustment Facility corridor.
- **No collateral** - In 2018, the amended **Section 17 of the RBI Act** empowered the RBI to introduce the SDF - an additional tool for absorbing liquidity without any collateral.
- By removing the binding collateral constraint on the RBI, the SDF strengthens the operating framework of monetary policy.
- Since the SDF comes with the conditionality of no collateral of G-secs to be given by the RBI to banks, it will free up securities from Statutory Liquidity Ratio (SLR) holdings of banks.

- This will thus result in lowering of excess SLR holdings and will lead to an increase in demand for bond
- **Role of SDF -** The main purpose of SDF is to reduce the excess liquidity of Rs 8.5 lakh crore in the system, and control inflation.
- It will be **applicable to overnight deposits** at this stage.
- It would, however, retain the flexibility to **absorb liquidity of longer tenors** as and when the need arises, with appropriate pricing.
- The SDF is also a financial stability tool in addition to its role in liquidity management.
- With the Marginal Standing Facility (MSF) at the upper end of the policy corridor at 4.25%, the SDF will make up the duo of standing facilities – one to absorb and the other to inject liquidity.

Reference

1. https://indianexpress.com/article/explained/everyday-explainers/what-is-standing-deposit-facility-7859803/
2. https://www.financialexpress.com/economy/rbi-launches-standing-deposit-facility-at-3-75/2486281/
3. https://economictimes.indiatimes.com/news/economy/policy/standing-deposit-facility-to-be-the-new-floor-for-policy-rates/articleshow/90728631.cms

Weapons of Mass Destruction Bill 2022

The Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022 has been unanimously passed in Lok Sabha.

- The Bill seeks to amend the Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005.
- The 2005 Act prohibited the manufacturing, transport, and transfer of weapons of mass destruction, and their means of delivery.
- It will be amended to provide against the financing of proliferation of weapons of mass destruction and their delivery systems in line with India's international obligations.
- **Definition** - India's 2005 WMD Act defines the Biological weapons and Chemical weapons.
- "Biological weapons" are
    1. Microbial or other biological agents, or toxins of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; and
    2. Weapons, equipment or delivery systems specially designed to use such agents or toxins for hostile purposes or in armed conflict.
- "Chemical weapons" are
    1. Toxic chemicals and their precursors except where used for peaceful, protective, and certain specified military and law enforcement purposes;
    2. Munitions and devices specifically designed to cause death or other harm through the toxic properties of those toxic chemicals; and
    3. Any equipment specifically designed for use in connection with the employment of these munitions and devices.

History of WMD

- The expression 'Weapon of Mass Destruction' (WMD) is usually considered to have been used first by the leader of the Church of England, the Archbishop of Canterbury, in 1937.
- It was used to refer to the aerial bombing of civilians in the Basque town of Guernica by German and Italian fascists in support of General Franco during the Spanish Civil War.

- It refers to something that is capable of inflicting mass casualties and/or destroying or rendering high-value assets as useless.
- While there is no single, authoritative definition of a WMD in international law, the expression is usually understood to cover nuclear, biological, and chemical (NBC) weapons.

Control over use of WMDs

- The use of chemical, biological, and nuclear weapons is regulated by a number of international treaties and agreements.

Treaties and Agreements	Purpose
Geneva Protocol, 1925	Banned the use of chemical and biological weapons
Biological Weapons Convention, 1972	Put comprehensive bans on the biological weapons
Chemical Weapons Convention, 1992	Put comprehensive bans on the chemical weapons
Nuclear Non-Proliferation Treaty (NPT)	Regulates the use and proliferation of nuclear weapons.
Comprehensive Test Ban Treaty (CTBT)	Regulates the use and proliferation of nuclear weapons.

- India has signed and ratified both the Biological Weapons Convention and Chemical Weapons Convention.
- There are very few non-signatory countries to these treaties, even though several countries have been accused of non-compliance.

Reference

1. https://indianexpress.com/article/explained/everyday-explainers/explained-weapons-of-mass-destruction-law-amendment-7856169/
2. https://www.sciencedirect.com/topics/social-sciences/weapon-of-mass-destruction#:~:text=of%20Mass%20Destruction-,A%20weapon%20of%20mass%20destruction%20(WMD)%20is%20something%20capable%20of,be%20used%20as%20a%20WMD.
3. https://www.britannica.com/technology/weapon-of-mass-destruction d

QS World University Rankings 2022

Recently, the QS World University Rankings 2022 was released by the Quacquarelli Symonds (QS).

- Started in 2004, the QS World University Rankings is an **annual** publication of university rankings.
- Featuring 1,300 Universities from around the world, the university rankings of the year 2022 is the largest of the rankings.
- **Methodology** - Each institution has been assessed according to the following six metrics:
    1. Academic Reputation (40%)
    2. Employer Reputation (10%)
    3. Faculty/Student Ratio (20%)
    4. Citations per faculty (20%)
    5. International Faculty Ratio (5%)
    6. International Student Ratio (5%)
- This ranking can be used to easily compare universities by looking at their score which is from 0 to 100.
- **Findings** - In the 2022 ranking, the top rank holders are

1. Massachusetts Institute of Technology (MIT), Cambridge, USA,
2. University of Oxford, United Kingdom and
3. Stanford University, United States.

- IIT-Kharagpur has been ranked 37th in 2022 in mineral and mining engineering and 80th in 2022 in electrical and electronic engineering globally.
- Jadavpur University is the only state university in India which was ranked in the QS World University Rankings in the sphere of arts and humanities, 2022.
- Vellore Institute of Technology (VIT) bagged 9th rank in engineering and technology in the country.

QS World University Rankings by Subject 2022

- The QS World University Rankings by Subject are compiled **annually** to help prospective students **identify leading universities in a particular subject**.
- It covers a total 51 disciplines under 5 broad subject areas.
- 16 higher education institutes (with 35 programmes) from India were ranked among the top 100 in their subject categories.
- Two programmes with best performance among Indian Institutes were
    1. Saveetha Institute of Medical and Technical Sciences with its Dentistry programme placed at18; and
    2. Indian School of Mines (ISM) University, Dhanbad with its Mineral and Mining Engineering programme placed at 26.

Reference

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3. https://timesofindia.indiatimes.com/city/chennai/qs-rankings-vit-ninth-best-in-engg-technology/articleshow/90767577.cms
4. https://www.topuniversities.com/qs-world-university-rankings/methodology