Equitable Agrifood Systems for Food Security

Why in News?

World Food Day 2024 was observed on October 16 with the theme “Right to foods for a better life and a better future”.

What is equitable food system?

- **Food system** - It encompasses every stage of food production and consumption from growing, harvesting, processing, packaging, transporting, marketing, consuming, and disposing.
- **Stakeholders of food system** - It involves farmers, processors, retailers, consumers, and even policy makers, each playing a role in influencing the flow and quality of food.
- **Equitable food system** - It is a framework that ensures access to safe, nutritious, and culturally appropriate food to all individuals while promoting fairness and justice throughout the food supply chain.



- **Production** - Network of farms, ranches, and fisheries that use natural resources, capital, labor, and other inputs to cultivate food
- **Processing** - Network of factories and facilities that transform agricultural goods into

a range of food products for consumption
- **Distribution** - Network of aggregators and shippers responsible for transporting food products across the supply chain by land, air, and sea
- **Retail** - Constellation of stores of all kinds and direct-to-consumer and other operational models that transact the final sale of food products to customers and consumers
- **Recovery, recycling, and waste** - Network of municipalities, companies, and nonprofits that handle remainder, discarded, expired, and unused food from numerous end points along the supply chain.
- **Significance of equitable food system** - Addressing inequalities and empower marginalised communities by prioritising the right to food and nutrition security is essential for peaceful, prosperous communities.

How has India's food system evolved?

- Once a food-deficient nation, India has made significant strides in food security over the past 60 years and has transformed into a food-surplus country.
- **Increase in Food Availability** – Green Revolution, White Revolution, Yellow Revolution, Gold Revolution, Blue Revolution have increased the Cereal, Milk, Oil , Horticulture, Fish availability in India.
- **Food Research** - Agricultural research institutes that play a crucial role in advancing agricultural practices, improving crop yields, and addressing food security challenges.
    - Indian Agricultural Research Institute (IARI), New Delhi
    - Indian Council of Agricultural Research (ICAR), New Delhi
    - National Dairy Research Institute (NDRI), Karnal, Haryana
    - Indian Veterinary Research Institute (IVRI), zatnagar, Uttar Pradesh
    - National Institute of Agricultural Economics and Policy Research (NIAP), New Delhi
    - Indian Institute of Horticultural Research (IIHR), Bengaluru, Karnataka
    - Central Arid Zone Research Institute (CAZRI), Jodhpur, Rajasthan
    - Indian Institute of Pulses Research (IIPR), Kanpur
    - Indian Institute of Rice Research (IIRR), Hyderabad
    - National Bureau of Plant Genetic Resources (NBPGR), New Delhi
- **Supply Chain** - FCI procurement , Public Distribution System (PDS), APMC Markets are a crucial food distribution mechanism for ensuring food security.
- **Food Affordability** – Minimum Support Price mechanism ensure the availability food at affordable price and income security for farmers.
- **Food Safety** - Food Safety and Standards Authority of India (FSSAI) regulates the food quality and safety in India.
- **Right to Food** - A key pillar of India's food security is the National Food Security Act (NFSA) of 2013, which provides food entitlements to over 800 million citizens.
- **Nutritional Security** – India has approved the distribution of fortified rice from July 2024 to December 2028 to address nutritional deficiency especially Anaemia.
- PM POSHAN Scheme aims to enhance the nutritional status of children in government schools.

What are the challenges in achieving equitable food system ?

- India’s agricultural sector is the cornerstone of its economy.
- **Population Growth** – Feeding nutritiously the current population of about 1.4 billion and an annual growth rate of 0.9% is a huge challenge.
- **Fragmented Land Holdings** - Of its 93.09 million agrarian households, approximately 82% are small and marginal farmers holding less than two hectares of land.
- Fragmented landholding limits smallholder farmers’ adoption of modern techniques, reducing productivity and income.
- **Natural resource degradation** - Overusing groundwater strains water tables while chemical fertilizers and monocropping harm soil and agricultural productivity.
- **Market Access Limitation** - Many smallholder farmers need help accessing markets effectively due to infrastructure limitations and supply chain inefficiencies.
- **Poverty & Inequality** –Rural poverty and inequality affects the participation and distribution of agricultural system.
- **Climate change** - Erratic weather patterns pose risks to agriculture productivity.
- **Infrastructure** - Inadequate infrastructure for storage, processing, and transportation of food affects the food supply chain system.

What lies ahead?

- Addressing food inequality and ensuring that everyone has access to nutritious food are essential steps.
- Facilitating better links between production and markets, farmers can increase their incomes and reduce food waste.
- Enhancing access to appropriate technologies is vital.
- Building resilience of farming system through sustainable agricultural practices such as water conservation and soil health restoration.

Quick Facts

- **Cereal Production** – Launched in 1967 it creased the food availability by tripling the cereal production while only increasing the cultivated area by about 30%.
- **Milk Revolution** - Operation Flood was launched in 1970 increased the milk production from 20 million tonnes to over 70 million tonnes.
- **White revolution 2.0** has been launched in 2024 to empower women, fight malnutrition, increase milk procurement, and strengthen cooperatives.
- **Oil Revolution** – Yellow Revolution was launched in 1986- 1987 to increase the production of edible oil, especially mustard and sesame seeds to achieve self-reliance.
- **Fish Revolution** – Blue Revolution was launched in 1985-1990 during the 7th Five-Year Plan to develop, manage, and promote fisheries to double the farmers' income.
- **Horticulture Revolution** - Golden revolution between 1991 to 2003 aimed to increase the production of honey and horticulture.

References

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