Infrastructure Push in Kerala

For Prelims: National Infrastructure Pipeline (NIP), PM Gati Shakti Scheme, World Bank's Financing India's Urban Infrastructure Needs, National Bank for Financing Infrastructure and Development (NBFID), Viksit Bharat, Amrit Kaal, Made in India.

For Mains: India's Infrastructure sector - Significance, Challenges and Related Initiatives.

Source: TH

Why in News?

Recently, the **Prime Minister (PM)** inaugurated three projects in Kochi, Kerala which include the **New Dry Dock (NDD) at Cochin Shipyard Limited (CSL), the International Ship Repair Facility (ISRF) of CSL, and the LPG Import Terminal** of Indian Oil Corporation Limited (IOCL).

- These major infrastructure projects are in line with the Prime Minister's **vision to transform India's ports, shipping, and waterways sector,** and build capacity and self-sufficiency in it.

What are the three Different Projects Inaugurated in Kerala?

- **New Dry Dock:**
  - The NDD, with a length of 310 meters, is built **at par with international standards.**
  - This national pride is an engineering marvel which is **capable of handling aircraft** carriers twice the displacement of **INS Vikrant or other larger ships.**
  - It is a flagship project reflecting India's engineering prowess and project management capabilities, the **NDD is one of the largest marine infrastructures in the region.**
  - It has incorporated the latest technology and innovations to ensure efficiency, safety, and environmental sustainability.
- **International Ship Repair Facility:**
  - The ISRF is **India's first fully developed pure ship repair ecosystem** which will **add 25% capacity of ship repair industry in the country.**
  - Built at an investment of ₹970 crores, it will also **provide rapid turnaround for India's Naval and Coast Guard ships** during emergencies as planned refits.
  - The ISRF will modernise and expand the existing ship repair capabilities of CSL and to transform it as a global ship repair hub.
- **LPG Import Terminal for IOCL:**
  - An LPG Import Terminal for IOCL was also inaugurated at Kochi with a **state-of-the-art infrastructure connected with Multi-User Liquid Terminal Jetty** through a 3.5 km Cross Country Pipeline.
  - **The terminal aims at achieving a turnover of 1.2 million metric tons per annum (MMTPA)**. It will ensure LPG distribution through road and pipeline transfers, which will directly benefit bottling plants in Kerala and Tamil Nadu.
  - It will also significantly enhance India's energy infrastructure by ensuring a steady supply of LPG, benefiting millions of households and businesses in and around the region.
  - This project will further strengthen India's efforts towards ensuring accessible & affordable

energy for all.

What is the Significance of These Projects?

- **Strategic Vision for Maritime Development:**
  - Prime Minister emphasises the global benchmark set by the projects aligned with **'Sabka Saath, Sabka Vikaas'** vision.
  - The **Maritime Amrit Kaal Vision 2047** outlines ambitious goals to elevate Kochi into a prominent **Maritime Cluster and a Global Hub for Green Ship,** reflecting a commitment to excellence and innovation.
- **Investment and Employment in Maritime Sector:**
  - The initiatives launched aim to bring significant investment of Rs 45,000 Crores and generate employment of over 50,000 people in the maritime sector.
  - Efforts focus on increasing India's tonnage, becoming **Atmanirbhar,** and minimizing dependency on foreign ships.
- **Role of Cochin Shipyard Limited (CSL):**
  - CSL, recognized globally for **delivering autonomous electric barges to Norway,** plays a pivotal role in India's resurgence as a major maritime player.
  - The shipyard's strong product portfolio, **including Next-Generation Green Technology ships,** positions it as a key contributor to India's maritime industry.
- **National Pride and Environmental Impact:**
  - The projects in Kochi, symbolising national pride, showcase India's engineering prowess. They are expected to lead to **significant logistic savings and reduce CO_2 emissions, emphasizing environmental responsibility.**
- **Alignment With Global Vision:**
  - Throwing light on the agreements made during **India's G20 Presidency** regarding the **Middle East-Europe Economic Corridor (MEEEC),** PM underlined that the MEEEC will further strengthen the **creation of Viksit Bharat by giving a boost to the coastal economy of India.**
- **Future Plans for Maritime Infrastructure:**
  - The Ministry of Ports, Shipping & Waterways outlines future plans on the basis of these projects which includes:
    - Establishment of a **Centre of Excellence in Shipbuilding & Repair**.
    - Creation of ship **repair clusters in strategic locations.**
    - Relaxation of trade conditions to propel the Ship Repair Sector.
    - Discussions for a Ship Repair facility at Vadinar are underway.

Major and Minor Ports

- Number of Major Ports:
  - There are **12 major ports and 200 non-major ports** (minor ports) in the country.
  - **Major ports** include Deendayal (erstwhile Kandla), Mumbai, JNPT, Marmugao, New Mangalore, Cochin, Chennai, Kamarajar (earlier Ennore), V O Chidambaranar, Visakhapatnam, Paradip and Kolkata (including Haldia).
- Major Ports vs Minor Ports:
  - Ports in India are classified as Major and Minor Ports according to the jurisdiction of the Central and State government as defined under the Indian Ports Act, 1908.
  - All the **12 Major Ports are governed under the Major Port Trusts act, 1963 and are owned and managed by the Central Government.**
  - All the Minor Ports are governed under the Indian Port Act, 1908 and are owned and managed by the State Governments.
- **Recent Developments:**
  - **Indian ports achieved double-digit annual growth in the last 10 years.**
  - India has surpassed many developed nations when it comes to their turnaround time.
  - **Timely changes to laws related to Indian seafarers have led to an increase in their numbers by 140%**.

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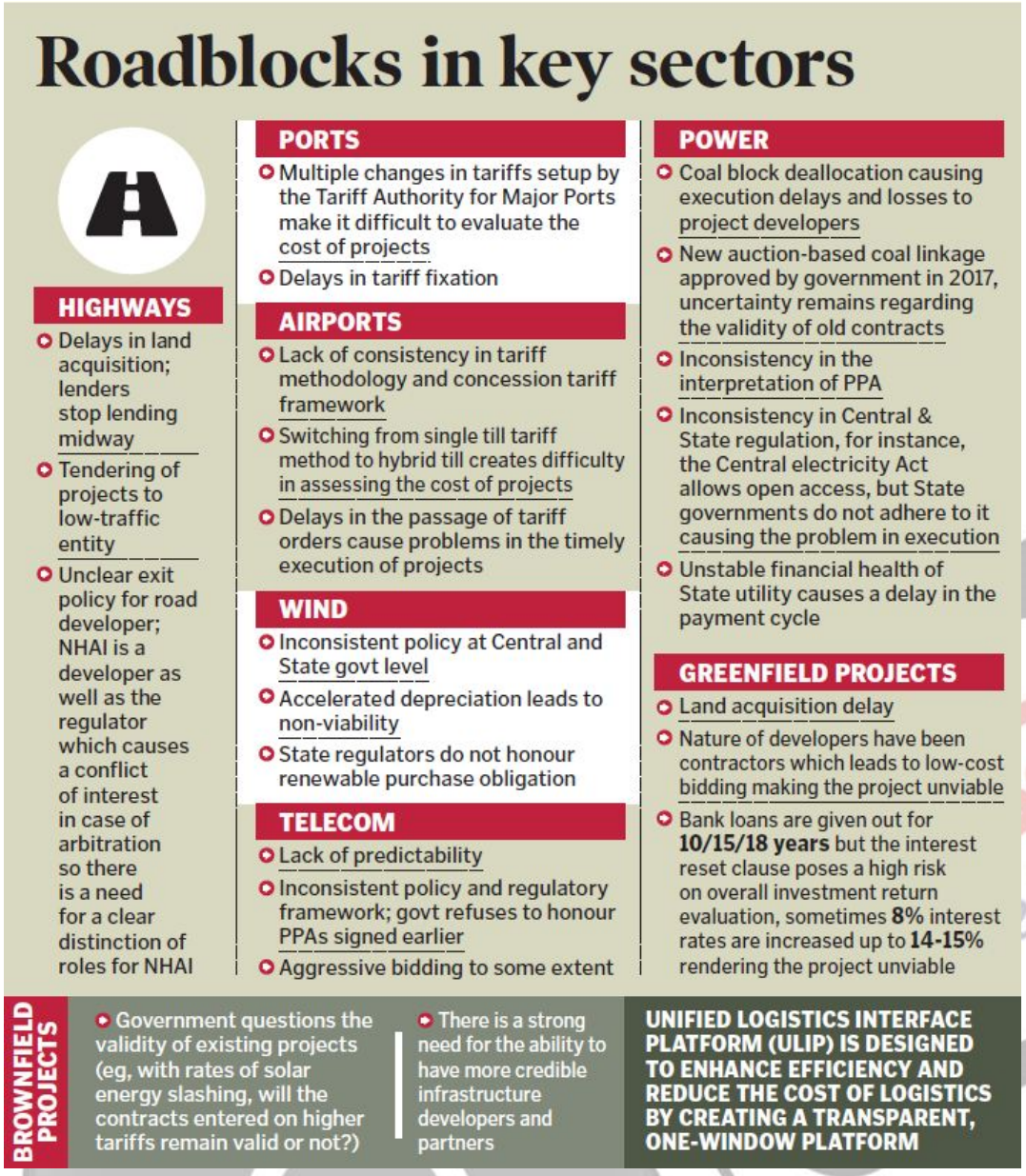


What Measures Can be Taken to Strengthen the Infrastructure Sector?

- **Ensuring Consistency in Policy/Regulatory Framework:**
  - There is a need for a better regulatory environment and consistency in the tendering process. **Lack of consistency and policy coherence across different government departments** should be addressed as a priority.
  - Between the government and the RBI, **there needs to be a holistic way to deal with the issue of stressed assets.**
    - A dedicated policy needs to be formed across sectors for non-performing assets and revamp of PSUs.
- **Reasonable User Charges:**
  - It is necessary for **augmenting infrastructure financing,** financial viability of infrastructure service providers, and for environmental and resource use sustainability.
  - User charges are crucial because in many areas across the country, **partly because of zero or very low user charges, there is over-use and wastage** of the precious resources.
  - Besides the environmental sustainability and resource use efficiency that would emanate

from reasonable user prices, this **policy priority has immense resource generation potential.**

- **Autonomous Regulation of Infrastructure:**
  - As India and the world opens up more sectors to private participation, the **private sector would essentially demand autonomous infrastructure regulation.**
  - The world-wide trend is towards multi-sectoral regulators as the **regulatory role is common across infrastructure sectors**, and such institutions build regulatory capacity, conserve resources and prevent regulatory capture.
- **Asset Recycling (AR) and BAM:**
  - The basic idea of **BAM (Brownfield Asset Monetisation) is to augment infrastructure resources through brownfield AR** for accelerated greenfield investment by freeing up funds tied up in de-risked brownfield public sector assets.
  - These assets can be transferred to a **trust (** Infrastructure Investment Trusts (InvITs)**)** or a corporate structure **(Toll Operate Transfer (TOT) model),** which receive investment from institutional investors against a capital consideration (which captures value of future cash flows from these underlying assets).
  - **India has a large stock of brownfield assets across infrastructure sectors.**
- **Utilising Domestic Funds:**
  - Domestic sources such as **India Pension Funds** which **have been lying dormant could give a big boost to the sector if utilised efficiently.**
  - India can emulate the practices in Canada, the Netherlands, Australia and the likes on efficient usage of domestic funds to push infrastructure development.

What are the Different Government Initiatives Related to Infrastructure?

- **PM Gati Shakti Scheme**
- **National Infrastructure Pipeline**
- **Urban Infrastructure Development Fund**
- **National Logistics Policy**
- **Dedicated Freight Corridors**
- **Sagarmala Projects**

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q1. With reference to 'National Investment and Infrastructure Fund', which of the following statements is/are correct? (2017)

1. It is an organ of NITI Aayog.
2. It has a corpus of `4,00,000 crore at present.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (d)

Q2. In India, the term "Public Key Infrastructure" is used in the context of (2020)

(a) Digital security infrastructure
(b) Food security infrastructure
(c) Health care and education infrastructure
(d) Telecommunication and transportation infrastructure

Ans: (a)

Mains

Q. "Investment in infrastructure is essential for more rapid and inclusive economic growth." Discuss in the light of India's experience **(2021)**

Finalising Implementation Strategy of NQM

For Prelims: National Quantum Mission**,** Quantum Technology, Department of Science & Technology (DST), Mission Coordination Cell (MCC).

For Mains: National Quantum Mission and its role in developing Quantum Technology, Quantum Technology: Application, Challenges and Way Forward.

Source: PIB

Why in News?

Recently, the first meeting of the **Mission Governing Board (MGB)** of the **National Quantum Mission (NQM)** discussed implementation strategy and timelines of NQM as well as the formation of **the Mission Coordination Cell (MCC).**

- The MCC will be set up in an institution identified by the Department of Science and Technology (DST), based on merit and existing infrastructure and will function under the overall supervision and guidance of the **Mission Technology Research Council (MTRC).**

What is the National Quantum Mission (NQM)?

- **About:**
  - The mission planned for **2023-2031, aims to seed, nurture, and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in** Quantum Technology (QT).
  - It'll be implemented by the DST under the Ministry of Science & Technology.
  - With the launch of this mission, **India will be the seventh country to have a dedicated quantum mission** after the US, Austria, Finland, France, Canada and China.
- **Salient features of NQM:**
  - It will target **developing intermediate-scale quantum computers with 50-100 physical qubits in 5 years** and **50-1000 physical qubits in 8 years.**
  - Just like bits (1 and 0) are the basic units by which traditional computers process information, **'qubits' or 'quantum bits' are the units of process by quantum computers.**
  - The mission will **help develop magnetometers with high sensitivity for precision timing (atomic clocks), communications, and navigation.**
  - It will also support the design and synthesis of quantum materials such as superconductors, novel semiconductor structures and topological materials for fabrication of quantum devices.
- **Development of Quantum Communications:**
  - Satellite based secure quantum communications between ground stations over a range of

2000 km within India.
    - Long distance secure quantum communications with other countries.
    - **Inter-city** quantum key distribution **over 2000 km.**
    - Multi-node Quantum network with quantum memories.
- **Four Thematic Hubs (T-Hubs) would be set up in top academic and National R&D institutes on the domains of Quantum Technology:**
    - **Quantum computation**
    - **Quantum communication**
    - Quantum Sensing & Metrology
    - Quantum Materials & Devices

Quantum Technology

- **About:**
    - Quantum technology is a **field of science and engineering that deals with the principles of quantum mechanics**, which is the study of the behaviour of matter and energy at the smallest scale.
    - Quantum mechanics is the branch of physics that describes the behaviour of matter and energy at the atomic and subatomic level.
- **A Comparison between India and China:**
    - **R&D in China:** China started its research and development (R&D) in the field of quantum technology in 2008.
        - **In 2022, China boasts of developing the world's first quantum satellite**, creating a quantum communication line between Beijing and Shanghai, and **owning two of the world's fastest quantum computers.**
        - This was a **result of decade-long research** carried out in the hope of achieving critical breakthroughs.
    - **India:** Quantum Technology remains a **field highly concentrated in long-term R&D in India.**
        - **Just a few hundred researchers, industry professionals,** academicians, and entrepreneurs are in the field right now without a constant focus on R&D.

What are the Advantages of Quantum Technology?

- **Increased Computing Power:** Quantum computers are much faster than the computers we today have. They also have the capability to solve complex problems that are currently beyond our reach.
- **Improved Security:** Because they rely on principles of quantum mechanics, quantum encryption techniques are much more secure than traditional encryption methods.
- **Faster Communication:** Quantum communication networks can transmit information faster and more securely than traditional networks, with the potential for completely unhackable communication.
- **Enhanced AI:** Quantum machine learning algorithms can potentially enable more efficient and accurate training of **Artificial Intelligence** models.
- **Better Sensing and Measurement:** Quantum sensors can detect extremely small changes in the environment, making them useful in areas such as medical diagnostics, environmental monitoring, and geological exploration.

What are the Disadvantages of Quantum Technology?

- **Expensive:** The technology requires specialized equipment and materials which make it more expensive than the traditional technologies.
- **Limited Applications:** Currently, quantum technology is only useful for specific applications such as cryptography, quantum computing, and quantum communication.
- **Sensitivity to Environment:** Quantum technology is highly sensitive to environmental interference, such as temperature changes, magnetic fields, and vibrations.

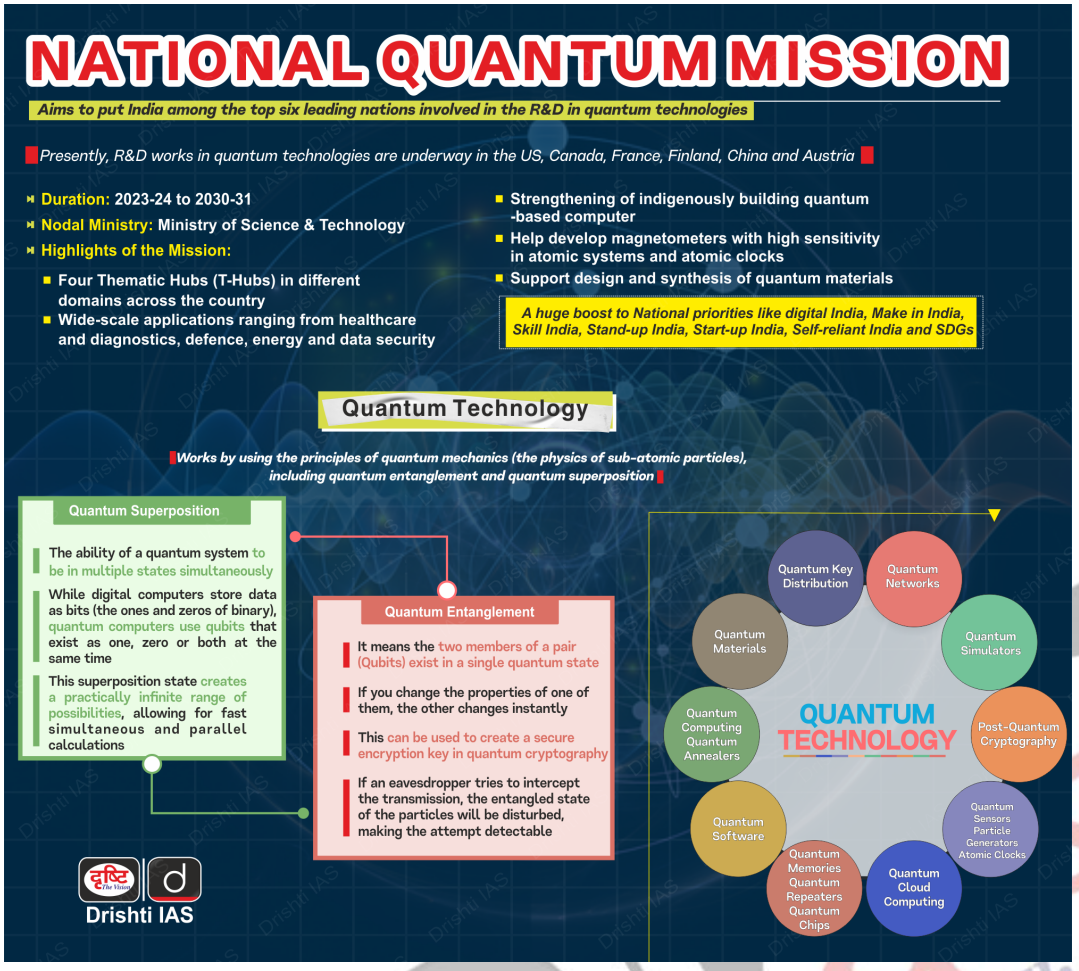
    - **Qubits are easily disrupted by their surroundings which can cause them to lose their quantum properties and make mistakes in calculations.**
- **Limited Control:** It is difficult to control and manipulate quantum systems. Quantum-powered AI could create unintended consequences.
    - **Quantum-powered AI systems could potentially arrive at conclusions that are unexpected or difficult to explain** as they operate on principles that are fundamentally different from classical computing.

What Should be the Way Forward?

- **Enhance the Investment:** Quantum technology requires substantial investment in research and development, infrastructure, and human resources to achieve its full potential.
    - India has taken a step in this direction by launching the National Quantum Mission with a budget of Rs. 6000 crores.
    - However, more public and private funding is needed to support the growth of quantum start-ups, service providers, and academic institutions.
        - **Private Sector R&D funding can be enhanced in this segment** which is already very low in India compared to developed countries.
- **A Regulatory Framework is a must:** Quantum technology also poses ethical, legal, and social challenges that need to be addressed before it becomes widely available. **For example, quantum sensing may infringe on privacy rights, and quantum weapons may cause mass destruction.**
    - Therefore, it would be **prudent to develop a regulatory framework for quantum technology that balances innovation and security.**
- **Promote Quantum Education**: Quantum technology also **requires skilled and trained professionals who can understand and apply its principles and methods.** Therefore, it is essential to promote quantum education and awareness among students and researchers across various disciplines.
    - This can be done by introducing quantum courses in schools and colleges, organising workshops and seminars, and creating online platforms and resources.
- **Collaboration among Various Stakeholders:** For better understanding of Quantum technology, it is required to have proper collaboration and cooperation among various stakeholders, such as government agencies, industry players and institutions.
    - This can foster knowledge sharing, innovation, and standardization across different domains and applications of quantum technology.
    - It can also **enable India to participate in global initiatives and networks on quantum technology.**

What are the Related Government Initiatives?

- **Quantum-Enabled Science & Technology (QuEST)**
- **National Mission for Quantum Technologies and Applications (NM-QTA)**
- **Quantum Key Distribution (QKD) solution.**



Investment Under PLI Schemes

For Prelims: Production Linked Incentive (PLI) Schemes, Electronics Manufacturing, Pharmaceuticals, Food Processing, Telecom & Networking products, Penicillin-G

For Mains: Significance of Production Linked Incentive (PLI) Scheme in growth in the manufacturing sector.

Source: PIB

Why in News?

Recently, **Production Linked Incentive (PLI) Schemes** witnessed over **Rs. 1.03 lakh crore of investment** till November 2023.

- It has **led to production of Rs. 8.61 lakh crore and employment generation of over 6.78 lakhs.**

What are the Key Achievements of PLI Scheme?

- **PLI Schemes** have witnessed exports surpassing **Rs. 3.20 lakh crore**, with significant contributions from sectors such as **Large-Scale** Electronics Manufacturing**,** Pharmaceuticals**,** Food Processing**,** and **Telecom & Networking products.**
- 176 **Micro, Small and Medium Enterprises (MSME)** are among the PLI beneficiaries in sectors such as **Bulk Drugs, Medical Devices, Pharma, Telecom, White Goods, Food Processing,** Textiles & Drones.
- Incentive amount of around **Rs. 4,415 crore** disbursed under PLI Schemes for **8 Sectors** viz. **Large-Scale Electronics Manufacturing (LSEM),** IT Hardware**, Bulk Drugs, Medical Devices, Pharmaceuticals, Telecom & Networking Products, Food Processing and Drones & Drone Components.**
- Due to the **PLI Scheme**, there has been a **significant reduction in imports of raw materials in the Pharma sector.**
    - **Unique intermediate materials and bulk drugs** are being manufactured in India including **Penicillin-G.**
    - **Production of 39 Medical Devices have commenced** such as CT-Scan, Linear Accelerator (LINAC), Rotational Cobalt Machine, C-Arm, MRI, Cath Lab, Ultrasonography, Dialysis Machine, Heart Valves, Stents, etc.
- **Import substitution of 60% has been achieved in the Telecom sector** and sales of **Telecom & Networking Products** by PLI beneficiary companies in **FY 2023-24.**
    - Significant impact on **investment in the Drone industry with a** Compounded Annual Growth Rate (CAGR) **of 90.74%.**
- The **PLI Scheme** for **Food Processing**, sourcing of raw materials from India has significantly **increased which has positively impacted income of Indian farmers and MSMEs.**
    - **Sales of Organic Products increased and Indian brand visibility enhanced in the international market** through Branding & Marketing abroad.
    - **The Scheme has also led to increased Millet procurement** – from 668 MT (FY 20-21) to 3,703 MT (FY 22-23).
- The PLI Scheme across these key specific sectors has started to make Indian manufacturers globally competitive, attract investment in the areas of core competency and cutting-edge technology and make India an integral part of the global value chain.
    - It has **transformed India's export basket from traditional commodities to high-value-added products** such as electronics & telecommunication goods, processed food products etc.
- **Production of mobile phones increased by** more than **125%** and **export of Mobile Phones increased ~4 times** since **FY 2020-21.**
- Foreign Direct Investment **(FDI) increased by ~254%** since the inception of the PLI scheme for LSEM.

What is the Production Linked Incentive Scheme (PLI)?

- **About:**
    - The **PLI scheme** was conceived to scale up domestic manufacturing capability, accompanied by higher import substitution and employment generation.
    - Launched in **March 2020, the scheme initially targeted three industries:**
        - Mobile and allied Component Manufacturing
        - Electrical Component Manufacturing and
        - Medical Devices.
    - **The scheme is currently active in 14 key sectors:** mobile manufacturing, manufacturing of medical devices, automobiles and auto components, pharmaceuticals, drugs, specialty steel, telecom & networking products, electronic products, white goods (ACs and LEDs), food products, textile products, solar PV modules, advanced chemistry cell (ACC) battery, and drones and drone components.
    - **Under PLI scheme, Domestic and Foreign companies receive financial rewards** for manufacturing in India, based on a percentage of their revenue over up to five years.

What are the Concerns Regarding the PLI Scheme?

- **Competition and Market Dynamics:** The scheme may create **price wars or market**

distortions among the participating companies, **affecting their profitability and sustainability.**

- **Compliance and Reporting Burden:** The scheme requires companies to submit various documents and reports to claim the **incentives**, which may increase their **administrative costs** and **delays.**
- **Assembly vs. Value Addition:** The **scheme does not differentiate between the value added by manufacturing** in India and **the value added by importing components and assembling them in India.** This may result in **low value addition and innovation in the domestic industry.**
- **Production of Low-value Goods: Low-value goods production is more prevalent than that of high-value goods.** The United States and the European Union primarily engage in transactions involving high-value goods.
- **Research and Development:** Insufficient attention is dedicated to Research and Development in the formulation of export-oriented policies.
- **Implementation and Coordination Issues:** The scheme involves multiple ministries and departments, which may create **confusion** and **inconsistency** in the implementation and monitoring of the scheme.

Way forward

- **Market Impact Assessment:** Conduct a thorough market impact assessment to anticipate potential distortions. Implement safeguards or guidelines to prevent unhealthy price wars.
- **Documentation:** Streamline documentation requirements to reduce administrative burdens.
    - Integrate stringent environmental and social impact assessments into the scheme.
- **Value Addition and Innovation:** Introduce criteria that incentivize high-value addition and innovation.
- **Engage with Stakeholders:** To address concerns related to pollution, land acquisition, and labour rights engage with appropriate stakeholders.
    - Foster inter-ministerial collaboration to ensure consistent and coherent policy enforcement.
- **Research and Development:** Introduce additional incentives for companies investing in research and development. Facilitate partnerships between industry and research institutions to enhance innovation.
- **Establishment of Fund:** Establish a dedicated fund to support innovative projects and technologies.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q. Consider, the following statements : (2023)

Statement-I : India accounts for 3.2% of global export of goods.

Statement-II : Many local companies and some foreign companies operating in India have taken advantage of India's ‘Production-linked Incentive’ scheme.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

(d) Statement-I is incorrect but Statement-II is correct

Ans: (d)

Exp:

- According to the recent WTO'S Global Trade Outlook and Statistics report, India accounts for 1.8 % of global exports of goods. Hence, statement 1 is not correct.
- The 'Production Linked Initiative' (PLI) scheme offers companies incentives on incremental sales from products manufactured in India. It aims to attract foreign companies to set up units in India while encouraging local companies to expand their manufacturing units, generate more employment, and reduce the country's reliance on imports. Hence, Statement 2 is correct.

Mains:

Q. Economic ties between India and Japan while growing in the recent years are still far below their potential. Elucidate the policy constraints which are inhibiting this growth. **(2013)**

Q. Account for the failure of manufacturing sector in achieving the goal of labour-intensive exports. Suggest measures for more labour-intensive rather than capital-intensive exports **(2017)**

Q. The nature of economic growth in India in recent times is often described as a jobless growth. Do you agree with this view? Give arguments in favour of your answer. **(2015)**

Market Monopoly and Laws in India

For Prelims: Competition Commission of India (CCI)**,** Competition Act, 2002, Abuse of Dominant Market Position, Competition Amendment Bill, 2022.

For Mains: Market Monopoly and Laws in India, Inclusive growth and issues arising from it.

Source: MC

Why in News?

Recently, the **Competition Commission of India (CCI)** has dismissed a complaint against PVR, a leading multiplex chain, for allegedly abusing its Dominant Market Position, raising the Concern of **Market Monopoly.**

What were the Allegations and CCI's Verdict?

- It was alleged that PVR abused its dominance by giving special treatment to films of powerful and monetarily **affluent production houses,** thus creating entry barriers to films by independent filmmakers.
    - PVR refuted the allegations, asserting they lacked supporting evidence, arguing that the complaint aimed to **pressurise the exhibition of his film without any legal obligation.**
- CCI found no discernible competition concerns. It emphasised that unless harm **to competition was evident,** regulatory **intervention could lead to undesirable consequences,** preserving exhibitors' autonomy.

What is Market Monopoly?

- **About:**
  - Market monopoly **refers to a situation in which a single company or a group of companies dominates** and controls a significant share of a particular market or industry.
  - In a monopoly, there is **only one seller or producer that provides a specific product** or service, and there are no close substitutes available to consumers.
  - This gives the monopolistic entity substantial market power, allowing it to influence the market conditions, set prices, and control the supply of goods or services.
- **Features of Market Monopoly:**
  - **Single Seller or Producer:**
    - In a monopoly, there is only one entity that dominates the entire market. This company is the exclusive provider of a particular product or service.
  - **High Barriers to Entry:**
    - Monopolies often **arise when there are significant barriers** preventing new competitors from entering the market. Barriers may include high startup costs, exclusive access to resources, **government regulations, or strong brand loyalty.**
  - **No Substitutes:**
    - Consumers have **limited or no alternative options** for the product or service offered by the monopolistic company. There are no close substitutes available in the market.
  - **Market Power and Pricing Control:**
    - The monopoly has **considerable market power, allowing it to control prices without significant fear** of competition. This can lead to higher prices for consumers and potentially reduced output.
  - **Influence Over Supply:**
    - The monopoly has **control over the supply of the product** or service. It can determine the quantity produced and adjust supply to impact market conditions.
  - **Lack of Competition:**
    - Due to the **absence of competitors, monopolies operate** in an environment where there is no direct competition for their specific product or service. This lack of competition can result in reduced incentives for innovation and efficiency.

Key Terms Related to Anti-Competitive Practices

- **Predatory Pricing:**
  - Predatory pricing occurs when **a company intentionally sets its prices below cost** in order to **drive competitors out** of the market. Once competitors are eliminated, the **company can raise prices** to recoup losses and enjoy a monopolistic position.
- **Cartels:**
  - Cartels **are associations of independent businesses or countries** formed to regulate production, pricing, and marketing of goods or services.
  - Cartels are **typically illegal and are known for fostering anti-competitive behaviour.**
- **Collusion:**
  - Collusion is an agreement **between two or more parties to limit competition** by misleading, deceiving, or defrauding others. It often involves **secret cooperation** to gain an unfair advantage.
- **Mergers:**
  - Mergers involve the **combination of two or more companies into a single entity.** While not all mergers are anti-competitive, some **may reduce competition in a particular market,** leading to regulatory scrutiny.
- **Price Discrimination:**
  - Price discrimination occurs when a seller charges different prices to different customers for the **same product or service.** While not always illegal, it can be considered **anti-competitive if it harms competition.**
- **Price Fixing Agreements:**
  - Price fixing involves an agreement between competitors to set **a specific price for their**

products or services. This eliminates competition and artificially inflates prices, violating antitrust laws.

How does India Deal with the Practices of Market Monopoly?

- **Competition Act, 2002:**
  - The **Competition Act, 2002,** is the primary legislation in India addressing antitrust issues. It was enacted **to promote and sustain competition in markets**, prevent anti-competitive practices, and protect the interests of consumers.
    - The Act prohibits **anti-competitive agreements, abuse of dominant position** by enterprises, and regulates combinations that may have an appreciable adverse effect on competition within India.
  - **Competition Amendment Bill, 2022:**
    - The proposed amendment **aims to further strengthen the regulatory framework**, address emerging challenges, and enhance the effectiveness of competition law enforcement.
- **Competition Commission of India (CCI):**
  - **CCI** is the regulator of competition under the **Competition Act, 2002** in the Indian market, it is responsible for enforcing the **provisions of the Competition Act 2002**. It consists of a Chairperson and Members appointed by the Central Government.
  - The CCI investigates and **takes actions against anti-competitive practices**, abuse of dominant position, and anti-competitive agreements.
- **Competition Appellate Tribunal and NCLAT:**
  - The **Competition Appellate Tribunal (COMPAT)** was initially responsible for hearing appeals against CCI decisions.
  - However, in 2017, the government replaced COMPAT with the **National Company Law Appellate Tribunal (NCLAT)**, which now handles appeals related to competition matters.

What are the International Initiatives to Curb Anti-Competitive Practices?

- **OECD Competition Committee:**
  - The **OECD (Organisation for Economic Cooperation and Development)** addresses anti-competitive practices through various initiatives, including the **OECD Competition Committee**, which facilitates discussions and cooperation among **member countries on competition-related issues.**
- **United Nations Conference on Trade and Development (UNCTAD):**
  - **UNCTAD** works to promote international trade and development. It provides guidance on competition policy and **law through its Intergovernmental Group of Experts on Competition Law and Policy**, supporting countries in implementing effective competition frameworks.
    - It also deals with the polices to **Protect consumers from abuse and Curb regulations that stifle competition.**
- **International Competition Network (ICN):**
  - The ICN is a network of competition authorities from around the world. It facilitates **communication and cooperation among member jurisdictions** to address global competition challenges. The ICN provides a platform for sharing best practices and **developing guidelines on various aspects of competition law.**
- **World Trade Organization (WTO):**
  - While primarily focused on trade issues, the WTO **addresses competition policy through its Working Group** on the Interaction between Trade and Competition Policy.
    - The aim is to **ensure that competition policies do not create unnecessary barriers to trade.**

What are the Judgements Related to Market Monopoly in India?

- ***Competition Commission of India v. Steel Authority of India Ltd (SAIL), 2010:***

    - The SC upheld the CCI's order to investigate SAIL for anti-competitive practices in supplying rails to Indian Railways.
    - SC ruled that SAIL was not exempt from the Competition Act and that its order was not appealable at the initial stage.
    - The Court also said that the CCI was a necessary or proper party in any appeal before the COMPAT.
- ***Competition Commission of India v. Google LLC & Ors, 2021:***
    - CCI appealed against Karnataka HC's order, investigating alleged anti-competitive practices by Google in India's smart TV and Android app store markets.
    - The HC quashed CCI's order due to lack of jurisdiction and the absence of Google's opportunity to present its case.
    - The SC stayed CCI's investigation and issued notices to all parties involved.

Way Forward

- Continuously review and strengthen antitrust laws to ensure they are robust and able to address emerging challenges in the business environment. Regular updates can help the legal framework adapt to evolving market dynamics.
- Empower and adequately fund regulatory authorities, such as the Competition Commission, to effectively enforce antitrust laws. Authorities should be equipped to investigate, penalize, and deter anti-competitive behavior.
- Ensure transparent and efficient processes for reviewing mergers and acquisitions. A clear and thorough review helps prevent the creation or strengthening of monopolies through consolidation.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims:

Q. With reference to 'consumers' rights/privileges under the provisions of law in India, which of the following statements is/are correct? (2012)

1. Consumers are empowered to take samples for food testing.
2. When a consumer files a complaint in any consumer forum, no fee is required to be paid.
3. In case of death of consumer, his/her legal heir can file a complaint in the consumer forum on his/her behalf.

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)

Shankaracharyas

Source: IE

Why in News?

The decision of the **four** Shankaracharyas to abstain from attending the inauguration of the **Ram Temple in Ayodhya** has stirred considerable interest.

Who are the Shankaracharyas?

- **About: Shankaracharya** (teacher of the way of Shankara), is a **religious title** used by the heads of the f**our cardinal mathas or peeths** believed to have been established by **Adi Shankara (c 788 CE-820 CE).**
  - According to tradition, they are religious teachers who belong to a **line of teachers** going back all the way to Adi Shankara himself, however, **historical evidence regarding the same is scarce** before the 14th century CE.
- **Mathas:** The four mathas are in **Dwarka (Gujarat), Joshimath (Uttarakhand), Puri (Odisha), and Sringeri (Karnataka).**
  - They serve as **religious shrines, temples, libraries, and residences.** They play a crucial role in preserving and propagating Shankara's tradition.
  - There is little historical evidence for the existence of these mathas prior to the **14th century CE**, when the **Vijayanagara kingdom** began to patronise the Sringeri matha.

Who was Adi Shankara?

- **About: Adi Shankara or Adi Shankaracharya** was an **8th-century Indian philosopher and theologian,** considered one of the most influential figures in the history of Hinduism
  - He is believed to be born in **Kalady village in Kerala.**
  - Initiated into studies by **Govindacharya**, Shankara travelled extensively, challenging philosophical traditions, and **establishing mathas.**
- **Key Contributions:**
  - **Systematized Advaita Vedanta:** Provided a framework for understanding the **non-dualistic nature of reality.**
  - **Illuminating Hindu Scripture:** Authored 116 works, including commentaries on **Upanishads, Brahmasutra, and the Bhagavad Gita.**
  - **Promoted Bhakti movement:** Emphasised the importance of **devotion and surrender to God,** paving the way for later devotional movements.
- **Major Works/Commentaries:**
  - **Bhashya Granthas:**
    - Brahma Sutras
    - Isavasya Upanishad
    - Kena Upanishad
    - Katha Upanishad
    - Prasna Upanishad
    - Mundaka Upanishad
    - Mandukya Upanishad
    - Mandukya Karika
    - Bhagavad Gita
  - **Prakarana Granthas:**
    - Vivekachudamani
    - Aparokshanubhuti
    - Upadesasahasri
    - Swatma Nirupanam
    - Atma bodha
    - Sarva Vedanta Sara Samgraha
    - Advaita Anubhuti
    - Brahma anuchintanam
    - Sadachara anusandhanam
  - **Hymns and Meditation Verses:**
    - Sri Ganesa Pancharatnam
    - Ganesa Bhujangam
    - Subrahmanya Bhujangam

Note

However, the authorship of many works attributed to Shankara remains disputed. But Shankara's legacy extends beyond metaphysics and theology, incorporating a near-nationalistic interpretation of **faith, philosophy, and geography.**

- **Core Tenets of Advaita Vedanta:**
  - **Advaita Vedanta** posits an **ontological position of radical nondualism.**
  - **It asserts that perceived reality is ultimately illusory (maya),** and brahman is the only true reality, transcending empirical plurality.
  - Focuses on the **unity of atman (individual consciousness) and brahman (ultimate reality).**

Note

A **'Statue of Oneness'** dedicated to **Adi Shankaracharya,** standing at a height of 108 feet, has been unveiled on **Mandhata mountain in the Khandwa district of Madhya Pradesh.**

Marginal Rise in Saltwater Crocodile Population in Bhitarkanika

Source: IE

Why in News?

Bhitarkanika National Park **in Odisha**, renowned for its diverse ecosystem, has observed a slight increase in the population of saltwater crocodiles **(*Crocodylus porosus*)** during the annual census in **2024.**

What are the Key Points Related to Salt-water Crocodiles?

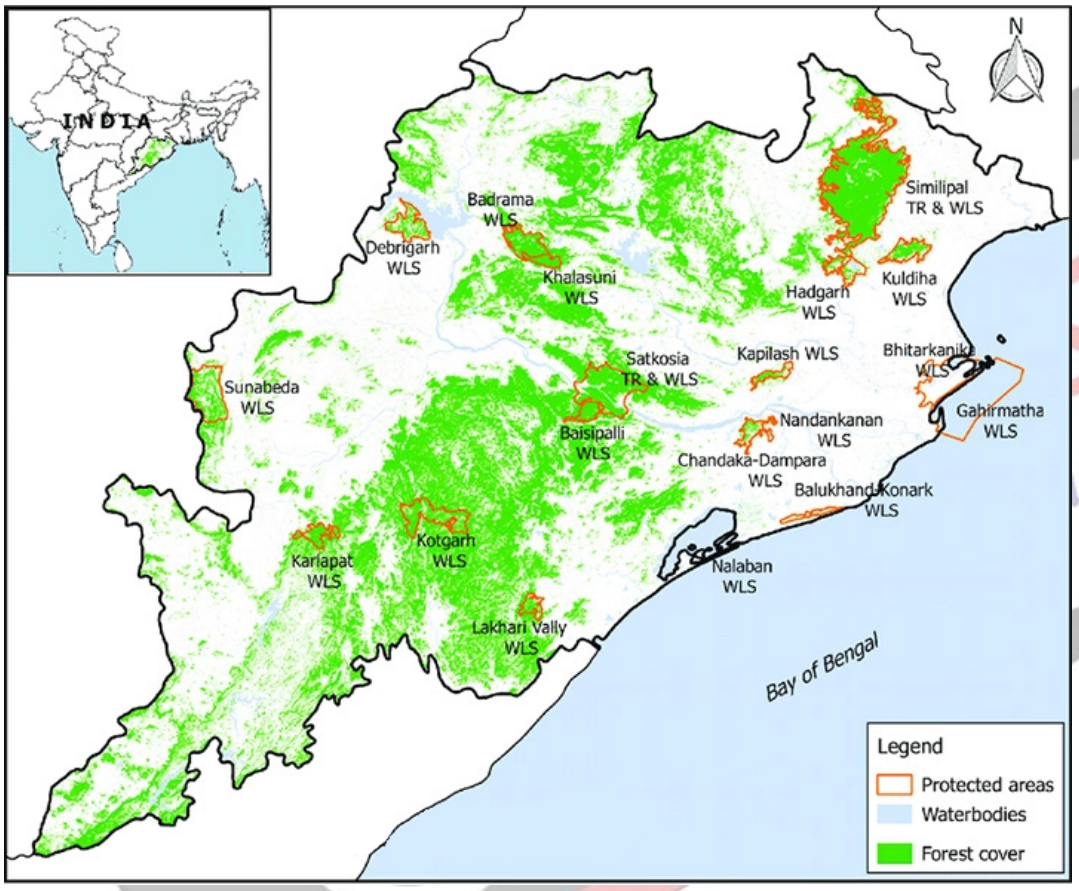
- **About:** The saltwater crocodile is the **largest of all crocodilians**, and the **largest reptile in the world.**
  - Female saltwater crocodiles are smaller in size than their male counterparts, normally reaching a maximum length of 2.5 to 3 m.
  - They **tolerate salinity** and are found mostly in coastal waters or near rivers. They are also found in freshwater near rivers and swamps.
- **Communication:** Saltwater crocodiles communicate using several sounds, including **barking, hissing, growling and chirps.**
- **Distribution:** Tropical to warm temperate latitudes in the **eastern Indian and western Pacific oceans.**
- **Habitat:** Mangrove forests and other coastal habitats
- **Prey:** Saltwater crocodiles have a variety of prey. Juveniles are restricted to **small insects, amphibians, reptiles, crustaceans, and small fish.**
  - Adults feed on **crabs, turtles, snakes, birds, buffalo, wild boar, and monkeys.**
  - Saltwater crocodiles hide in the water exposing only their eyes and nose. They **lunge at prey, often killing it with a single snap of the jaws,** then drag the prey under water where it is more easily consumed.
- **Conservation Status:**
  - **IUCN Red list :** Least Concern
  - **WPA, 1972:** Schedule I
  - **CITES :** Appendix I/II

Note

Bhitarkanika is the **second-largest mangrove forest in India after the Sundarbans** in West Bengal. Both areas are among the three strongholds of saltwater crocodiles, the third being the **Andaman and Nicobar Islands**.

What are the Key Facts about Bhitarkanika National Park (NP)?

- The Bhitarkanika NP is essentially a network of creeks and canals which are inundated with waters from rivers **Brahmani, Baitarani, Dhamra and Patasala** forming a unique ecosystem.
    - The Gahirmatha Beach which forms the **boundary of the sanctuary in the east** is the largest colony of the **Olive Ridley Sea Turtles.**
- A unique phenomenon observed in this NP is the **Bagagahana or the heronry near Surajpore creek.**
    - Thousands of birds colonise the creek for nesting and the aerial acrobatics performed prior to the mating makes for an impressive sight.
- Bhitarkanika is also home to **eight varieties of Kingfisher birds** which is also a rarity.



Stamp Book on Ramayana

Recently, the **Prime Minister of India** released commemorative **postage stamps** on the **Ram temple** along with a **book of stamps** on the **Ramayana** from around the world.

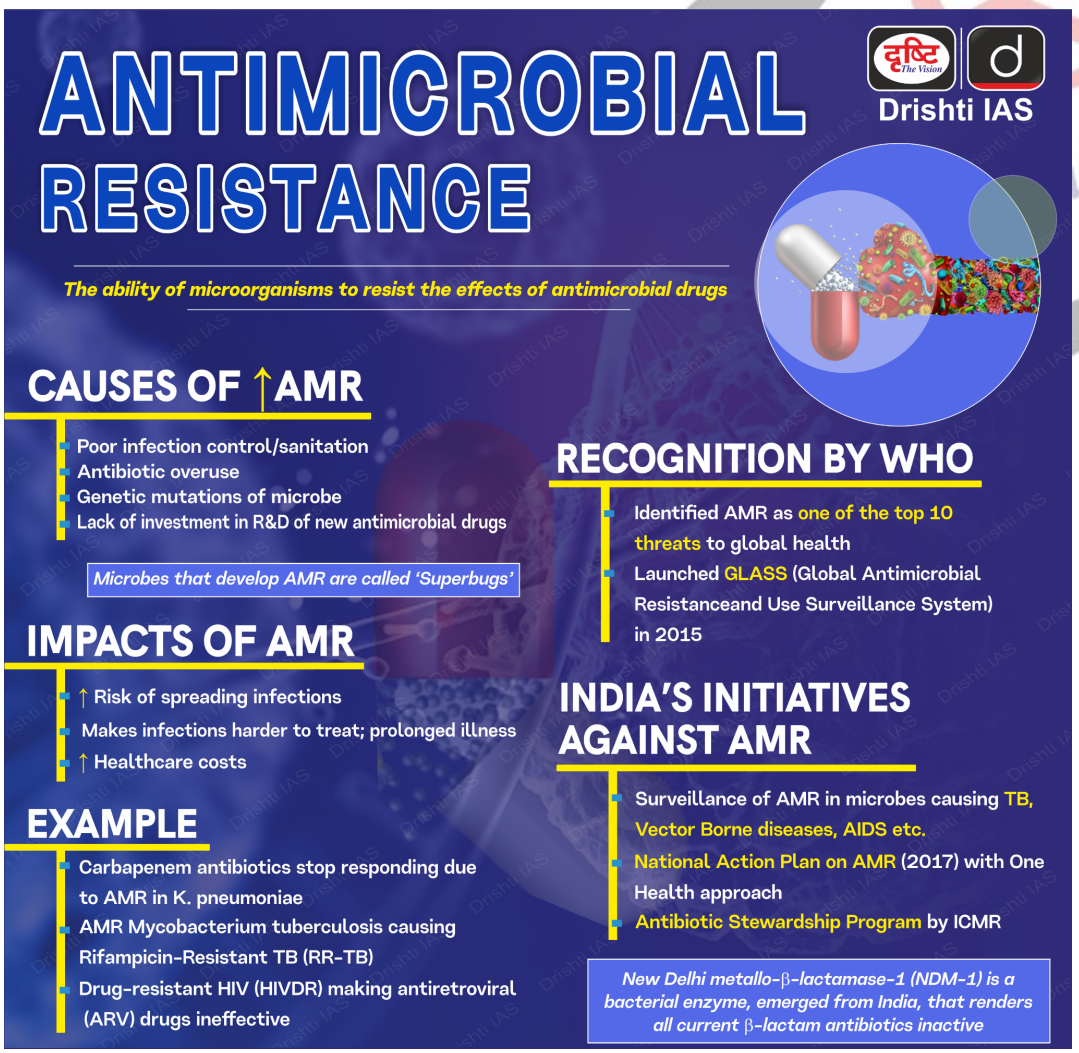
- The components of its design include the **under-construction Ram temple**, the **Saryu River** flowing in **Ayodhya,** and sculptures in and around the temple.
    - The book covers stamps issued by more than 20 countries, including the **US, New Zealand, Singapore, Canada, Cambodia,** and organisations like the **UN**.
- The **Ramayana** was written by the **Maharishi Valmiki.** It gives the message of the **victory of love** and teaches people **sacrifice, unity**, and **bravery** in the most difficult of times while

connecting humanity.

Operation AMRITH

Kerala's Drug Control Department has initiated **Operation AMRITH** to curb antibiotic overuse.

- Under this initiative, pharmacies must keep accurate antibiotic sales records and must display a poster mentioning 'antibiotics not sold without doctor's prescription'.
    - The public can also report non-compliance of this measure to the Drug Control Department.
- In 2018, **Kerala** became the inaugural Indian state to **introduce** the **KARSAP** state action plan on AMR, aligning with **India's National Action Plan**. The **Kerala government** has implemented various similar initiatives:
    - **Antibiotic Literate Kerala Campaign**
    - Establishment of **block-level AMR Committees** in all 191 blocks
    - **Kerala Antimicrobial Resistance Surveillance Network (KARS-NET)**
    - Inauguration of an **AMR laboratory by Kerala State Pollution Control Board**
    - **Programme on Removal of Unused Drugs (PROUD)** for proper disposal of unused antibiotics



Read more: Antimicrobial Resistance

Sumit Nagal Defeated Seeded Player at Australian Open

Sumit Nagal, by defeating **Kazakhstan's Alexander Bublik** in the opening round of the **Australian Open** became the **first Indian since 1989** to defeat a seeded player at a Grand Slam, following **Ramesh Krishnan's** victory over **Mats Wilander** at the **Australian Open.**

- Though he ended **an 11-major drought** by securing Indian representation in the Australian Open singles main draw after three years with a victory over Alex Molcan.
- **Grand Slam tournaments,** also called **majors,** are the **four** most important **annual tennis events.**
    - The Grand Slam itinerary consists of the **Australian Open** in mid-January, the **French Open** from around late May to early June, **Wimbledon** in June–July, and the **US Open** in August–September.
    - The **Australian and United States tournaments** are played on **hard courts,** the **French on clay,** and **Wimbledon on grass.**

Read more: Australian Open
