

GOVERNANCE**State Food Safety Index: FSSAI**

Recently, the Union Minister for Health and Family Welfare has released the 3rd State Food Safety Index (SFSI). Also, 19 Mobile Food Testing Vans (Food Safety on Wheels) have been flagged off to supplement the food safety ecosystem across the country.

Key Points**About the Index:**

- The index is developed by FSSAI (Food Safety and Standards Authority of India) to measure the performance of states on five significant parameters of Food Safety.
- The parameters include Human Resources and Institutional Data, Compliance, Food Testing – Infrastructure and Surveillance, Training & Capacity Building and Consumer Empowerment.
- The Index is a dynamic quantitative and qualitative benchmarking model that provides an objective framework for evaluating food safety across all States/UTs.
- The first State Food Safety Index for the year 2018-19 was announced on the first-ever World Food Safety Day on 7th June 2019.

Ranking of States:

- Among the larger states, Gujarat was the top ranking state, followed by Kerala and Tamil Nadu.
- Among the smaller states, Goa stood first followed by Meghalaya and Manipur.
- Among UTs, Jammu & Kashmir, Andaman & Nicobar Islands and New Delhi secured top ranks.

Importance of Food Safety:

- Access to sufficient amounts of safe food is key to sustaining life and promoting good health.
- 1. Foodborne illnesses are usually infectious or toxic in nature and often invisible to the plain eye, caused by bacteria, viruses, parasites or chemical substances entering the body through contaminated food or water.
- 2. An estimated 4,20,000 people around the world die every year after eating contaminated food and children under 5 years of age carry 40% of the foodborne disease burden, with 1,25, 000 deaths every year.
- Food safety has a critical role in assuring that food stays safe at every stage of the food chain - from production to harvest, processing, storage, distribution, all the way to preparation and consumption. Food production is responsible for up to 30% of global greenhouse-gas emissions contributing to global warming.

Related Initiatives:**Indian:****Eat Right India Movement:**

1. It is an initiative of the Government of India and FSSAI to transform the country's food system in order to ensure safe, healthy and sustainable food for all Indians.
2. It is aligned to the National Health Policy 2017 with its focus on preventive and promotive healthcare and flagship programmes like Ayushman Bharat, POSHAN Abhiyaan, Anemia Mukh Bharat and Swachh Bharat Mission.

Eat Right Station Certification:

1. The certification is awarded by FSSAI to railway stations that set benchmarks (as per the Food Safety and Standards Act, 2006) in providing safe and wholesome food to passengers.
2. The Eat Right Research Awards and Grants to encourage and recognize high-quality research in the area of food safety and nutrition in India has also been launched.
3. The results of PAN-India survey for identifying the presence of industrially produced trans fatty acid content in the selected foods has been released. Overall, only 84 samples, i.e. 1.34%, have more than 3% industrially produced trans fats from the total of 6245 samples.
4. In an effort to engage industry on the issue of plastic in food packaging, 24 food businesses signed a pledge on becoming "Plastic Waste Neutral" by collecting, processing and recycling of 100% post-consumer plastic waste from across the sources.

Global:

- The Codex Alimentarius, or "Food Code" is a collection of standards, guidelines and codes of practice adopted by the Codex Alimentarius Commission.
- The Codex Alimentarius Commission is a joint intergovernmental body of the Food and Agriculture Organization (FAO) and World Health Organization (WHO). Currently, it has 189 members and India is a member.

SOCIAL ISSUE**Forest Rights Act**

Recently, the Jammu and Kashmir government has decided to implement the Forest Rights Act (FRA), 2006, which will elevate the socio-economic status of a sizable section of the 14-lakh-strong population of tribals and nomadic communities.

Key Points

About:

- FRA enacted in 2006 recognises the rights of forest-dwelling tribal communities and other traditional forest dwellers to forest resources on which these communities were dependent for a variety of needs, including livelihood, habitation and other sociocultural needs.
- It recognizes and vest the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.
- It strengthens the conservation regime of the forests while ensuring livelihood and food security of the FDST and OTFD.
- The Gram Sabha is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) or Community Forest Rights (CFR) or both that may be given to FDST and OTFD.

Rights Under the Forest Rights Act:

- **Title rights:**
 1. It gives FDST and OTFD the right to ownership to land farmed by tribals or forest dwellers subject to a maximum of 4 hectares.
 2. Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted.
- **Use rights:**The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc.
- **Relief and development rights:**To rehabilitate in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.
- **Forest management rights:**It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.

Significance:

- **Constitutional Provision Expansion:**It expands the mandate of the Fifth and the Sixth Schedules of the Constitution that protect the claims of indigenous communities over tracts of land or forests they inhabit.
- **Security Concerns:**The alienation of tribes was one of the factors behind the Naxal Movement, which affected states like Chhattisgarh, Odisha and Jharkhand.
- **Forest Governance:**It has the potential to democratise forest governance by recognising community forest resource rights.It will ensure that people get to manage their forest on their own, which will regulate exploitation of forest resources by officials, improve forest governance and better management of tribal rights.

Challenges:

- **Administrative Apathy:**
 1. As tribals are not a big vote bank in most states, governments find it convenient to subvert FRA or not bother about it at all in favour of monetary gains.
 2. The forest bureaucracy has misinterpreted the FRA as an instrument to regularise encroachment instead of a welfare measure for tribals.
 3. Corporates fear they may lose the cheap access to valuable natural resources.
- **Dilution of Act:**Certain sections of environmentalists raise the concern that FRA bends more in the favour of individual rights, giving lesser scope for community rights.
- **Institutional Roadblock:**Rough maps of community and individual claims are prepared by Gram Sabha which at times often lack technical knowhow and suffers from educational incapacity.
- **Misuse of FRA:**The FRA has been misused and communities have rushed to file claims. Politicians across party lines have interpreted FRA as a land distribution exercise and have fixed targets for districts.

Way Forward

It is important that the governments at Central and State levels are strengthened with human and financial resources to help implement FRA on a mission mode.Besides leveraging modern technology to map and monitor the implementation of FRA, the forest bureaucracy must also be reformed to serve as service providers to gram sabhas.

ECONOMY

Global Innovation Index 2021

2

Recently, India has climbed two spots and has been ranked 46th in the Global Innovation Index (GII) 2021 rankings.

Key Points

Global Innovation Index (GII) 2021:

- **About:**
 1. **Launch:** The GII is launched by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. The GII aims to capture the multi-dimensional facets of innovation ranking and rich analysis referencing around 132 economies.
 2. **Partnership:** It is published in partnership with the Portulans Institute and other corporate partners: The Brazilian National Confederation of Industry (CNI), Confederation of Indian Industry (CII), Ecopetrol (Colombia) and the Turkish Exporters Assembly (TIM).
 3. **Indicators:** The index ranks world economies according to their innovation capabilities and consists of roughly 80 indicators grouped into innovation inputs and outputs.
- ✓ **Innovation inputs:** Institutions; Human capital and research; Infrastructure; Market sophistication; Business sophistication.
- ✓ **Innovation outputs:** Knowledge and technology outputs; Creative outputs
- **Global Performance:**
 1. Top Five: Switzerland, Sweden, U.S., and U.K. continue to lead the innovation ranking, and have all ranked in the top 5 in the past three years.
 2. The Republic of Korea joins the top 5 of the GII for the first time in 2021.
 3. Asian Countries: Four Asian economies feature in the top 15: Singapore (8), China (12), Japan (13) and Hong Kong, China (14).
- **India's Performance:**
 1. India has been on an upward trajectory over the past few years in the GII. India has shot up from a rank of 81 in 2015 to 46 in 2021.
 2. India performs better in innovation outputs than innovation inputs in 2021. This year India ranks 57th in innovation inputs, the same as last year but higher than 2019. As for innovation outputs, India ranks 45th. This position is the same as last year but higher than 2019.
 3. India ranks 2nd among the 34 lower middle-income group economies.
 4. India ranks 1st among the 10 economies in Central and Southern Asia.
 5. The government attributed the country's improved performance to the departments of atomic energy, science and technology, biotechnology and space.

Other Findings from the GII 2021:

- Investments in innovation reached an all-time high before the pandemic with R&D growing at an exceptional rate of 8.5% in 2019.
- Government budget allocations for the top R&D spending economies showed continued growth in 2020.
- The publication of scientific articles worldwide grew by 7.6% in 2020.
- India, Kenya, the Republic of Moldova, and VietNam hold the record for overperforming on innovation relative to their level of development for the 11th year in a row.

INTERNATIONAL RELATION

Saudi Arabia Foreign Minister's Visit

Recently, the Indian External Affairs Minister met the Foreign Minister of the Kingdom of Saudi Arabia.

Key Points

About the Meeting:

- **Cooperation in Multilateral Forums:** Discussed bilateral cooperation in multilateral forums such as the United Nations, G-20 and Gulf Cooperation Council (GCC). India is not a member of GCC.
- **Implementation of the Strategic Partnership Council Agreement (signed in 2019):**
 1. India-Saudi Strategic Partnership Council was formed to coordinate on strategically important issues.
 2. The council will be headed by the Prime Minister and Crown Prince Mohammed bin Salman and will meet every two years.
 3. India is the fourth country with which Saudi Arabia has formed such a strategic partnership, after the UK, France and China.
 4. Saudi Arabia has been a strategic partner of India since the signing of the Riyadh Declaration in 2010.
- **Focus on the Developments in Afghanistan and Other Regional Issues:** Saudi Arabia, along with Pakistan and the UAE, were the key backers of the Taliban regime that ruled Kabul from 1996 till 2001 when they were ousted by US-led international troops.
- **Strengthening Partnership:** Discussed further steps to strengthen their partnership in trade, investment, energy, defence, security, culture, consular issues, health care, and human resources.

India - Saudi Arabia Ties:

- **Crude oil Supplier:** Saudi Arabia is currently India's second-largest supplier of crude oil (Iraq has been India's top supplier).
- 1. Saudi Arabia is keen to play a role in the creation of Strategic Petroleum Reserves (SPRs) at Padur in Karnataka.
- 2. A study is being conducted for the setting up of the world's largest greenfield refinery at Raigarh in Maharashtra by Saudi Aramco, Adnoc of the United Arab Emirates and Indian public sector oil companies.
- **Bilateral Trade:** Saudi Arabia is India's fourth largest trade partner (after China, USA and Japan). The bilateral trade was valued at US \$33.07 billion during FY 2019-20. During the same period, India's imports from Saudi Arabia reached US \$26.84 billion and exports to Saudi Arabia were worth US\$ 6.24 billion registering an increase of 12.18% over last year.
- **Indian Diaspora:** The 2.6 million-strong Indian community in Saudi Arabia is the largest expatriate community in the Kingdom and is the 'most preferred community' due to their expertise, sense of discipline, law-abiding and peace-loving nature.
- **Cultural Linkages:** Haj pilgrimage is another important component of bilateral relations between India and Saudi Arabia.
- **Naval Exercise:** Recently, India and Saudi Arabia started their first-ever Naval joint exercise called the Al-Mohed Al-Hindi Exercise.

Way Forward

- The trade balance between India and Saudi Arabia is highly in favour of Saudi Arabia, and India's exports are mainly restricted to the agricultural sector. There is a need for India to increase its product base to balance the trade in its favour. The potential areas for the next stage of bilateral cooperation could be infrastructure, energy, skilling and IT.
- Further, India should convince Saudi Arabia to exercise its influence over Pakistan in controlling the Taliban in Afghanistan. A joint collaborative effort of both economies will transform the Southwest Asia sub-region.

SCIENCE & TECHNOLOGY

Role of Rice in Boosting Nourishment

According to a recent study, as many as 12 folk varieties of Indian rice examined by researchers can supplement the nutritional demand of important Fatty Acids (FA) in undernourished mothers. Rice contains various classes of fatty acids, vitamins, minerals, starch and a small amount of protein.

Key Points

Fatty Acids:

- Fatty acids are natural components of fats and oils. These have many important functions in the body, including energy storage.
- Based on their chemical structure they can be differentiated into three groups: 'saturated', 'mono-unsaturated' and 'poly-unsaturated' fatty acids.
- 1. Saturated fatty acids (fats) are mainly found in animal foods, such as (fatty) meat, lard, sausage, butter and cheese but even in palm kernel and coconut oil, which are used for frying.
- 2. Most unsaturated fatty acids (fats) are of plant and fatty fish origin. Meat products contain both saturated and unsaturated fats.
- 3. Within the family of PolyUnsaturated Fatty Acids (PUFAs), there are two different groups: the 'omega-3-fatty acids' and 'omega-6-fatty acids'. Both are considered essential fatty acids because they cannot be synthesized by humans.
- Trans fatty acids, more commonly called trans fats, are made by heating liquid vegetable oils in the presence of hydrogen gas and a catalyst, a process called hydrogenation. These are the worst types of fat for the heart, blood vessels, and rest of the body.

Findings of the Study:

- **Helpful for Health:**
- 1. The traditional rice varieties can add essential FAs in the staple diet helping in the normal brain development in infants.
- 2. Many folk varieties like Athikaraya, Dudh-sar, Kayame, Neelam samba, Srihati, Maharaji and Bhejri are known in folk medicine to enhance milk production in lactating women.
- 3. Varieties like Kelas, DudheBolta and Bhutmoori are rich in iron and can be included in the diet of mothers to treat anaemia.
- **Address the Problem of Undernutrition:**
- 1. The traditional varieties help address the problem of undernutrition in under five children.

2. India was placed at the 94th spot among 107 countries by the Global Hunger Index 2020. It is calculated on the basis of total undernourishment of the population, child stunting, wasting and child mortality.
- **Contributes to the Economy:**
 1. Recently, the first export consignment of Bao-dhaan (red rice) from Assam was sent to the US in March 2021. This enhances incomes of farming families. This iron-rich red rice is grown in the Brahmaputra valley of Assam, without the use of any chemical fertilizer.
- **Resistance against Disease:**
 2. Seven rice varieties of North East India — Meghalaya lakang, Chingphourel, Manuikhamei, Kemenyakepeyu, Wainem, Thekrulha, and Koyajang — have the potential to resist leaf and neck blast disease in rice plants. Blast disease caused by fungal pathogen *Pyricularia oryzae* is a major threat to rice productivity worldwide.

Conservation is Cheaper:

In situ conservation of these neglected and vanishing varieties of rice, rich in nutrients, is a cheaper option than High-Yielding Varieties (HYVs). HYV seeds were developed by scientists to improve food supplies and reduce famine in developing countries. In situ and ex situ conservation focuses on the maintenance of species diversity within or away from their natural habitats, respectively.

IMPORTANT FACTS FOR PRELIM

Exercise Samudra Shakti

The third edition of maritime exercise 'Samudra Shakti' between India and Indonesia will be conducted from 20th-22nd September, 2021 in the Sunda Strait.

Key Points

About:

- In pursuance of India's Act East Policy, Exercise 'Samudra Shakti' was conceived in 2018 as a bilateral IN-IDN exercise.
- The exercise aims to strengthen the bilateral relationship, enhance mutual understanding and interoperability in maritime operations between the two navies.

India's Participation:

- The participating Indian Navy ships Shivalik and Kadmat are amongst the latest indigenously designed and built multi-role Guided Missile Stealth Frigate and Anti-Submarine Corvette respectively.
- Indian Navy's Anti-Submarine Warfare capable Long Range Maritime Reconnaissance Aircraft P8I is also participating in the exercise.

Other Exercises with Indonesia:

- Garuda Shakti (Military Exercise)
- IND-INDO CORPAT, IND-INDO BILAT (Maritime Exercise)

DAILY ANSWER WRITING PRACTICE

Qns. An India-United Kingdom Free Trade Agreement (FTA) can unlock new opportunities in trade and bring together people, ideas, and institutions that share a common history. Examine. (250 words)

Ans:

Introduction

India-UK are eyeing for a Free Trade agreement and the formal negotiations would begin on November 1, with an interim 'early harvest' agreement to be completed by March 2022. The interim trade pact would involve early tariff or market access concessions on certain key high priority products and services.

Body

India-UK trade ties

- India has had strong historical ties with the U.K. and currently, it is one of India's most important trading partners.
- It is a significant partner of India as an FDI investor after Mauritius and Singapore which ranked second and first respectively.
- The UK is a permanent member of the UN Security Council, and one of the strategic partners of India. Strengthening bonds with the trade would seek UKs support at global issues like standoff with China in the Ladakh sector of the Line of Actual Control (LAC) and claim for permanent seat at UNSC.
- The UK has been pushing India for a bilateral trading arrangement ever since it voted to leave the European Union (EU) in June 2016 and left finally in January 2020.
- India opted out of the Regional Comprehensive Economic Partnership deal in November 2019. Therefore, there is renewed focus on trade deals with the US, the European Union and the UK, which are key markets for Indian exporters and are keen to diversify their sourcing.

Unlocking new opportunities through India-UK FTA

- The total trade between India and the UK is currently around \$33 billion per year, including \$15 billion worth of trade in goods and the rest in services.
- Leveraging India's trade surplus: The UK is amongst India's top ten exporting destinations while India is UK's sixth-largest non-EU trading partner. The UK is one of the few large economies with which India has a trade surplus
- Export advantage: India's major exports to the UK include clothing, pharmaceuticals, refined oil and metal manufactures.
- Trade complementarity: The UK's key exports to India comprise metal ores, non-ferrous metals, electrical goods and general industrial machinery. Overall, the trading patterns between the two countries show a high degree of complementarity, with India's export basket having a high match with UK's import basket, and vice-versa.
- FDI inflow: FDI inflows from the UK to India have also grown steadily, with the UK being the sixth largest source of FDI in India since 2000.
- Untapped potential areas: The two countries would also aim to reduce tariff and non-tariff barriers that are holding up trade potential between the two economies. According to the International Trade Centre (ITC), the Indian products with greatest export potential are jewellery (of precious metals), diamonds and medicaments. The UK products with the highest export potential include turbojets, whiskies, and airplane/helicopter parts.

Conclusion

For India, this is an opportunity to showcase itself as an alternative trading partner to China in a post-covid world. It also helps India demonstrate its commitment towards freer trade without much risk of incurring large trade deficits.

DAILY QUIZ

Q1. The National Eligibility Entrance Test (NEET), formerly known as the All India Pre-Medical Test (AIPMT), is conducted by the:

- Central Government
- Union Public Service Commission
- Medical Council of India
- National Testing Agency**

Q2. Consider the following statements:

- The Quad is an inter-governmental political forum consisting of Japan, India, United States and Australia.
- The Quad Secretariat is located at Osaka, Japan.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2**

Q3. Consider the following statements:

- Hydrogen is the lightest and first element on the periodic table.
- The weight of 1 atom of hydrogen is calculated as 10 AMU.

Which of the given above statements is/are correct?

- 1 only**
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Q4. Which one of the following statements best describes the term 'Green Hydrogen'?

- It is derived from methane in natural gas.
- It is produced by splitting water by electrolysis.**
- It is generated from natural gas through a process called "steam reforming".

Q5. Which one of the following pairs (Biosphere reserves: Location) is not correctly matched?

- Cold Desert: Parts of Chamoli District, Pithoragarh District & Bageshwar District.**
- Pachmarhi Biosphere Reserve: Parts of Betul District, Hoshangabad District and Chhindwara District.
- Agasthyamalai Biosphere Reserve: Neyyar, Peppara and Shenduruny Wildlife Sanctuary and their adjoining areas.
- Simlipal: Part of Mayurbhanj district