DAILY CURRENT AFFAIRS ANALYSIS

04 MARCH 2024

1 - Food System Transformation's Economic Impact:

GS II

Government Policies and Interventions

- **Context:**

- In a paper titled "The Economics of the Food System Transformation," released recently, the Food System Economics Commission emphasises the urgent need for a sustainable transformation of the current food systems, which is expected to cost USD 500 billion annually.

- The Food System Economics Commission (FSEC) is a private alliance of scientists from many academic disciplines and countries with the goal of determining the obstacles to the security of the food system and the necessary policy adjustments to address them.

- **The Food Systems: What Are They?**

- The Food and Agriculture Organisation (FAO) defines food systems as the full spectrum of players involved in:
- The processes involved in producing, gathering, preparing, distributing, using, and discarding food products that come from forestry, fisheries, and other areas of the larger ecological, social, and economic ecosystems in which they are embedded.

- **Which aspects of the report stand out the most?**

- **Current Expenses and Results:**

- The current food systems around the world are much more expensive than they are beneficial to development. It is critically necessary to overhaul the current food systems sustainably, at an estimated annual cost of $500 billion.
- In comparison to the potential multi-trillion dollar advantages, this cost is negligible, making up approximately 0.2–0.4% of the world's GDP (gross domestic product).

- **Present-day Difficulties in the Food System:**

- By 2020, the hidden costs of the present global food system to society, the environment, and health will reach $10 trillion USD.
- By 2050, approximately 640 million people—121 million of them are children—may experience hunger and malnutrition if current trends continue.

- **Food Chain to Fuel Global Greenhouse Gas Emissions:**

- A third of greenhouse gas (GHG) emissions worldwide will still come from food systems under the current scenario, which will result in a 2.7-degree Celsius increase in global temperatures by the end of the century over pre-industrial levels.
- Climate change will make food production more and more susceptible, and the probability of catastrophic events will rise sharply.

- **Route towards 2050:**

- The report compares and contrasts the Current Trends (CT) and Food System Transformation (FST) trajectories until 2050.
- By 2050, the CT pathway predicts a rise in obesity, persistent food insecurity, and detrimental environmental effects.
- Restructuring food systems can solve health and climate issues while also making a major economic contribution.
- The entire economic benefits of pursuing the FST pathway could be attributed to global convergence towards healthy meals to the tune of up to 70%.
- By 2040, food systems operating under FST may turn into net carbon sinks, contributing to keeping global warming to 1.5°C or less.
- Significant reforestation, a decrease in extreme weather events, land protection, a reduction of nitrogen surplus, and a reversal of biodiversity loss are examples of positive results.

- **Suggestions:**

- Unlocking the global advantages of food system transformation requires removing financial barriers for lower-income nations.
- The challenge of the food system must be addressed by policymakers in order to achieve both immediate and long-term advantages for the world.
- The necessity of thorough and long-lasting paths for the transformation of food systems is emphasised in the report.

- **How Can the World Food System Be Made More Sustainable?**

- **Cut Down on Food Wastage:**

- Promote and assist the implementation of circular food systems, which effectively redistribute surplus food to those in need.
- Create and put into effect regulations that encourage companies and customers to reduce food waste.

- **Enhance Food Production Methods:**

- Encourage and fund intelligent agricultural techniques that use technology to track and improve growth environments.
- Promote the use of sustainable farming methods including vertical and hydroponic gardening.
- Encourage the creation of crop types that are resistant to environmental stresses so that less excessive resource input is required.

- **Encourage the use of sustainable farming methods:**

- Promote the application of regenerative agriculture, which emphasises the repair of ecosystems and the health of the soil.
- Reduce the excessive use of water, pesticides, and fertilisers by implementing precision farming practices.
- Encourage farmers to switch to organic and more sustainable farming practices.

- **Promote Ecological Consumption:**

- Encourage people to switch to plant-based diets, which often have less of an impact on the environment than diets high in animal products.
- Inform customers of the effects that their dietary decisions have on the environment and society.
- Encourage people to shop at sustainable and local food markets to promote the purchase of products made nearby.

- **Invest in Innovation and Research:**

- Invest funds in research and development projects that strive to produce agricultural technologies and practices that are more sustainable.
- Encourage projects that emphasise crops resistant to climate change and creative ways to deal with new issues in the food chain.

- **Strengthen Local Communities:**

- Encourage community-led projects aimed at producing food and agriculture in a sustainable manner.
- Encourage farmers, particularly smallholders, to embrace sustainable methods by offering them resources and training.
- Make sure that local communities are included in the decision-making processes concerning the distribution and production of food.

Source → The Hindu

2 - Changing Economic Scene in China:

GS II

International Issues

- **Context:**

- Amidst a plethora of obstacles in 2023, including a devastating housing crisis, sluggish consumption, altering demographic patterns, and global turbulence, China's economy grew at one of its weakest rates in almost three decades.

- **What are the main causes of China's economic difficulties?**

- Economic Situation: The GDP of China increased by 5.2% in 2023 to reach 126 trillion yuan, according to the National Bureau of Statistics (NBS).
- This increase is the slowest since 1990, excluding pandemic years, even though it exceeded the goal and outperformed the 3% recorded in 2022.
- The economic challenges were exacerbated by three months of deflation.

- **Factors Associated with Economic Difficulties:**

- Lack of Jobs for Youth: In May 2023, almost one-fifth of those aged 16 to 24 did not have a job, underscoring the difficulties in finding employment for young people.
- The working-age population, defined as those between the ages of 15 and 59, who are considered productive in an economy, currently makes up only 61% of the total population.
- Demographic Trends: Since 2016, China's population has been decreasing, which is indicative of a dropping total fertility rate (TFR) and difficulties in letting go of the one-child policy's legacy.
- Demographic patterns have not changed, even with policy modifications permitting up to three children.
- Unsteady Real Estate business: Major companies like Evergrande and Country Garden are having financial troubles, which is concerning for the real estate business, which has historically contributed significantly to China's economy.

- **What Other Difficulties Does China Face in the Global Context?**

- Degradation of the environment: China emits the most greenhouse gases globally. According to the WHO, air pollution causes over 2 million fatalities in China annually.

- Tense Relations with the US: The ongoing trade war, rivalry for technological superiority, and ideological divides between the US and China significantly exacerbate tensions that affect the global balance of power.
- Significant technological decoupling is occurring between the US and its allies and China in areas like semiconductors.
- South China Sea Disputes: A number of nations oppose China's territorial claims in the South China Sea, which raises questions about the stability of the area and freedom of navigation.
- Human Rights Concerns: China has come under fire from around the world for its treatment of ethnic minorities, notably the Uighurs in Xinjiang, and for violating their rights.

- **How is India Changing in the Face of China's Economic Unrest?**

- Demographic Advantage: Unlike China, where the population is ageing, India is expected to have 68.9% of its entire population in working age by 2030.
- Changing Manufacturing and Transportation Scene: Projects like the Delhi-Mumbai Industrial Corridor and the India Semiconductor Mission are attracting investments and strengthening India's infrastructure.
- Foxconn, a significant Apple supplier, is moving a large amount of iPhone manufacturing from China to India.
- Business-Friendly Environment: Initiatives that provide vital support to enterprises include the production-linked incentive plan and Made in India.
- The PLI plan for electronics has been effective in luring significant businesses like Wistron, Samsung, Pegatron, and Rising Star.
- Robust Domestic Market: India, the fifth-largest economy in the world (in terms of nominal GDP), offers substantial prospects for domestically produced goods, drawing international companies to incorporate India into their manufacturing operations.
- For example, H&M sources from clothing producers in India.
- Stress on Sustainability and ESG: India is drawing businesses dedicated to green manufacturing as part of its ambition to reach 50% renewable energy capacity by 2030.
- For instance, Tesla intends to join the Indian electric vehicle market in 2024.
- Global Reputation and Dependability: India's leadership in the International Solar Alliance and its membership in the IMEC corridor are increasing its trade appeal and reputation as a dependable place to invest globally.

- **What are the obstacles impeding India's advancement?**

- Infrastructure Constraints: India's power grids, logistics networks, and transportation systems are not as advanced as those of China, which could make manufacturing less competitive and deter investment. This is despite continuous improvements.
- Skilled Workforce Shortage: Although the country has a sizable working-age population, a sizable section of the population lacks the specialised skills needed for high-value manufacturing

(Skill India Report: Only 5% of Indians are formally skilled). This calls for major investment in upskilling and vocational training.

- Lack of Desired Ease of Doing Business: Despite efforts such as Made in India to improve, India continues to lag behind China in worldwide rankings of ease of doing business, necessitating more steps to streamline procedures and cut red tape.
- Lack of R&D Push: In spite of progress, India still lags behind China in terms of research and development capacity, dedicating only 0.6-0.7% of its GDP to this area.

- **The Way Ahead:**

- Upskill the Workforce: To create a readily available pool of trained people for high-value manufacturing, India needs to concentrate on vocational training and skilling programmes that are in line with industry needs.
- Simplify Regulations and Bureaucracy: India's ease of doing business can be improved by enacting changes to streamline processes, cut down on red tape, and speed up corporate approvals.
- Boost Technology and Innovation: India can develop a strong innovation ecosystem by investing more in R&D, encouraging business and academic collaboration, and encouraging entrepreneurship.
- Diplomatic Dialogue and Conflict Resolution: India should seize this opportunity to hold a positive diplomatic dialogue with China in order to resolve unresolved border disputes and promote improved ties on a number of fronts, such as trade, economic cooperation, and cultural exchanges, which will be advantageous to both countries as well as the larger international community.

Source → The Hindu

3 - Centre for the Fusion and Analysis of Terrorism Data:

GS III

Internal Security related issues

- **Context:**

- The National Terrorism Data Fusion & Analysis Centre (NTDFAC), which was recently established by the National Investigation Agency (NIA) forces the government to gather data on terrorists and their associates from a variety of sources.

- For the first time, the NIA has gathered information on every terrorist, including members of the Khalistani militant groups including the Indian Mujahideen and Lashkar-e-Taiba.

- **What is the National Centre for the Fusion and Analysis of Terrorism Data?**

- The US Global Terrorism Database (GTD) has served as the blueprint for the NTDFAC.
- Based at the University of Maryland in the United States, the National Consortium for the Study of Terrorism and Responses to Terrorism (START) is in charge of overseeing the GTD.
- The GTD is a freely available database that compiles and examines information on terrorist incidents around the world. It offers comprehensive details about every occurrence, such as the time, place, guns fired, strategies used, targets, and number of casualties.
- It would act as a central repository and hub for analysis of data about terrorism and terrorist organisations active in the nation.
- The Ministry of Home Affairs requested in 2023 that all state police forces and anti-terror organisations develop a strategy to stop the emergence of new terrorist organisations.

- **Important characteristics:**

- Extensive Database: This offers a thorough overview of people engaged in terrorist activities and contains case histories, fingerprints, images, videos, and social media profiles.
- Automated Fingerprint Recognition System (AFIS): The National Automated Fingerprint Recognition System (NAFIS), which has over 92 lakh fingerprint records, is included into the NTDFAC.
- This makes it possible to quickly and precisely identify people using their fingerprint data.
- Face Recognition System: It has a face recognition system installed, which makes it possible to scan suspect photos from CCTV footage. The identification and tracking of those engaged in terrorist activity is made easier by this technology.
- Assistance to State Police Forces: The NTDFAC helps state police forces identify suspect details in addition to providing assistance to NIA officers.
- The centralised system is accessible to state police forces so they can obtain intelligence on terrorists that are active inside their jurisdiction.

- **What does NAFIS stand for—the National Automated Fingerprint Identification System?**

- The National Crime Records Bureau (NCRB) is responsible for the conception and management of this nationwide searchable database of fingerprints connected to criminal activity.
- Through the consolidation of fingerprint data from all states and Union Territories, the web-based programme serves as a central information repository.

- **Important characteristics:**

- Web-Based Application: The system functions as a web-based application, giving law enforcement organisations round-the-clock, real-time access to and management of fingerprint data.
- Unique Identifier: Every individual detained for a criminal offence is given a 10-digit National Fingerprint Number (NFN) by NAFIS.
- The individual may use this special ID for the duration of their life, and the same NFN will be connected to several offences reported under various FIRs.
- Integration with CCTNS: NAFIS has a backend connection to the Crime and Criminal Tracking Network & Systems (CCTNS) database, which gives each arrested individual in the CCTNS a unique identifier.
- Uploading, tracing, and retrieving fingerprint data in real time is made possible by the technology, which improves the effectiveness of criminal identification procedures for law enforcement authorities.
- Substitute for Older Systems: The most recent automated fingerprint identification system in India is called NAFIS. It takes the place of FACTS 5.0, the prior system, which was thought to have "outlived its shelf life."

Source → The Hindu

4 – Ramsar Sites in India:

GS III

Environmental Conservation related issues

- **Context:**

- The Ministry of Environment, Forests, and Climate Change has declared that India has designated five more wetlands as Ramsar sites, bringing the total number of Ramsar sites to 80 on the eve of World Wetlands Day, 2024, from the current 75.

- Two of these locations are in Tamilnadu, Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest, while three are in Karnataka: Ankasamudra Bird Conservation Reserve, Aghanashini Estuary, and Magadi Kere Conservation Reserve.

- With 16 sites, Tamil Nadu still holds the record for the most Ramsar Sites, followed by Uttar Pradesh with 10.

- **The Ramsar Convention: What is it?**

- Adopted on February 2, 1971, in the Iranian city of Ramsar, on the southern border of the Caspian Sea, it is an intergovernmental convention.
- It went into effect in India on February 1st, 1982, designating wetlands of worldwide significance as Ramsar areas.

- **World Wetlands Day (WWD):**

- The passage of this international agreement on wetlands on February 2, 1971, is commemorated globally.
- "Wetlands and Human Wellbeing" is the subject for World Wetland Day in 2024, highlighting the vital role wetlands play in improving our quality of life.
- It draws attention to the ways that wetlands support clean water, biodiversity, recreational possibilities, and flood protection—all of which are critical to the health and prosperity of humankind.

- **What Qualities Do the Recently Designated Ramsar Sites Have?**

- **Karnataka's Ankasamudra Bird Conservation Reserve:**

- It is a man-made, 244.04-acre village irrigation tank that borders the Ankasamudra community. It was constructed millennia ago.

- **Estuary of Aghanashini (Karnataka):**

- It is formed at the confluence of the Aghanashini River and the Arabian Sea, covering an area of 4801 hectares.
- The estuary's brackish water offers a variety of ecological services, such as reducing the risk of flooding and erosion, preserving biodiversity, and sustaining livelihoods.
- In addition, the wetland sustains fishing, farming, prawn aquaculture, harvesting edible bivalves and crabs, traditional fish farming in the estuary rice fields—known locally as Gazni rice fields—and salt manufacture.
- The mangroves that round the estuary aid in shielding the coastline from hurricanes and cyclones.

- **Karnataka's Magadi Kere Conservation Reserve:**

- It's a man-made wetland that covers around 50 hectares and was created to hold rainwater for irrigation.

- The wetland is home to four near-threatened species: Oriental Darter (Anhinga melanogaster), Black-headed Ibis (Threskiornis melanocephalus), Woolly-necked Stork (Ciconia episcopus), and Painted Stork (Mycteria leucocephala). Two vulnerable species are found in the wetland: Common pochard (Aythya ferina) and River tern (Sterna aurantia).
- Additionally, it is one of Southern India's biggest Bar-headed Goose (Anser indicus) wintering sites. It has been designated as an Important Bird and Biodiversity Area (IBA) on a worldwide scale.

- **Tamil Nadu's Karaivetti Bird Sanctuary:**

- The people who live there use the wetland's water to grow crops including split red gramme, cotton, sugar cane, maize and rice.
- A total of 198 bird species have been observed in this area, with the Bar-headed Goose, Pin-tailed Duck, Garganey, Northern Shoveler, Common Pochard, Eurasian Wigeon, Common teal, and Cotton teal among the more notable visitors.

- **Tamil Nadu's Longwood Shola Reserve Forest:**

- The term "Solai" in Tamil, which meaning "tropical rainforest," is where it gets its name.
- The upper portions of the Nilgiris, Anamalais, Palni hills, Kalakadu, Mundanthurai, and Kanyakumari in Tamil Nadu are home to the "Sholas."
- The globally endangered Black-chinned Nilgiri Laughing thrush (Strophocincla cachinnans), the vulnerable Nilgiri Wood-pigeon (Columba elphinstonii), and the Nilgiri Blue Robin (Myiomela major) all call these forested wetlands home.

Source → The Hindu