

World Tourism Day 2024

For Prelims: World Tourism Day, United Nations World Tourism Organization, Sustainable
Development Goals, Gross Domestic Product, Travel and Tourism Development Index, National
Tourism Policy 2022, Dekho Apna Desh Initiative, Swadesh Darshan Scheme, Himalayas, Hampi

For Mains: Significance of the Tourism Sector in India, Challenges Related to the Tourism Sector in India, Recent Initiatives Related to Tourism in India.

Source: IE

Why in News?

The Ministry of Tourism celebrated <u>World Tourism Day</u> on 27th September 2024, with the theme "Tourism and Peace." focusing on how tourism contributes to promoting world peace by encouraging cross-cultural interactions and understanding.

What is the Significance of World Tourism Day?

- History: World Tourism Day was first celebrated in 1980 by the <u>United Nations World</u>
 <u>Tourism Organization (UNWTO)</u>, and raises awareness about the social, cultural, and economic importance of tourism.
 - The day marks the **adoption of UNWTO's statutes in 1975**, signifying its official establishment five years later.
 - UNWTO advocates for tourism as a driver of economic growth, inclusive development, and environmental sustainability while supporting the sector in advancing knowledge and policies worldwide.
 - UNWTO comprises 160 Member States (including India), 6 Associate Members, 2 Observers, and over 500 Affiliate Members.
 - · Headquartered in Madrid, Spain.
- **Annual Themes**: Each year, World Tourism Day is celebrated with a specific theme and a host country, highlighting the unique role tourism plays in different regions around the world.
 - In 2024, Georgia will have the honour of hosting this important event. The theme for World Tourism Day 2024 is particularly inspiring: "Tourism and Peace."
- The day emphasises tourism's potential as a tool for achieving the <u>UN Sustainable</u>
 <u>Development Goals (SDGs)</u>, particularly in <u>poverty eradication</u> and <u>sustainable resource</u>
 <u>management</u>. It also highlights the importance of <u>eco-tourism</u> in supporting <u>SDG 13 on</u>
 climate action.

How does Tourism Contribute to Peace?

- Cultural Exchange: Tourism promotes understanding and tolerance among diverse cultures,
 reducing prejudice through shared experiences and dialogue.
- Economic Empowerment: As a major driver of economic growth (tourism contributes 10% of global Gross Domestic Product (GDP), 7% of global exports and accounts for one in every 10

jobs worldwide), tourism creates jobs and **strengthens local economies**, which can alleviate **poverty and inequality**, which can be root causes of conflict.

- Sustainability: Responsible tourism practices conserve natural and cultural heritage, fostering community pride and reducing resource-related tensions.
- Good Governance: A thriving tourism sector encourages governments to maintain stability and develop policies that promote peace and functionality.
- Gender Equality: The tourism industry empowers women and engages local communities.
 - The Tribal Home Stays (under <u>Swadesh Darshan program</u>), implemented by the Ministry of Tourism of India, aims to tap into the **tourist potential of tribal areas** and provide an **alternative livelihood to the tribal community.**
 - This initiative fosters social equity and reduces inequalities.
- **Pandemic Recovery**: Tourism aids in rebuilding economies and promoting healing in post-conflict areas, as seen in countries like **Rwanda**.
 - Rwanda's GDP grew by 8.4% in the first three quarters of 2022, following an 11% increase in 2021. This growth was driven by the services sector, particularly the revival of tourism, which improved employment indicators to levels similar to early 2020, before the Covid-19 pandemic.

What is the Outlook of India's Travel and Tourism Industry?

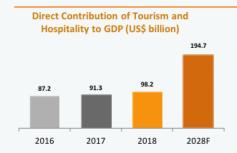
- Global Ranking: India ranks 39th in the World Economic Forum's Travel and Tourism
 <u>Development Index</u> 2024. Its strong performance is driven by exceptional <u>natural</u>, <u>cultural</u>,
 and <u>non-leisure resources</u>(resources that are utilised for business, education, and other
 activities outside of leisure travel).
- Economic Contribution: According to the World Travel & Tourism Council (WTTC), the
 contribution of India's travel and tourism sector to India's economy was worth USD 199.6 billion in
 2022.
 - Cumulative <u>Foreign Direct Investment</u> (FDI) inflow in the hotel and tourism industry stands at USD 17.2 billion from April 2000 to <u>March 2024</u>. This constitutes 2.54% of the total FDI inflow received across sectors.
 - Rise of Domestic Tourist Visits (DTV) in 2023 reached 250 crore, nearly double from 128 crore in 2014.
- Government Initiatives:
 - National Tourism Policy, 2022
 - Dekho Apna Desh Initiative
 - Swadesh Darshan Scheme
 - Ek Bharat Shreshtha Bharat
 - e-Visa Facility
 - Cruise Tourism
- Growth Projections:
 - Annual Growth Rate: The Indian travel and tourism industry is expected to grow at an annual rate of 7.1%.
 - Job Creation: The Government of India has a vision of USD 56 Billion forex, creating around 140 million jobs in tourism by 2030 through inclusive growth and are particularly focusing on cruise tourism, ecotourism and adventure tourism.
 - Visitor Spending Trends: Domestic visitor spending surged by 20.4% in 2022, while international visitor spending increased by 81.9%.
 - **Foreign Tourist Arrivals (FTAs):** FTAs reached 9.24 million in 2023, a notable rise from 6.43 million in 2022.
 - The top countries for FTAs in India during 2022 are the United States, Bangladesh, and the United Kingdom. FTAs are expected to reach 30.5 million by 2028.



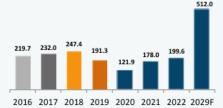
TOURISM AND HOSPITALITY



MARKET SIZE



Travel and Tourism's Total Contribution to GDP (US\$ billion)

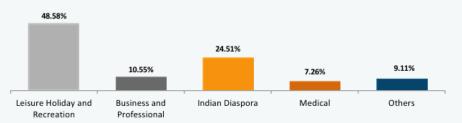


Note: F - Forecast



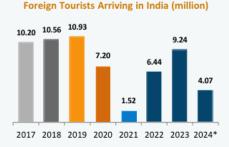
SECTOR COMPOSITION

Purpose-wise Foreign Tourist Arrivals in (Jan-May) 2024 (%)

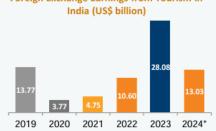




KEY TRENDS



Foreign Exchange Earnings from Tourism in India (US\$ billion)



Note: E- Estimated, *January to May 2024



GOVERNMENT INITIATIVES



Incredible India!



Swadesh Darshan



Robust demand: The travel market in India is projected to reach US\$ 125 billion by FY27 from an estimated US\$ 75 billion in FY20. Drawing upon world-class healthcare amenities and traditional healing practices, medical tourism and wellness retreats entice 21% of international travelers.

- Diverse Attractions: India offers geographical diversity, world heritage sites and niche tourism products like cruises, adventure, medical, eco-tourism, etc. Incredible India has spurred growth in tourist arrivals and employment. According to WTTC, the contribution of India's travel and tourism sector to India's economy was worth US\$ 199.6 billion 2022. Pilgrimage travel in India is gaining popularity domestically and among the large Indian diaspora worldwide.
- Policy support: In the 2024 Interim Budget, Finance Minister Ms. Nirmala Sitharaman allocated Rs. 2,449.62 crore (US\$ 294.8 million) to the tourism sector, a 44.7% increase from the previous fiscal year. The Ministry of Tourism has undertaken Destination Based Skill Development training programme at various places in the country to train, local people residing near the tourist sites and destinations. Around 12,187 candidates have been trained at 145 destinations.
- Attractive opportunities: In 2024, Prime Minister Mr. Narendra Modi inaugurates 52 tourism sector projects valued at over Rs. 1,400 crore (US\$ 168.5 million) under the Swadesh Darshan and PRASHAD Scheme.



ADVANTAGE INDIA

What are the Challenges Related to the Tourism Sector in India?

- Safety and Security Issues: Instances of crime, including theft and assault, have been reported, creating an atmosphere of fear, particularly for women travellers.
 - Such security issues can deter tourists from visiting certain areas, affecting the overall perception of India as a tourist-friendly country.
- Inadequate Infrastructure: Many tourist destinations, especially in remote regions like the Northeast, lack essential infrastructure such as reliable air, rail, and road connectivity. This limits access to beautiful yet unexplored areas, affecting domestic and international travel.
- Unskilled Human Resources: The tourism sector suffers from a lack of trained manpower, including multilingual guides. This shortage can hinder the overall experience for international tourists and impact service quality.
- Unsustainable Tourism Practices: Unsustainable tourism practices, especially in ecologically sensitive areas like the <u>Himalayas</u>, lead to resource depletion, soil erosion, and habitat destruction. The overconsumption of resources strains local ecosystems and communities.
- Pollution and Climate Change: Major tourist sites, including the <u>Taj Mahal</u>, are affected by pollution. <u>Climate change</u> poses further threats, leading to <u>natural disasters</u> that impact tourism infrastructure and heritage conservation.

What are India's Tourism Advantages?

- Rich Cultural Heritage: India is a mosaic of languages, religions, and traditions. Home
 to <u>UNESCO World Heritage sites</u> like the Taj Mahal, <u>Hampi</u>, and <u>Jaipur's forts</u> that attract
 tourists interested in history and culture.
- Natural Beauty: India boasts 70% of the Himalayas (Home to numerous adventure sports and trekking opportunities).
 - 7,000 km of <u>coastline</u> (ideal for water sports and beach tourism). India has both hot and cold deserts.
 - Extensive forest cover which can aid in boosting ecotourism.
 - India's biodiversity hosts unique flora and fauna, including national parks like Jim Corbett and Kaziranga.
- Adventure Tourism Potential: With a range of activities like trekking, river rafting, paragliding, and wildlife safaris available, India is poised to become a premier destination for adventure tourism.
- Affordable Travel Options: India offers relatively low travel costs compared to many Western countries, making it accessible for various income groups, thereby attracting a diverse range of tourists.
- Warm Hospitality: The Indian ethos of "Atithi Devo Bhava" (Guest is God) ensures warm and welcoming experiences for visitors.
 - Locals are generally eager to help and share their rich cultural heritage with tourists, enhancing their overall experience.
- Culinary Diversity: The country boasts varied culinary experiences across its regions, known for both vegetarian and non-vegetarian dishes. Its popular street food offerings cater to food lovers seeking authentic local flavours.
- Growing Infrastructure: India is enhancing tourism infrastructure through airport expansions, railway improvements, and highway developments under initiatives like <u>Bharatmala</u>.
 - Investments in hospitality and skill development programs aim to improve service quality and accommodate growing visitor numbers.

Percentage share of top 10 States/UTs of India in number of Domestic Tourist Visits in 2022 is depicted below:



Way Forward

- **Enhance Connectivity**: Invest in transportation initiatives like **Vande Bharat trains** and infrastructure development to improve access to remote tourist destinations.
- Tax Simplification: Advocate for streamlined tax reforms, including lower <u>Goods and Services</u>
 Tax (GST) rates, to reduce costs for tourists and businesses.

isw.

- Prioritise Safety: Establish tourism police and implement strict security protocols to boost tourist confidence in safety.
- **Skill Development**: Invest in training programs for the tourism workforce to improve service quality and cultural sensitivity.
- Leverage Digital Technology: Enhance existing initiatives like the Digi Yatra app and leverage Bhashini to facilitate multilingual support, ensuring a seamless travel experience for all users.
 - Additionally, utilise <u>social media</u> and travel websites to increase the visibility of destinations and streamline trip planning.
- Embrace Staycation Trends: Major hotel chains like Marriott, and Oberoi are embracing the staycation trend by offering curated experiences that provide stress relief and luxurious getaways. By promoting staycations, hotels can enhance occupancy rates and stimulate the local economy through increased spending on nearby attractions and services.
- **International Partnerships**: Explore **travel bubbles** with countries like Russia to facilitate tourism while implementing health safety protocols.
 - The concept of <u>sister cities</u> can enhance these partnerships by fostering cultural exchange, economic collaboration, and mutual support in tourism initiatives.

Drishti Mains Question:

Discuss the significance of World Tourism Day and evaluate the current outlook of India's travel and tourism industry and propose strategies to address them.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Mains

Q.1 How can the mountain ecosystem be restored from the negative impact of development initiatives and tourism? **(2019)**

Q.2 The states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand are reaching the limits of their ecological carrying capacity due to tourism. Critically evaluate. **(2015)**

India's Stance on Fisheries Subsidies

For Prelims: World Trade Organization (WTO), Fisheries Subsidies Agreement (FSA), Special and Differential Treatment (S&DT), Pradhan Mantri Matsya Sampada Yojana (PMMSY), Blue Revolution (Neel Kranti Mission), Kisan Credit Card (KCC) Scheme Extension, Sagarmala Project, Marine Fisheries Bill, 2021, National Fisheries Policy.

For Mains: Fisheries Subsidies Agreement (FSA) and its impact on India.

Source: BL

Why in News?

India's proposals at the <u>World Trade Organization (WTO)</u> advocating for the establishment of regulations on fisheries subsidies have garnered substantial backing from numerous developing nations and least developed countries (LDCs).

Efforts are currently underway to finalize the second phase of the <u>Fisheries Subsidies</u>
 <u>Agreement (FSA)</u> which aims to establish regulations on subsidies that contribute to
 overcapacity and overfishing, thereby promoting sustainable fishing practices.

What is the Fisheries Subsidies Agreement (FSA)?

About:

It prohibits subsidies from being provided for <u>Illegal</u>, <u>Unreported and Unregulated</u>
 (<u>IUU</u>) <u>fishing</u> and overfished stocks.

The Visu

 The agreement proposed in <u>WTO's 12th Ministerial Conference</u>, also prohibits providing subsidies for fishing on <u>high seas</u>, which are outside the jurisdiction of coastal countries and Regional Fisheries Management Organizations/ Arrangements.

Transition Period Allowance:

- Under the Special and Differential Treatment (S&DT), Developing Countries and Least Developed Countries (LDCs) have been allowed a transition period of two years from the date of entry into force of this Agreement.
- They will have no obligation to implement disciplines for the specified period.

Exempted Areas:

- No prohibition has been imposed on a WTO Member regarding granting or maintaining subsidy to its vessel or operator as long as it is not carrying out IUU.
- No prohibition on providing subsidies has been imposed for fishing regarding overfished stocks as long as such subsidies are implemented to rebuild the stock to a biologically

sustainable level.

• Negotiations on this issue have been going on in the second phase of FSA.

Benefits:

 It will check large-scale IUU fishing which deprives coastal countries like India of fisheries resources, thereby significantly impacting the livelihoods of our fishing communities.

What are the Concerns Regarding the Fisheries Subsidies Agreement?

- Concerns of Small fishermen and Developing Countries and LDCs:
 - Large-scale **commercial fishing operations often deplete fish stocks**, leading to reduced catches for small fishermen.
 - Large fishing corporations often receive substantial government subsidies that small fishermen do not, creating an uneven playing field.
 - The sustainability exemption clause in FSA is problematic as it permits advanced fishing nations, which have better monitoring capabilities, to evade commitments to reduce harmful subsidies, thereby disadvantage poorer countries that may fish sustainably but lack similar capacities.
 - Globally, an estimated 37.7% of fish stocks are overfished, a significant rise from 10% in 1974, underscoring the urgent need for effective regulatory interventions.
 - As per WTO data, government funding for fisheries amounts to USD 35 billion globally, of which approximately USD 22 billion is directed towards subsidies that increase the capacity for unsustainable fishing.

Note:

- Status of Countries Subsidising Fisheries:
 - The top five countries subsidizing fishing are China, the European Union, the US, South Korea, and Japan, collectively accounting for 58% of total global fishing subsidies.
 - China stands out as a significant subsidiser, with approximately two-thirds of its subsidies classified as capacity-enhancing, which includes investments in larger vessels and equipment designed to exploit marine resources extensively.

What is India's Stand on the FSA?

- India's submissions to the WTO on fisheries subsidies emphasize critical gaps that could perpetuate unsustainable fishing practices, particularly among large-scale industrial fishing nations.
 - India's stand is that it is one of the lowest fisheries subsidisers despite such a large population and one of the disciplined nations in sustainably harnessing the fisheries resources.
- India advocates for the application of the "polluter pays principle" and "common but differentiated responsibilities" to ensure that countries with higher subsidies and industrial fishing practices bear greater obligations in prohibiting harmful subsidies.

Status of India's Fisheries Sector

- India ranks as the third-largest fish-producing country globally (after China and Indonesia), accounting for 8% of total global fish production.
 - In the fiscal year 2022-23, India produced approximately 17.54 million metric tons (MMT) of fish.
- Initiatives Related to Fisheries Sector:
 - Pradhan Mantri Matsya Sampada Yojana (PMMSY)
 - Blue Revolution (Neel Kranti Mission)

- Extension of the KCC facility to fisheries
- Marine Fisheries Bill, 2021
- National Fisheries Policy

Way Forward

- Balanced Approach for Negotiations: The ongoing negotiations at the WTO for the FSA should prioritize a balanced approach that effectively addresses the issue of overcapacity and overfishing while protecting the interests of small-scale fishers, particularly in developing countries like India.
 - The agreement should prioritize the voices and concerns of coastal communities, ensuring that their needs are central to the decision-making process.
- **Leadership Role for India:** India has significant gains to make from this agreement. India's small-scale fishers and local coastal communities are especially hurt from overfishing.
 - It has the opportunity to position itself as a leader of the Global South by advocating for coastal nations that suffer from the impacts of foreign industrial fishing fleets.
 - This stance can solidify India's commitment to the welfare of its small-scale fishers and local coastal communities, who are adversely affected by overfishing and declining catches.

Drishti Mains Ouestion:

Discuss the implications of the Fisheries Subsidies Agreement (FSA) for developing countries and Least Developed Countries (LDCs). What are the concerns regarding the potential impacts of subsidies from developed countries?

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

- Q. The terms 'Agreement on Agriculture', 'Agreement on the Application of Sanitary and Phytosanitary Measures' and 'Peace Clause' appear in the news frequently in the context of the affairs of the (2015)
- (a) Food and Agriculture Organization
- (b) United Nations Framework Conference on Climate Change
- (c) World Trade Organization
- (d) United Nations Environment Programme

Ans: (c)

Mains:

Q. WTO is an important international institution where decisions taken affect countries in a profound manner. What is the mandate of WTO and how binding are their decisions? Critically analyse India's stand on the latest round of talks on Food security. **(2014)**

State of Sugar Industry in India

For Prelims: FRP, SAP, CACP, Rangarajan Committee, WTO, Sugarcane Industry, EBP Program

For Mains: State of Sugar Industry in India, Sugarcane Production in India, its Potential and Challenges.

Source: BS

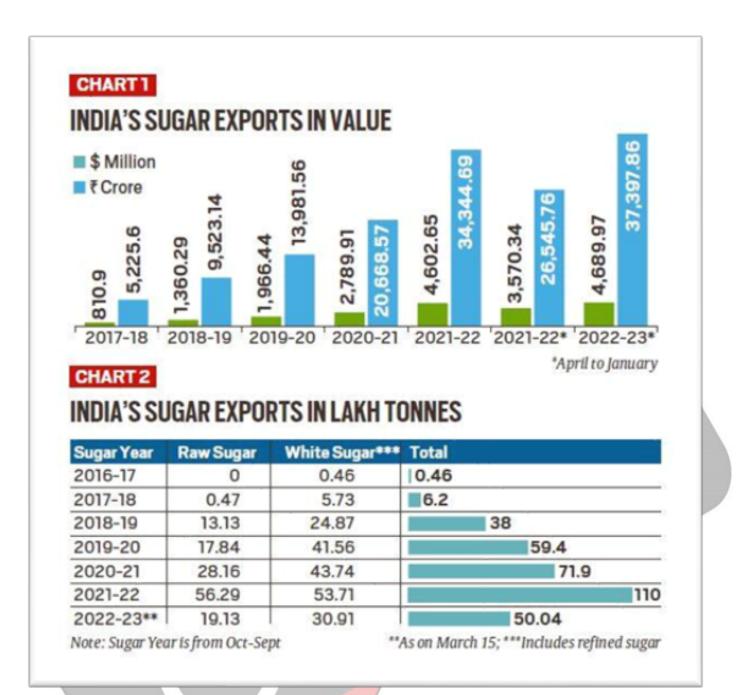
Why in News?

The sugar sector in India is experiencing a notable **recovery** after a prolonged period of uncertainty.

 Recent revisions in production estimates for the current season, coupled with a positive outlook for the upcoming season beginning in October, have contributed to a more favourable supply situation in the industry.

What is the State of the Sugar Industry in India?

- Production and Consumption Data:
 - Production: Indian Sugar Mills Association (ISMA) projects gross sugar production at 34.0 million MT, with net production at 32.3 million MT for Sugar Year (SY) 2024 after ethanol diversion and a ban on exports.
 - According to the US Department of Agriculture, Brazil is the world's top sugar producer for 2023-24, with a production of 45.54 million MT, accounting for about 25% of global output.
 - India is the largest consumer and the second-largest producer of sugar in the world contributing around 19% of global sugar production.
 - Consumption and Stocks: Domestic consumption is estimated at 28.5 million
 MT, leading to a closing stock of 9.4 million MT by September 2024, up from 5.6 million
 MT last year.
 - Ethanol Production: A target of 320 crore liters for the first half of Ethanol Supply Year (ESY) 2024 was set, with 224 crore liters supplied by March 2024, achieving an 11.96% blending ratio.
- Distribution of Sugar Industries: The sugar industry is broadly distributed over two major areas of production:
 - Uttar Pradesh, Bihar, Haryana and Punjab in the north and Maharashtra, Karnataka, Tamil
 Nadu and Andhra Pradesh in the south.
 - South India has tropical climate which is suitable for higher sucrose content giving higher yield per unit area as compared to north India.
- Geographical Conditions for the Growth of Sugar:
 - **Temperature:** Between 21-27°C with hot and humid climate.
 - Rainfall: Around 75-100 cm.
 - Soil Type: Deep rich loamy soil.
- Sugar Exports:



What is the Significance of the Sugar Industry in India?

- Employment Generation: The sugar sector is highly labor-intensive, providing livelihoods for approximately 50 million farmers and their families.
 - It offers direct employment to over 500,000 skilled workers, along with numerous semi-skilled laborers engaged in sugar mills and related industries, particularly in states like Uttar Pradesh, Maharashtra, Tamil Nadu, and Karnataka.
- Value-Chain Linkages: The industry spans the entire value chain, from sugarcane cultivation
 to the production of sugar and alcohol which supports various sectors and promotes economic
 development at the local and national levels.
- **Economic Contributions from Byproducts:** The sugar industry generates several byproducts, including **ethanol, molasses, and bagasse**, which further enhance economic growth.
 - It has emerged as a multi-product crop, serving as a raw material for not only sugar and ethanol but also for paper and electricity generation.
- Livestock Feeding and Nutrition: Molasses, a byproduct of sugar production, is highly nutritious and used for both livestock feeding and alcohol production, contributing to the agricultural economy.

- Biofuel Production: The majority of ethanol in India is produced from sugarcane molasses, which plays a crucial role in reducing reliance on crude oil imports through ethanol-blended fuels.
- Utilisation of Bagasse: Bagasse, the fibrous residue after sugar extraction, serves as a fuel source and is an essential raw material for the paper industry. It contributes about 30% of the cellulose requirements from agricultural residues.

What are the Challenges Associated With the Sugar Industry in India?

- Water-Intensive Crop: Sugarcane is a highly water-intensive crop, yet it is predominantly grown in monsoon-dependent states like Maharashtra and Karnataka which exacerbates water scarcity issues in these areas.
- Seasonal Nature of Sugarcane: The seasonal availability of sugarcane poses a challenge, as delays in crushing beyond 24 hours after harvest result in sucrose loss.
- Low Sugar Recovery Rate: The sugar recovery rate in Indian sugar mills has remained stagnant at 9.5-10%, much lower than the 13-14% seen in some other countries. This is largely due to a lack of major advancements in developing better sugarcane varieties and improving crop vields.
- Uncertain Production Output: Sugarcane cultivation competes with other food and cash crops like cotton, oilseeds, and rice, leading to supply fluctuations and price volatility, especially during surplus periods when prices fall.
- Low Investment and Outdated Technology: Many sugar mills, particularly in states like Uttar Pradesh and Bihar, are old and operate with outdated machinery which hampers productivity.
- Competition from Gur Production: While gur has higher nutritional value, it has a lower sugar recovery rate compared to sugar leading to a net loss for the country when sugarcane is diverted to gur production.
 - Also, gur factories often procure sugarcane at a lower price than sugar mills, incentivising farmers to sell to them, further impacting sugar production.

What are the Government Initiatives for the Sugar Industry?

- Rangarajan Committee (2012): It was established to provide recommendations for reforming the sugar industry.
 - Replacing quantitative controls on sugar imports and exports with appropriate tariffs and ending outright bans on sugar exports.
 - Reviewing the 15 km minimum radial distance between sugar mills, which can create monopolies and give mills undue power over farmers.
 - **Allowing market-determined prices** for by-products and encouraging states to reform policies, enabling mills to generate power from bagasse.
 - Lifting restrictions on the sale of non-levy sugar to improve the financial health of mills, ensuring timely payments to farmers and reducing cane arrears.
- Fair and Remunerative Price (FRP): On the recommendations of <u>Commission for</u>
 <u>Agricultural Costs and Prices (CACP)</u> a hybrid approach for fixing sugarcane prices, incorporating the <u>Fair and Remunerative Price (FRP)</u> was suggested.
- Ethanol Blending with Petrol (EBP) Programme: Under EEP initiative, ethanol production capacity in molasses/sugar-based distilleries has expanded to 605 crore litres annually, with ongoing efforts to achieve the 20% ethanol blending target by 2025.
- Legislations Measures:
 - **Essential Commodities Act (ECA), 1955**: <u>ECA,1955</u> regulates sugar and sugarcane, giving powers to control the sugar sector.
 - **Sugarcane (Control) Order, 1966**: Fixes the FRP for sugarcane and ensures timely payments to farmers.
 - **Sugar (Control) Order, 1966**: Regulates the production, sale, packaging, and international trade of sugar.
 - **Sugar Price Control Order, 2018**: Establishes the Minimum Selling Price (MSP) for sugar and allows inspections of sugar mills and storage facilities.

Note:

- Fair and Remunerative Price (FRP): FRP is the minimum price sugar mills are mandated to pay farmers for sugarcane. It is determined by the Central Government, based on the recommendations of the CACP, in consultation with state governments and other stakeholders.
- State Advised Price (SAP): While FRP is set by the central government, state governments
 can set their own SAP, which sugar mills must pay farmers if higher than the FRP.

Way Forward

- Research & Development in Sugarcane: Investment in R&D is crucial to address low yields and low sugar recovery rates. Developing high-yielding, drought-resistant varieties can improve productivity and sustainability in the long term.
- Implementation of Revenue Sharing Formula: The Rangarajan Committee's Revenue Sharing Formula should be adopted for fair cane pricing, factoring in sugar and by-product prices.
- Adoption of Remote Sensing Technologies: There is an urgent need to deploy advanced remote sensing technologies for accurate mapping of sugarcane cultivation areas with reliable data.
- Price Support Mechanism: In cases where the cane price determined by the formula falls below a reasonable level, the government can bridge the gap through a dedicated fund, built from a cess levied on sugar sales.
- Encouragement of Ethanol Production: The government should incentivise ethanol production to reduce dependence on oil imports and manage excess sugar production and stabilise both the sugar and energy markets.

Drishti Mains Question:

Discuss the challenges faced by India's sugar industry and evaluate the government measures implemented to support it.

UPSC Civil Services Examination, Previous Year's Question (PYQs)

Q. With reference to the usefulness of the by-products of sugar industry, which of the following statements is/are correct? (2013)

- 1. Bagasse can be used as biomass fuel for the generation of energy.
- 2. Molasses can be used as one of the feedstocks for the production of synthetic chemical fertilizers.
- 3. Molasses can be used for the production of ethanol.

Select the correct answer using the codes given below:

- (a) 1 only
- **(b)** 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (c)

Mains

Q. Do you agree that there is a growing trend of opening new sugar mills in the Southern states of India? Discuss with justification. **(2013)**

Make in India Celebrates 10 Years

For Prelims: Make in India initiative, Make in India 2.0 phase, Foreign Direct Investment (FDI), PLI Schemes, PM GatiShakti, Semicon India Programme, NLP, India's Logistics Performance Index (LPI), Smart Cities, Startup India Initiative, Goods and Services Tax (GST).

For Mains: Major Initiatives Taken under Make in India initiative, Critical analysis of Make in India initiative, Challenges and concerns regarding MII.

Source: PIB

Why in News?

The <u>'Make in India' initiative</u>, launched on **25th September 2014**, completes a landmark decade of empowering India to become a global manufacturing hub.

What is the 'Make in India' Initiative?

- About: The campaign was launched to facilitate investment, foster innovation, enhance skill development, protect intellectual property & build best-in-class manufacturing infrastructure.
- Objectives:
 - Increase the growth rate of the manufacturing sector to 12-14% per annum.
 - Create 100 million additional manufacturing jobs by 2022 (revised to 2025).
 - Increase the manufacturing sector's contribution to GDP to 25% by 2025.
- Pillars of 'Make in India':
 - New Processes: Recognized 'ease of doing business' as vital for entrepreneurship, implementing measures to improve the business environment for startups and established enterprises.
 - New Infrastructure: The government prioritised developing industrial corridors and smart cities to create world-class infrastructure.
 - It also enhanced innovation and research through streamlined registration systems and improved **intellectual property rights (IPR)** infrastructure.
 - New Sectors: Foreign Direct Investment (FDI) was significantly opened up in various sectors including Defence Production, Insurance, Medical Devices, Construction, and Railway infrastructure.
 - New Mindset: The government embraced a role as a facilitator rather than a regulator, partnering with industry to drive the country's economic development.
- Make in India 2.0: The ongoing "Make in India 2.0" phase, encompassing 27 sectors, continues to propel the program forward, consolidating India's role as a significant player in the global manufacturing arena.

Made in China 2025

- This initiative aims to transform China's economy from a low-cost manufacturing base to a producer of high-value products and services. The plan's goals include:
 - Increasing the share of core materials sourced domestically from 40% in 2020 to 70% in 2025.
 - Achieving technological breakthroughs in 10 key sectors, including semiconductors,

- aerospace, and robotics.
- Reducing energy and resource consumption.
- Developing globally competitive firms and industrial centres.

What are the Major Initiatives Taken to Enable Make in India?

- Production Linked Incentive (PLI) Schemes: The PLI Schemes aim to enhance domestic manufacturing and boost exports by covering 14 key sectors.
 - **Progress as of July 2024:** Total investment reached Rs 1.23 lakh crore and approximately 8 lakh jobs have been generated.
- PM GatiShakti: It was launched with the aim of achieving a USD 5 trillion economy by 2025.
 - The initiative focuses on establishing multimodal and last-mile connectivity infrastructure to enhance economic growth.
 - The **initiative operates through seven primary engines**: Railways, Roads, Ports, Waterways, Airports, Mass Transport, and Logistics Infrastructure.
- Semiconductor Ecosystem Development: The <u>Semicon India Programme</u> was approved in 2021 to develop a sustainable semiconductor and display ecosystem.
- National Logistics Policy (NLP): It was launched to focus on enhancing India's logistics sector through advanced technology, improved processes, and skilled manpower.
 - Its goals include reducing logistics costs, boosting India's Logistics Performance Index
 (LPI) ranking to be in the top 25 by 2030, and developing a data-driven decision support system.
- Industrialization and Urbanization: The National Industrial Corridor Development Programme is India's flagship infrastructure initiative, aimed at developing <u>"Smart Cities"</u> and advanced industrial hubs.
- **Startup India:** It was **launched** to support entrepreneurs, build a robust startup ecosystem, and transform India into a nation of job creators rather than job seekers.
 - As of September 2024, India has the third-largest startup ecosystem globally, with 148,931 DPIIT Recognized Startups that have generated over 15.5 lakh direct jobs.
- Tax Reforms: Goods and Services Tax (GST) marked a significant reform in India's tax system.
- Unified Payments Interface: UPI processes 46% of global real-time payment transactions, emphasizing its critical role in digital finance.
 - From April to July 2024, UPI facilitated nearly Rs 81 lakh crore in transactions, reflecting its robustness and increasing consumer trust.

What are the Major Achievements under Make in India?

- Global Supply of Vaccination: India achieved record <u>Covid-19 vaccination coverage</u>, powered by indigenous vaccines, and emerged as a leading exporter, supplying nearly 60% of the world's vaccines.
- Vande Bharat Trains: It is India's first indigenous semi-high-speed trains, exemplifying the 'Make in India' initiative.
 - Currently, 102 services (51 trains) are operational, enhancing connectivity and showcasing advancements in rail technology.
- Defence Production Milestones: The launch of <u>INS Vikrant</u>, India's first domestically produced aircraft carrier, signifies progress in self-reliance in defence.
 - In 2023-24, defence production reached Rs. 1.27 lakh crore, with exports to over 90 countries.
- Electronics Sector Growth: India's electronics sector has expanded to USD 155 billion in FY23, with production nearly doubling since FY17. Mobile phones account for 43% of this production, establishing India as the second-largest mobile manufacturer globally.
- Export:
 - Merchandise: It amounted to USD 437.06 billion in FY 2023-24.
 - Defence Footwear: 'Made in Bihar' boots have been incorporated into the Russian Army's equipment.

- Kashmir Willow Bats: These have gained international popularity, demonstrating India's craftsmanship and influence in cricket.
- Amul's International Expansion: Amul has launched its dairy products in the US, underscoring the global appeal of Indian dairy.
- Textile Industry Employment: The textile sector has created approximately 14.5 crore jobs, significantly contributing to the employment landscape.
- **Toy Production:** India produces around 400 million toys annually, innovating with 10 new toys developed every second.

What are the Challenges Related to the Make in India Programme?

- Global Manufacturing Index: As of 2023, India ranked 5th in the Global Manufacturing Index, trailing behind countries like China and the USA, indicating the need for enhanced competitiveness.
- Manufacturing Contribution to GDP: The manufacturing sector contributed approximately 17% to India's GDP in FY 2022-23, highlighting the necessity for policies that stimulate growth in this area.
 - However, to reach the goal of 25% contribution by 2025, substantial reforms are essential.
- Skill Development Deficiencies: The India Skills Report 2024, indicate that around 60% of the workforce in India lacks relevant skills for manufacturing jobs, which hampers the potential growth of the sector.
- Supply Chain Challenges: The Covid-19 pandemic exposed vulnerabilities in global supply chains, which continue to affect India's manufacturing landscape.
 - A shift towards localizing supply chains is necessary but remains underdeveloped .
- Investment Targets: The government set a target to attract USD 100 billion in manufacturing investment by 2025.
 - As of 2023, only about USD 23 billion has been achieved, underscoring the gap between goals and reality.
- Innovation and R&D: India's research and development (R&D) expenditure-GDP ratio of 0.7% is very low when compared to major economies and is much below the world average of 1.8%.

Way Forward

- Streamlining Regulations: Simplify bureaucratic processes and labour laws to create a more business-friendly environment.
 - For example, <u>Four labour codes</u> passed in India in 2019 and 2020 are yet to be implemented.
- Investment in Infrastructure: Upgrade transportation networks and logistics systems to improve manufacturing efficiency.
- **Skill Development Programs:** Implement targeted skill development initiatives to address workforce skill gaps.
 - Countries like South Korea have 90% skilled population rate and India have to work as per industry need.
- **Incentivizing R&D Investment:** Promote innovation through increased investment in research and development, including tax incentives.
- Promoting Local Supply Chains: Strengthen domestic supply chains to reduce dependency on imports and enhance resilience.
- **Enhancing Foreign Relations:** Foster trade relations to attract foreign investment and facilitate technology transfer.
 - Economic Survey of 2023-24 suggests that India can benefit from Chinese investments by attracting FDI from China.
- **Monitoring and Evaluation:** Establish a framework for monitoring the initiative's impact to identify bottlenecks and areas for improvement.

Drishti Mains Question:

Evaluate the progress and challenges of the Make in India initiative ten years post-implementation.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims:

Q. What is/are the most likely advantages of implementing 'Goods and Services Tax (GST)'? (2017)

- 1. It will replace multiple taxes collected by multiple authorities and will thus create a single market in India.
- 2. It will drastically reduce the 'Current Account Deficit' of India and will enable it to increase its foreign exchange reserves.
- 3. It will enormously increase the growth and size of the economy of India and will enable it to overtake China in the near future.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (a)

Mains:

Q. "Success of 'Make in India' program depends on the success of the 'Skill India' programme and radical labour reforms." Discuss with logical arguments. **(2015)**

Latitudinal Variation in Sun's Rotation Speed

Source: PIB

Why in News?

Recently, **Indian astronomers** have mapped variation in the <u>Sun's rotation</u> speed from its **equator to its poles** for the first time.

The study used 100 years of daily solar observations from the <u>Kodaikanal Solar Observatory</u>,
 Tamil Nadu.

What are the Key Findings of the Study?

- **Sun's Chromospheric Rotation Mapped:** Astronomers have successfully mapped the variation in the rotation speed of the **Sun's chromosphere** for the **first time.**
 - The chromosphere is a **thin layer of <u>plasma</u>** that lies **between** the Sun's visible surface **(the <u>photosphere</u>)** and the **corona** (the Sun's upper atmosphere).

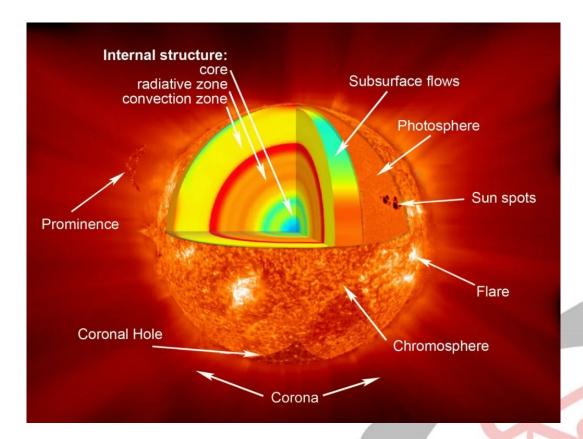
- **Differential Rotation of the Sun:** The Sun's **equator** spins much **faster** than its poles. It takes the equatorial region only about 25 days to complete one rotation, while the poles take 35 days.
 - The Sun's equator rotates at 13.98 degrees per day, while at 80 degrees latitude, the rotation rate slows to **10.5 degrees per day**.
- Contribution of Kodaikanal Solar Observatory: Using solar plages and network cells from the observatory's records of 100 years, astronomers could measure the Sun's rotation speeds across all latitudes.
 - Plages are brighter regions with weaker magnetic fields. They are found in the **chromosphere** and are 3 to 10 times larger than sunspots.
 - **Network cells** have weaker magnetic fields and are slightly larger than individual **sunspots** but smaller than sunspot groups.
 - Unlike sunspots, plages and networks are always present on the Sun's surface, helping scientists study the rotation rate even at the poles.
 - Sunspots are areas that appear dark on the surface of the Sun. They appear dark because they are **cooler** than other parts of the Sun's surface.
- Significance of the Findings: Understanding this differential rotation is essential as it is behind the solar dynamo, the 11-year solar cycle, and its periods of intense activity that even produce **magnetic storms** on Earth.

Note:

- Richard Carrington, an English astronomer in the 19th century, first discovered differential **rotation** by observing **sunspots**.
- The Vision However, sunspots are mostly limited to latitudes below 35 degrees and are not suitable for high-latitude rotation measurements.

What are the Key Facts About the Sun's Atmosphere?

- The Sun's atmosphere consists of multiple layers, each with distinct characteristics and temperatures:
 - Photosphere: The visible surface of the Sun, marking the boundary between the interior and the atmosphere.
 - Chromosphere: An irregular layer above the photosphere where the temperature rises from 6000°C to about 20,000°C.
 - Transition Region: A thin and very irregular layer of the Sun's atmosphere that **separates** the **hot corona** from the much cooler **chromosphere**.
 - Corona: The Sun's outer atmosphere. It is much hotter than the underlying chromosphere or photosphere.
- Beyond the corona lies the solar wind, which is an outward flow of charged particles (plasma) originating from the corona.
 - The solar wind extends far into space affecting planetary atmospheres and causing phenomena like the auroras on Earth.



About Kodaikanal Solar Observatory

- It is operated by the <u>Indian Institute of Astrophysics</u> (IIA) is located in the Palani range of hills in Southern India.
 - IIA is an autonomous institute of Department Of Science & Technology.
- It was established to study the Sun's impact on Earth's atmosphere and better understand monsoon patterns.
- Solar observations at this observatory over more than 100 years provide one of the longest continuous series of solar data.
- One of the major milestones was the discovery of the **Evershed Effect** in **1909**, which is related to the **movement of gases in the solar atmosphere**.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

- Q. Electrically charged particles from space travelling at speeds of several hundred km/sec can severely harm living beings if they reach the surface of the Earth. What prevents them from reaching the surface of the Earth? (2012)
- (a) The Earths' magnetic field diverts them towards its poles
- (b) Ozone layer around the Earth reflects them back to outer space.
- (c) Moisture in the upper layers of atmosphere prevents them from reaching the surface of the Earth
- (d) None of the statements (a), (b) and (c) given above is correct

Ans: (a)

India's First Comprehensive Cancer Multi-Omics Data Portal

Source: BS

Why in News?

Recently, the <u>Indian Cancer Genome Atlas (ICGA)</u> has launched **India's first comprehensive cancer multi-omics data portal** as a repository for the country's cancer genomics.

• This will provide open access to clinically correlated data from Indian cancer patients.

Indian Cancer Genome Atlas (ICGA)

- It is a national initiative mapping cancer genomics, transcriptomics, and proteomics in India, operating as a not-for-profit organisation supported by public, private, and philanthropic collaboration.
- It engages over 50 clinicians, researchers, and data analysts to enhance cancer diagnosis and treatment in India while contributing to the global understanding of cancer biology.

What are the Key Features of Comprehensive Cancer Multi-omics Data Portal?

- Objective:
 - The goal is to create Indian-specific cancer datasets to enable personalised cancer treatment protocols tailored to Indian populations, addressing molecular-level differences between Indian and Western cancer patients.
- Key Features of the Portal:
 - Multi-Omics Data: It provides genomic, transcriptomic, and proteomic data for breast cancer, starting with 50 patients and plans to expand to over 500.
 - It will offer data that includes <u>Deoxyribonucleic Acid</u> (<u>DNA</u>), <u>Ribonucleic Acid</u> (<u>RNA</u>), and protein profiles of <u>breast cancer</u> patients, integrated with clinical outcomes.
 - Later, the dataset will be expanded to lung cancer patients and other cancers as well.
 - **cBioPortal Integration:** It is built on the internationally recognised **cBioPortal** platform facilitating **seamless integration with global cancer research efforts**.
 - It also invites researchers worldwide to contribute and expand the platform, fostering collaborative cancer research.
 - Free Access: It offers ethical data-sharing practices under <u>Biotech-PRIDE (Promotion of Research and Innovation through Data Exchange)</u> guidelines, promoting collaboration within the scientific community.

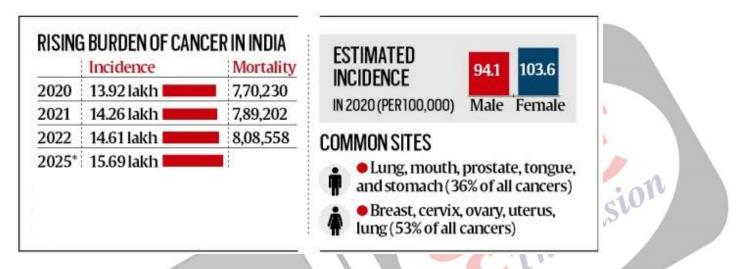
Multi-omics

- **Multi-omics** is a holistic approach to biology that combines data from multiple "omics" fields to gain a more comprehensive understanding of biological processes.
- These fields include:
 - **Genomics:** Study of the complete set of **DNA** (including all of its genes).
 - Transcriptomics: Study of a complete set of RNA molecules expressed in a cell, tissue, or organism.

- **Epigenomics:** Study of epigenetic changes, or changes in gene expression that don't alter the DNA sequence
- Proteomics: Study of the interactions, function, composition, and structures of proteins and their cellular activities

State of Cancer Burden in India

- Globally, in 2022, there were an estimated 20 million new cancer cases and 9.7 million deaths.
- In 2022, India recorded 1,413,316 new cancer cases, with a slight majority of female patients.
 - Breast cancer was the most prevalent, representing 13.6% of all cases and over 26% among women.
 - Other significant cancers included lip and oral cavity cancers, cervical and uterine cancers, lung cancer, and esophageal cancers.



Read More: Rising Cancer Concerns.

UPSC Civil Services Examination, Previous Year Question (PYQ)

- Q1. 'Mission Indradhanush' launched by the Government of India pertains to (2016)
- (a) Immunization of children and pregnant women
- **(b)** Construction of smart cities across the country
- (c) India's own search for the Earth-like planets in outer space
- (d) New Educational Policy

Ans: (a)

- Q. With reference to the treatment of cancerous tumours, a tool called cyberknife has been making the news. In this context, which one of the following statements is not correct? (2010)
- (a) It is a robotic image guided system
- (b) It delivers an extremely precise dose of radiation
- (c) It has the capability of achieving sub-millimetre accuracy
- (d) It can map the spread of tumour in the body

Ans: (d)

Q. 'RNA interference (RNAi)' technology has gained popularity in the last few years. Why? (2019)

- 1. It is used in developing gene-silencing therapies.
- 2. It can be used in developing therapies for the treatment of cancer.
- 3. It can be used to develop hormone replacement therapies.
- 4. It can be used to produce crop plants that are resistant to viral pathogens.

Select the correct answer using the code given below.

- (a) 1, 2 and 4
- **(b)** 2 and 3
- (c) 1 and 3
- (d) 1 and 4 only

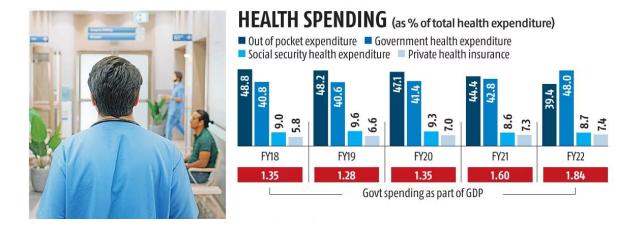
Ans: (a)

Decline in Out-of-Pocket Health Spending

Source: BS

ne Vision Recently, the National Health Accounts (NHA) Estimates 2021-22 was released by the Ministry of Health and Family Welfare as per which Out-of-pocket expenditure (OOPE) dropped to 39.4% of total health expenditure (THE) in 2021-22, down from 48.8% in 2017-18.

- This aligns with the government's objective to reduce OOPE to 35% of THE by the financial year **2025-26.**
- Reasons for Decline in OOPE:
 - Increase in the government's share of THE from 40.8% to 48%.
 - Initiatives like Avushman Bharat have facilitated broader access to health coverage.
 - Increased private health insurance coverage which grew from 5.8% in 2017-18 to 7.4% in 2021-22.
- Trends in Health Expenditure:
 - Social security expenditure for health declined from 9% in 2017-18 to 8.7% in
 - Government health expenditure as a percentage of GDP rose from 1.35% in 2017-18 to 1.84% in 2021-22. (Target: 2.5% of GDP by 2025).
 - Per capita health expenditure nearly doubled between 2017-18 and 2021-22.
- NHA Estimates is an annual publication that provides estimates of healthcare expenditures in India.
 - It explains how money flows in India's health system, how it's spent, how healthcare is provided, and the types of services used.
 - Based on 'A System of Health Accounts (SHA), 2011' (by WHO).
 - Published by The National Health Systems Resource Centre (NHSRC).



Read More: Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana

Launch of PARAM Rudra Supercomputers

Source: HT

Recently, the Prime Minister virtually launched three **PARAM Rudra supercomputers** showcasing India's commitment to self-reliance in **high-performance computing (HPC)**.

- The supercomputers have been deployed in Pune, Delhi, and Kolkata:
 - Pune: The <u>Giant Metre Radio Telescope</u> (<u>GMRT</u>) will utilise it to investigate <u>astronomical</u> phenomena like <u>Fast Radio Burst</u> (<u>FRB</u>).
 - A fast radio burst is a **bright and brief burst** of <u>electromagnetic radiation</u> (light) seen in **radio-wave frequencies**.
 - **Delhi**: The **Inter-University Accelerator Centre (IUAC)** will use it to bolster research in **material science and atomic physics.**
 - Kolkata: The S N Bose Centre will use it for research in physics, cosmology, and earth sciences.
- PARAM Rudra supercomputers are part of the **National Supercomputing Mission (NSM)**.
- About NSM: It aims to create a network of advanced computing systems across India.
 - It is a collaboration between the Ministry of Electronics and Information Technology (MeitY) and the Department of Science and Technology (DST).
- Supercomputers are advanced computing systems designed to handle complex and dataintensive tasks that require significant computational power.

Read More: National Supercomputing Mission (NSM)

Emergency Alert Messages in Cell Phones

Source: BS

Recently, the <u>Department of Telecommunications (DoT)</u> mandated that all **feature phones** in India must support **auto-readout of <u>emergency messages</u>** in Hindi and English. This order has raised concern among mobile manufacturers.

- Feature phones provide more features than basic cell phones but are not as advanced as smartphones.
- Key Provision of DoT Order:
 - All phones sold in India must support auto-readout of emergency messages in Hindi and English, with manufacturers required to add support for four additional Indian languages each year until full language support is achieved.
 - Alert signals (sound, vibration, light) must last for 30 seconds under standard conditions and 15 seconds for auto-read messages or until the user acknowledges them.
- Concerns of Phone Manufacturers:
 - Feature phones lack sufficient memory for text-to-audio conversion.
 - New requirements will increase production costs.
 - Redesigning phones will affect production timelines.
 - Smaller Indian brands may face challenges in complying with <u>Indian Wireless</u>
 <u>Telegraphy (Cell Broadcasting Service for Disaster Alerts) Act, 2023</u>, risking their market position.
 - The Act mandates that **no smartphone or feature phone** can be manufactured or sold in India **without cell broadcast capabilities**.

Read More: Emergency Alert System

Hike in Minimum Wages

Source: HT

Recently, the Union government hiked central minimum wages for agricultural and industrial workers.

- The increase is made under the provisions of the Minimum Wages Act, 1948 which empowers both the central and state governments to fix, review, and revise the minimum wages.
- A minimum or floor wage represents the lowest remuneration that employers are legally required to pay their workers.
- The government revises minimum wage rates twice a year.
- These adjustments are linked to the Consumer Price Index for Industrial Workers (CPI-IW).
 - CPI-IW measures the relative changes in retail prices of fixed basket of goods and services consumed by industrial workers over a period of time.
 - The Labour Bureau, Ministry of Labour and Employment, releases CPI-IW.

Read More: Consumer Price Index for Industrial Workers

PDF Reference URL: https://www.drishtiias.com/current-affairs-news-analysis-editorials/news-analysis/28-09-2024/print