

Processed food exports up 150% in 9 years: Ministry of Commerce & Industry

- ▶ **India's Food Processing Sector** emerged as sunrise sector and attracted FDI investments of about **Rs 50,000 crore** in past nine years.

Processed food segment's contribution to agri exports has grown to **23 percent**.

India has **158 food and agri Geographical Indications (GIs)** and **708 unique food items** across districts under One District One Product (ODOP) initiative.

India's food processing market is estimated to reach **\$535 Billion by 2025**.

- ▶ **Significance of Food Processing Sector**

Boost farmer's income by value addition and reducing waste.

Generate **employment**.

Earning **Foreign exchange**.

Ensure **Food and Nutritional Security**.

- ▶ **Challenges related to Food Processing Sector**

Infrastructure Bottlenecks: Inadequate cold storage, processing facilities, transportation network etc.

Lack of trained manpower and technology.

High food wastage: Around 74 million tonnes of food is lost in India every year.

- ▶ **Initiatives taken to promote Food Processing Sector**

Pradhan Mantri Kisan SAMPADA Yojana. Mega Food Park is one of its components.

ODOP initiative gives a new identity to small farmers and small industries.

Production Linked Incentive Scheme for Food Processing Industry.

- ▶ **India is third largest fish producing country** and ranks **second in aquaculture production**.

- ▶ **Fisheries are state subject** under Seventh Schedule of Constitution while Fishing and fisheries **beyond territorial waters** (Exclusive Economic Zone - **beyond 12 nautical miles**) are on Union list.

However, presently there is **no comprehensive legislation** to manage marine fisheries in EEZ.

Government has proposed **Indian Marine Fisheries Bill** for sustainable development of marine fisheries in EEZ.

- ▶ **Key Policy Suggestions for sustainable marine fisheries management include**

Introduce central legislation (**Marine Fishery Act**) for regulation of fishing in areas **beyond territorial waters** to address policy and legislative vacuum.

Institutionalize **regular stock assessments of marine fishery resources (MFR)** and mechanism for overseeing deep-sea fishing.

Establish national **guidelines on eco-labeling** of MFR.

- ⊕ Implementation of **frontier technologies like Artificial Intelligence** for tracking fishing vessel through Vessel Monitoring Systems.

- ▶ **Initiatives taken to harness fisheries potential**

- ⊕ **Pradhan Mantri Matsya Sampada Yojana (PMMSY) 2020**.

- ⊕ **National Policy on Marine Fisheries Policy (NPMF) 2017** for promoting blue revolution through sustainable utilization of MFR.

- ⊕ **Fisheries and Aquaculture Infrastructure Development Fund (FIDF), 2015** for infrastructure creation.

About CMFRI

- Established in 1947, CMFRI is part of **Indian Council of Agricultural Research (ICAR)** family.
- ICAR is an **autonomous organization** under **Ministry of Agriculture and Farmers Welfare**.

It coordinates, guides and manages research and education in agriculture.

New Solar Power Scheme for Particularly Vulnerable Tribal Groups (PVTGs) Habitations/ Villages

▶ President has sanctioned implementation of the scheme under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PMJANMAN).

▶ Key features of scheme

⊕ Two components:

- ◆ **Electrification of 1 Lakh PVTG households (HHs) through Off-grid solar power**
 - » **Solar Home Lighting System (SHLS)** for scattered unelectrified HHs in PVTG areas.
 - » **Solar Mini-grids** for cluster of HHs in a PVTG habitation/ hamlet.
- ◆ **Solarization of multi-purpose centers (MPCs)** by installation of Off-grid Solar power pack with battery bank.

Implementing agency: Respective DISCOMs in PVTG area.

Timeline: 2023-24 to 2025-26.

Monitoring: By **Ministry of New and Renewable Energy (MNRE)** and **Ministry of Tribal Affairs (MoTA)**.

Grievance Redress mechanism: Vendors shall operationalize helpline number in local language/ language of PVTG area.

▶ PM JANMAN

Aim: To saturate PVTG HHs and habitations with basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, etc.

Comprises **11 critical interventions through 9 ministries**, including MoTA, over 3 years.

Implemented as combination of:

- ◆ **Centrally Sponsored Schemes** in partnership with State Governments/ UT Administrations, and
- ◆ **Central Sector Schemes** through line Ministries/ Departments.

Particularly Vulnerable Tribal Groups (PVTGs)

- **Centrally recognized special categories from among the Scheduled Tribes (STs).**
- First recognized in **1975** as **Primitive Tribal Groups (PTGs)** on recommendations of **U N Dhebar Commission**.
- In 2006, PTGs were renamed as **PVTGs**.
- **Criteria for identifying PVTGs:** Pre-agricultural level of technology, Low level of literacy, Economic backwardness, Declining or stagnant population. Currently, there are **75 PVTGs**.

▶ India encounters challenges in negotiating **Free Trade Agreement (FTA)** with **Switzerland** and other **EFTA nations** during final rounds of talks.

▶ These include

Switzerland's decision to eliminate import duties on all industrial goods for all countries starting from January 1, 2024, limits FTA utility for India.

EFTA's request for tariff-free entry on major imports like Gold, pharmaceuticals, watches, cotton, chocolates, soybean oil, etc.

Large trade deficit in favor of EFTA countries restricts gains for India.

- ◆ In FY23, India's trade deficit with Switzerland stood at \$14.45 billion.

Gold Trade Complications: Complexities surrounding **inclusion of gold in FTA** and its compliance with rules of origin conditions.

- ◆ Gold accounts for 80% of India's imports from Switzerland.

India faced challenges in Agricultural Exports to Switzerland due to a complex web of tariffs, quality standards, and approval requirements.

- ◆ **EFTA has shown no inclination to make agriculture tariffs zero** on most basic agricultural produce.

Trade Related Intellectual Property Rights (TRIPs) plus protection requested by EFTA countries may come in conflict with India's domestic regulations of Intellectual Property Rights especially patents and copyrights.

About European Free Trade Association (EFTA)

- ▶ It is an **intergovernmental organization for promotion of free trade and economic integration** between its members. It has 4
- ▶ members: **Iceland, Liechtenstein, Norway and Switzerland**.
 - ⊕ These countries are **not part of European Union**.
- ▶ It is founded by **Stockholm Convention in 1960** by its then seven Member States (Austria, Denmark, Great Britain, Norway, Portugal, Sweden and Switzerland).

NASA's Solar Dynamics Observatory (SDO) captured the strongest solar flare since 2017

- ▶ The flare, classified as an **X5.0**, emitted a powerful burst of high-energy radiation that caused a radio blackout over Americas.
- ▶ Solar flares are **sudden and intense explosions of energy** on surface of Sun, often associated with sunspots.

Solar flares are **caused by release of magnetic energy stored in Sun's atmosphere.**

Sunspots form **when concentrations of magnetic field** from deep within sun well up to surface.

- ▶ Solar flares are classified into **3 categories based on their peak X-ray flux i.e. C (weakest), M (Medium), and X (Strongest).**

They are further classified from **1 to 9, with higher numbers indicating more powerful flare.**

- ▶ **Effects of Solar Flares on Earth**

Can interfere with signals of **radio communications, navigation systems, and satellites** etc.

Radiation Storm can pose a **risk to astronauts, spacecraft, and aircraft**, and people exposed to high altitudes or polar regions.

Solar flares followed by **coronal mass ejection** and cause geomagnetic storms i.e., **temporary disturbance of Earth's magnetic field.**

- ◆ These affect **power grids, pipelines, and railways**, and cause **auroras.**
- ◆ **Coronal Mass Ejections** are huge bubbles of radiation and particles from Sun.

Solar Dynamics Observatory

Launched in 2010, is **first mission launched for NASA's Living with a Star Program (LWS).**

LWS is designed to understand **causes of solar variability** and its impacts on Earth.

It studies **how solar activity is created and how SpaceWeather comes from that activity.**

Global Economic Prospects Report 2024

- ▶ **World Bank Group** released its **flagship report 'Global Economic Prospects'.**
- ▶ **Key findings**
 - ⊕ **Global trade growth in 2024** is expected to be only half the average in the decade before pandemic.
 - ⊕ **Global growth is projected to slow for third year in a row—** from 2.6% in 2023 to 2.4% in 2024.
 - ⊕ To tackle climate change and achieve other key global development goals by 2030, **developing countries need to increase investments**—about \$2.4 trillion per year.

Delhi High Court permits PepsiCo to claim patent for potato variety grown for its potato chips

- ▶ Judgement came on PepsiCo's appeal under **Protection of Plant Varieties and Farmers' Rights (PPVFR) Act, 2001** against order of PPVFR Authority.

⊖ PPVFR Authority had **revoked PepsiCo's registration** with respect to plant variety - **FL 2027.**

FL 2027 is **chipping potato variety** with low external defects which is grown exclusively for PepsiCo by some farmers.

◆ It has **high dry matter/high solids content and stable sugars**, making it highly suitable for manufacture of chips.

Under WTO's **TRIPS** (Agreement on Trade-Related Aspects of Intellectual Property Rights), it is **obligatory** for a member to provide protection to **new plant varieties.**

Under this, India enacted **PPVFR Act.**

A plant variety which conforms to criteria of **Distinctiveness, Uniformity and Stability (DUS)** is eligible for registration under **PPVFR Act.**

PPVFR Act recognizes following rights:

Farmers' rights: Registration and protection of new variety, farmers' variety, and extant variety, rewards for conservation of plant genetic resources etc.

Researchers' rights: Use of any registered variety for experiments.

Breeders' rights: Exclusive rights to produce, sell, import or export etc.

PPVFR Authority

It is a **statutory body** under **PPVFR Act**, established in 2005.

Comes under **Ministry of Agriculture and Farmers Welfare.**

Functions include registration of new plant varieties, rewarding farmers engaged in conservation and preservation of plant genetic resources, maintenance of national register of plant varieties and national gene bank.

Rudra and Arka propulsion system

Two payloads developed by Bengaluru-based space startup **Bellatrix Aerospace** were launched on **PSLV Orbital Experimental Module-3 (POEM-3).**

⊖ POEM is ISRO's platform that **helps perform in-orbit experiments** using final stage of PSLV.

- ▶ **Rudra** is a green propulsion system **replacing hazardous hydrazine with a non-toxic, environmentally friendly propellant.**

- ▶ **Arka** electric engine **utilizes electricity instead of conventional chemical propellants.**

⊖ Arka offers **superior fuel efficiency** and more precise control.



Peregrine Mission 1 (Peregrine Lunar Lander)

- ▶ NASA launched Peregrine Lunar Lander to explore Moon's Bay of Stickness.
- ▶ Mission is part of Nasa's **Commercial Lunar Payload Services initiative**, which partners with commercial entities to deliver payloads to Moon.
- ▶ **Scientific goals of mission include:**
 - To analyze lunar exosphere.
 - Assess thermal properties and hydrogen content of lunar regolith.
 - Study magnetic fields etc.
- ▶ **Bay of Stickiness** (also known as **Sinus Viscositatis region**), an area on moon, lies adjacent to Gruithuisen Domes near Oceanus Procellarum, or Ocean of Storms.

Machine-to-Machine (M2M) and Wireless Personal Area Network/Wireless Local Area Network (WPAN/WLAN)

- ▶ Department of Telecommunications has **extended M2M and WPAN/WLAN registration** to all entities engaged in businesses.
- ▶ **WPAN**
 - It is **personal network** that uses wireless communication technologies to communicate and transfer data between user's connected devices.
 - It can be **created using Wi-Fi, Bluetooth, etc.**
- ▶ **WLAN**
 - It is **wireless distribution method** for two or more devices.
 - It uses **high-frequency radio waves** and often include an access point to Internet.
 - It **allows users to move around coverage area**, like home or office while maintaining network connection.

Exercise Sea Dragon

- ▶ It is a **multinational maritime exercise** to enhance interoperability between **Indian Navy** and participating navies from **US, Australia, South Korea and Japan.**



Latitudinal Diversity Gradient (LDG)

- ▶ A recent study examined role of **major classes of Mycorrhizal Fungi - arbuscular mycorrhizal and ectomycorrhizal** in LDG.
- ▶ **LDG refers to the pattern of having lots of species at the equator with diversity reducing towards poles.**
- ▶ **Study found that:**
 - ⊖ Mycorrhizal fungi form **mutually beneficial relationships** with majority of **plant roots** globally.
 - Arbuscular** fungi, common near equator promote **diversity.**
 - Ectomycorrhizal fungi**, common at higher latitudes support single tree species, reducing diversity.

National Sports Awards (NSA) 2023

President of India conferred NSA 2023. Administered by:

Ministry of Youth Affairs & Sports. It includes

following six core awards:

- **Major Dhyan Chand Khel Ratna** (Highest sporting honour).
- **Arjuna Award** (For consistent performance over 4 years). **Dronacharya Award** (Highest sports honour for coaches). **Major Dhyan Chand Award** (For lifetime achievement).
- **Maulana Abul Kalam Azad Trophy** (Top performance in inter-university tournaments).
- **Rashtriya Khel Protsahan Puruskar** (sports promotion by organisations or corporates).

Chandubi Festival

Chandubi festival commenced from January 1 to 5 on the **banks of Chandubi Beel (Lake) in Kamrup district of Assam.**

- It is mainly celebrated by **Rabha and Hajong communities from Rabha Hasong Autonomous Council (RHAC).**
- It is an **annual festival that displays Assamese culture and traditions** featuring diverse activities, including folk music performances, traditional dance shows, local handicraft exhibitions etc.

Reportedly, **Chandubi Lake came into being in 1897** as a result of a **devastating quake.**

Timor Leste (Capital: Dili)

- ▶ Indian Prime Minister held a bilateral meeting with the President of Timor-Leste.
- ▶ **Political features**
 - Island country of South-East Asia.**
 - Bounded by **Timor Sea** (southeast), **Wetar Strait** (north), **Ombai Strait** (northwest) and **western Timor** (part of Indonesian province of East Nusa Tenggara) **to southwest.**
- ▶ **Geographical features**
 - ⊖ **Climate:** Dry tropical climate and moderate rainfall.
 - ⊖ **Highest Point:** Mount Tatamailau.