

**DAILY
CURRENT
AFFAIRS
ANALYSIS**



LEARNING ACADEMY[®]

16 DECEMBER 2024

1 - Pharmaceutical Technology Upgradation Assistance Scheme Scheme:

GS II

Government Policies and Interventions

- **Which RPTUAS highlights stand out the most?**
- **Goal:**
- By means of RPTUAS, the Department of Pharmaceuticals seeks to guarantee adherence to international manufacturing standards and foster the expansion of the pharmaceutical sector.
- **Important characteristics:**
- **Expanded Qualification Standards:**
- extended eligibility to include pharmaceutical manufacturing facilities with annual revenue under Rs 500 crores, in addition to Micro, Small, and Medium-Sized Enterprises (MSMEs).
- MSMEs continue to be preferred, helping smaller firms meet high criteria for manufacturing quality.
- **Adaptable Financing Choices:**
- Introduces reimbursement-based subsidies, which provide greater flexibility than the conventional credit-linked strategy.
- **Entire Assistance with Conformance:**
- Supports many technological advancements in compliance with updated Schedule-M and World Health Organisation (WHO) Good Manufacturing Practices (GMP) regulations, such as clean room facilities, testing labs, HVAC systems, etc.
- **Adaptive Incentive Framework:**
- Offers incentives based on turnover: for turnovers less than Rs. 50.00 crore, Rs. 50.00 to less than Rs 250.00 crore, and Rs 250.00 to less than Rs. 500.00 crore, respectively, rewards are 20%, 15%, and 10% of investment under qualified activities.

- **Integration of State Government Schemes:**

- permits collaboration with programmes run by state governments to deliver more help on top of that.

- **Improved Verification Process:**

- carries out a thorough verification process via a project management organisation to guarantee accountability and transparency.

- **Rewards under the Plan:**

- Interest subvention for the loan component eligible under the scheme is limited to a maximum of 5% per year (6% for units owned and managed by Scheduled Castes and Scheduled Tribes), with a cap of Rs. 10 crore.
- This subsidy is available for loans approved by scheduled commercial banks and financial institutions in both the public and private sectors, for a maximum of three years on the decreased balance.

- **What are WHO-GMP Standards and Revised Schedule M?**

- adjustments to Schedule M of the Drugs and Cosmetics Rules, 1945 were introduced by the Union Health Ministry in January 2024. The adjustments focused on strict quality control procedures for pharmaceutical and biotech products.
- Good Manufacturing Practices (GMP) are mandated for pharmaceutical items under Schedule M.
- The Drugs and Cosmetics Rules, 1945's Schedule M included GMP for the first time in 1988. The most recent revision was made in June 2005.
- The revised text reads, "Good Manufacturing Practices and Requirements of Premises, Plant, and Equipment for Pharmaceutical Products," in place of the original phrase "Good Manufacturing Practices" (GMP).
- The updated Schedule M includes criteria for premises, plant, and equipment while highlighting adherence to GMP. This guarantees compliance with the GMP Standards of the World Health Organisation (WHO).
- GMP is the required standard that controls the use of materials, procedures, equipment, processes, labour, facilities/environment, and other factors to develop and enhance product quality.
- A pharmaceutical quality system (PQS), quality risk management (QRM), product quality review (PQR), equipment qualification and validation, and an automated storage system for all pharmaceutical products are all included in the amended Schedule M.

- **Current Instances of Indian Medicine Quality Problems:**

- A required quality test for export was not passed by at least 6% of cough syrup samples from 54 Indian manufacturers, according to statistics from the Central Drugs Standard Control Organisation (CDSCO) in December 2023.
- Concerns were raised by the World Health Organisation (WHO), the Gambia, Uzbekistan, Cameroon, and other countries when children who had taken these drugs died.
- Concerns regarding a drug-resistant bacterial strain purportedly associated with eye drops imported from India were expressed in April 2023 by the US Food and Drug Administration (USFDA) and the US Centres for Disease Control and Prevention (CDC).

- **Which are the UCPMP 2024's Principal Elements?**

- **Limitations Regarding Inducements:**

- It is forbidden for medical representatives to approach healthcare providers with inducements in order to obtain access.

- **Gifts and Payments Are Prohibited:**

- Businesses are not allowed to give money, grants, or other financial advantages to medical practitioners or their families.
- It is against the law for pharmaceutical corporations to provide presents or other financial benefits to people who are authorised to prescribe or provide medications.

- **Evidence-Based Statements:**

- Terms like "safe" and "new" must be used appropriately, and claims on a drug's usefulness must be backed by the most recent research.

- **Programmes for Transparent CME Only:**

- Only through clear, open, and verifiable criteria can pharmaceutical corporations interact with healthcare professionals (HCPs) for Continuing Medical Education (CME).

- **Strict Observance:**

- The UCPMP will be distributed, and all pharmaceutical associations and corporations will be required to strictly abide by it.
- An Ethics Committee for Pharmaceutical Marketing Practices must be established by all associations.

- **India's Pharmaceutical Industry:**

- **Industry Situation:**

- In terms of volume and value, India is placed third globally in the manufacture of pharmaceuticals, according to the Economic Survey 2022–2023.
- By 2030, it is anticipated that the Pharma Industry would reach USD 130 Bn. India is a significant pharmaceutical exporter, reaching more than 200 nations with its exports.
- With a 20% volume share in the global supply of generic drugs, the country is the world's largest supplier of these drugs. It also leads the world in vaccine production.
- More than half of Africa's generic needs are met by India, which also supplies 40% of the US's generic demand and 25% of all medicines sold in the UK.
- Additionally, about 60% of the world's need for vaccines comes from India. India supplies 70% of the vaccinations used by the WHO.

Source → The Hindu

2 - Efforts to Advance Sustainable Agriculture:

 **GS III**
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Agriculture related issues

- **Which initiatives for soil health management were launched?**

- **Updated Mobile Application and Soil Health Card Portal:**

- A mobile application for collecting and testing soil samples has been developed, along with a redesign of the Soil Health Card webpage. A registry of soil labs with real-time status updates and geo-coordinate mapping is included in the site.
- Additionally, it offers up-to-date information on the creation of Soil Health Cards, lab testing, and soil sample collecting.
- Geographic Information System (GIS) analytics and a centralised dashboard with national, state, and district levels are elements of the new portal.
- Other components of the portal are heat maps of nutrients, a nutrient dashboard, and fertiliser management.
- Real-time progress monitoring, automatic geo-coordinate capture during sample collection, and plot detail registration are all made possible by this project.

- **School Soil Health Initiative:**

- A pilot project was started by the Department of School Education and Literacy and the Department of Agriculture & Farmers' Welfare (DA&FW). Twenty soil laboratories were set up in rural Kendriya and Navodaya Vidyalaya schools as part of this project.
- Teachers and students received training and study materials. The school programme was given its own tailored mobile application, and the portal features a section just for the programme to record all of the student activities.
- As part of this project, schoolchildren will gather soil samples, evaluate them in labs, and compile Soil Health Cards.
- Students encourage critical thinking and hands-on learning by educating farmers about the recommendations on the Soil Health Card.
- The Soil Lab Programme educates pupils about sustainable agriculture and the effects of human activity on soil health in an effort to instill in them a feeling of environmental responsibility and respect.
- This programme has now been expanded to 1000 schools. Under this plan, Kendriya Vidyalaya, Navodaya Vidyalaya, and Eklavya Model Schools have been included.
- Soil labs will be established in these schools by the DA&FW and the National Bank for Agricultural and Rural Development (NABARD).

- **Krishi Sakhi Convergence Programme (KSCP):**

- The KSCP was started by an agreement between the Ministry of Agriculture & Farmer Welfare and the Ministry of Rural Development. Its goal is to empower Krishi Sakhi and change rural India.
- A Krishi Sakhis Training plan is part of the plan, which certifies 70,000 Krishi Sakhis as "Para-Extension Workers."
- Krishi Sakhis are qualified para-extension specialists and active farmers. They guide Natural Farming and Soil Health Management, acting as friends to farmers.
- Krishi Sakhis are essential to the execution of several programmes, including the Pradhan Mantri Fasal Bima Yojana (PMFBY) and the National Mission of Natural Farming (NMNF).
- As para-extension workers, certified Krishi Sakhis help farmers develop their capacity and raise awareness.
- They act as a liaison between the Agriculture and Allied Departments, farmers, and Krishi Vigyan Kendras (KVKs).
- Agroecology, crop diversification, natural resource management, and nutritional security are among the topics covered in the training that Krishi Sakhis get.
- They host awareness-raising events on subjects including managing soil health and natural farming.
- The programme, which is being implemented in 13 states and has taught close to 3500 Krishi Sakhis, supports rural development and sustainable agriculture.
- Krishi Sakhis are change agents who support sustainable agriculture and alter rural India.

- **CFQCTI Online:**

- The facilities for sample collection and testing are introduced on the Central Fertiliser Quality Control and Training Institutes (CFQCTI) site, guaranteeing quality control in fertiliser management.
- The portal streamlines the quality assessment process by facilitating the generation of OTP for sample verification, automatic lab assignment, and analysis report issuing.

- **What Sort of Effect Are These Initiatives Expecting?**

- Through the promotion of sustainable farming methods like organic farming, these projects hope to secure long-term advantages for the environment and the economy.
- These programmes aim to improve farmer livelihoods and economic well-being by addressing issues with soil health, fertiliser quality, and agricultural sustainability.
- It is anticipated that initiatives such as the Krishi Sakhi Convergence Programme and the Soil Health Card Portal, which aim to bolster the legitimacy of organic farming, would increase consumer trust and promote the uptake of organic products.
- By guaranteeing the use of dependable inputs, initiatives to resolve issues with fertiliser quality and efficacy, as demonstrated in the CFQCTI Portal, seek to protect farmers' interests.

- **What worries India about the health of its soil?**

- More than 95% of food comes from soil and water, which are essential resources for life.
- Achieving the United Nations Agenda 2030 and maintaining agricultural systems depend on the symbiotic relationship between soil and water.
- Soil and water resources are under severe pressure due to current climatic changes and human activity.
- About half of India's net planted area is rainfed, accounting for 40% of the nation's overall food production.
- India's soil health is beset by issues including inadequate nutrient levels and an average soil organic carbon (SOC) of 0.54%.
- With roughly 30% of the land impacted, land degradation is a serious problem that affects population nutrition intake and results in nutritional deficits in plants.
- Productivity declines due to nutrient deficits and depletions as well as improper fertiliser application.
- Practices including sufficient nutrient replenishment, individualised fertiliser treatments based on soil studies, and raising the soil's organic matter are necessary for sustainable food production.
- An estimated 3 billion tonnes of soil are lost to wind and water erosion each year in India.

3 - India's unemployment rate:

GS III

Indian Economy

- **Which aspects of the report stand out the most?**
- **India's Rate of Unemployment:**
 - In 2023, the unemployment rate in India for those over the age of 15 fell to 3.1%, which is the lowest level in the previous three years.
 - In 2022, the unemployment rate was 4.2%, while in 2021 it was 3.6%.
 - The female unemployment rate has decreased, from 3.3% in 2022 and 3.4% in 2021 to 3% in 2023.
 - Likewise, for men, it dropped from 4.5% in 2021 and 3.7% in 2022 to 3.2% in 2023.
- **Recuperation of Employment Situation:**
 - Following the easing of state and federal lockdowns, there has been an improvement in the job situation following the effects of the Covid-19 pandemic.
 - Urban regions saw a fall from 5.9% in 2022 and 6.5% in 2021 to 5.2% in 2023, while rural areas had a decrease from 2.8% in 2022 and 3.3% in 2021 to 2.4% in 2023.
 - The LFPR in Current Weekly Status (CWS) for people living in urban areas who are 15 years of age or older increased to 56.2% in 2023, indicating a positive trend from 52.8% in 2022 and 51.8% in 2021.
 - This encouraging job figure follows other statistics that showed India's economy grew by 8.4% in the third quarter of 2023–2024.
 - According to NSO data, industries like manufacturing, mining & quarrying, and construction were major contributors to this rise.
 - India's growth is predicted by the NSO to be 7.6% for the full fiscal year 2023–2024, which is higher than the first estimate of 7.3% given in January 2024.

- **The Periodic Labour Force Survey: What is it?**

- Through PLFS, the National Statistical Office (NSO) generates quarterly estimates for urban regions as well as annual statistics on employment and unemployment characteristics for both rural and urban areas.
- In May 2019, the first annual report that was based on the information gathered in PLFS from July 2017 to June 2018 was released.

- **PLFS's goal is:**

- to calculate the major measures of employment and unemployment (i.e., the labour force participation rate, the unemployment rate, and the worker population ratio) for urban regions exclusively in the "Current Weekly Status" (CWS) within a three-month timeframe.
- to annually estimate the indices of employment and unemployment in "Usual Status" and CWS in both rural and urban areas.

- **Unemployment: What Is It?**

- When people who are capable of working actively seek employment but are unable to find acceptable positions, this is referred to as unemployment.
- A person who is in the labour force, has the necessary abilities, but is not actively employed, is considered unemployed.
- In essence, an unemployed individual is a person who is of working age, unemployed, able and willing to work, and actively seeking employment.

- **Calculating Unemployment:**

- The following formula is frequently used to determine the nation's unemployment rate:
- $$\text{Unemployment rate} = \left[\frac{\text{Number of Unemployed Workers}}{\text{Total Labour Force}} \right] \times 100.$$
- Here, the 'total labour force' includes the employed and the unemployed. Those who are neither employed nor unemployed — students, for example — are not considered a part of the labour force.

- **Types of Unemployment:**

- **Structural Unemployment:** Rooted in mismatches between the skills possessed by the workforce and the requirements of available positions, this form of unemployment highlights systemic issues within the labour market.
- **Cyclical Unemployment:** Tied to economic cycles, this type escalates during economic downturns and diminishes during periods of expansion, showcasing the sensitivity of job availability to macroeconomic conditions.

- **Frictional Unemployment/Transitional Unemployment:** Also called transitional unemployment, arising from the natural transition between jobs, this type reflects the temporary period individuals spend searching for new employment opportunities.
- **Underemployment:** While not strictly unemployment, this concept pertains to individuals employed in positions that underutilize their skills or provide insufficient working hours, contributing to a sense of economic inefficiency.
- **Hidden Unemployment:** Refers to individuals who are not actively seeking employment due to discouragement or other factors but could potentially enter the job market if conditions improve.
- **Disguised Unemployment:** It arises because more labourers work in the factory/land than are required. Hence productivity i.e., production per unit of labour will be less.

- **What are the Major Causes of Unemployment in India?**

- **Population Size:**

- India's substantial population amplifies the competition for employment opportunities, putting additional pressure on the job market.
- Managing this demographic challenge necessitates a comprehensive approach to economic development and job creation.

- **Skills Mismatch:**

- A predominant cause, where the skills possessed by the workforce may not align with the evolving demands of the job market. Addressing this issue requires initiatives focused on enhancing education and vocational training programs.

- **Informal Sector Dynamics:**

- The prevalence of the informal sector introduces complexities in tracking and addressing unemployment. Efforts to formalise and regulate this sector can contribute to a more accurate representation of employment conditions.

- **Policy Implementation Challenges:**

- Well-intentioned policies may face challenges in effective implementation, impacting their ability to generate employment. Streamlining policy execution and ensuring alignment with ground realities are imperative.

- **Global Economic Factors:**

- Influences from the global economy, such as trade dynamics and geopolitical shifts, can impact India's employment scenario. Crafting policies that enhance economic resilience to external factors is essential.

- **Way Forward:**

- Aligning education with the current market demands by updating curricula to impart relevant skills, emphasising vocational training, and promoting lifelong learning to enhance employability.
- Fostering a conducive environment for startups by providing financial incentives, reducing bureaucratic hurdles, and offering mentorship programs to encourage entrepreneurship.
- Formulating and implementing policies that promote job creation, including investment in infrastructure, industry-friendly regulations, and fiscal incentives for businesses generating employment.

Source → The Hindu

4 - Coral Bleaching in Great Barrier Reef:

GS III

Environmental Conservation

- **Great Barrier Reef (GBR):**
- The GBR is the world's largest coral reef system. It's located in the Coral Sea off the coast of Queensland, Australia.
- The GBR stretches across 2,300 km and is made up of around 3,000 individual reefs and 900 islands.
- The GBR is home to 400 types of coral, and 1,500 species of fish. It's also home to endangered species such as the dugong and the large green turtle. The GBR is a UNESCO World Heritage site and was inscribed in 1981.
- In 2023, the UNESCO Heritage Committee refrained from listing Australia's Great Barrier Reef as a site "in danger" but warned that the world's biggest coral reef ecosystem remained under "serious threat" from pollution and the warming of oceans.
- Widespread mass bleaching of the Great Barrier Reef was first seen in 1998 and happened again in 2002, 2016, 2017, 2020, 2022 and now in 2024.
- **What Factors are Contributing to the Coral Bleaching in GBR?**
- **Temperature Stress:**
- Warmer water temperatures can trigger coral bleaching, causing corals to expel the algae (zooxanthellae) living in their tissues and turn white.

- Above-average sea surface temperatures over an extended period have led to significant heat stress on the reef, exacerbating the bleaching phenomenon.
- Bleached coral isn't dead, but weakened and susceptible to starvation and disease. Persistent stress can lead to coral death.
- **Climate Change Impact:**
 - Rising ocean temperatures, exacerbated by climate change, increase coral susceptibility to stress and mortality, leading to widespread bleaching events globally due to El Niño conditions.
 - Other Environmental Stressors:
 - Cold water temperatures, pollution, runoff, and extreme low tides can also induce coral bleaching, highlighting the multifaceted nature of this phenomenon.
- **Algae Relationship:**
 - Coral bleaching occurs when the symbiotic relationship between corals and algae is disrupted, impacting the corals' food source and making them vulnerable to disease.
- **What are the Implications of Coral Bleaching?**
- **Ecological Impact:**
 - Coral reefs (also called Rainforest of seas) are vital ecosystems that support a diverse range of marine life. Coral bleaching can lead to the loss of habitat and biodiversity, affecting fish populations, marine plants, and other organisms that depend on coral reefs for survival.
- **Economic Consequences:**
 - Coral reefs are important for coastal protection, tourism, and fisheries. Coral reef ecosystems provide society with resources and services worth USD 375 billion per year. The degradation of coral reefs due to bleaching can have economic repercussions, impacting industries such as tourism and fishing, which rely on healthy reef ecosystems.
- **Food Security:**
 - Coral reefs provide food and livelihoods for millions of people worldwide. Coral bleaching threatens the availability of seafood and can disrupt the livelihoods of communities dependent on fishing and reef-related tourism.
- **Climate Change Indicator:**
 - Coral bleaching serves as a visible indicator of climate change impacts on marine ecosystems.

- **Loss of Ecosystem Services:**

- Coral reefs provide essential ecosystem services, including shoreline protection, nutrient cycling, and carbon sequestration.
- Bleaching diminishes the ability of reefs to provide these services, affecting the overall health of marine ecosystems and coastal communities.

Source → The Hindu



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