

NEWS TODAY

MISSION ON ADVANCED AND HIGH-IMPACT RESEARCH (MAHIR) LAUNCHED TO LEVERAGE EMERGING TECHNOLOGIES IN POWER SECTOR

• The mission was launched by the **Ministry of Power and the Ministry of New and Renewable Energy** jointly.

• Key objectives

- **Identify** emerging technologies/areas of future relevance for the energy sector.
- **Create a vibrant & innovative ecosystem and provide a common platform** for energy Sector Stakeholders for various tasks.
- **Support pilot projects** of indigenous technologies and facilitate their commercialization.
- **Leverage foreign alliances** and partnerships to accelerate R&D.
- **Make our Nation among the leading Countries** in the Power System.

• Key features of the mission

- Planned for an **initial period of five years** from 2023-24 to 2027-28.
- The Mission will **follow the technology life cycle approach**, i.e. Idea to Product. The Mission will have a two tier structure.
 - **Technical Scoping Committee: To survey and identify** the on-going and emerging areas of research globally and make recommendations to the Apex Committee.
 - **Apex Committee: To approve** the research proposals and monitor the progress of research.
- **Areas Identified for Research:** Alternatives to Lithium-Ion storage batteries; Modifying electric cookers / pans to suit Indian cooking methods; Green hydrogen for mobility; Carbon capture etc.

SIGNIFICANCE

- Will serve as a catalyst for national priorities such as **achieving Net Zero emissions**;
- Promote initiatives **like Make in India and Start-up India**;
- Will contribute towards **achieving the United Nation's Sustainable Development Goals (SDGs)**;
- Will help in **meeting growing energy demand**.

RUSSIA TO INVEST \$24 BN TO DEVELOP NORTHERN SEA ROUTE

- The Northern Sea Route (NSR), or the Northeast Passage (NEP), **connects the eastern and western parts of the Arctic Ocean**.
 - The NSR runs from the **Barents Sea, near Russia's border with Norway, to the Bering Strait between Siberia and Alaska**.
 - NSR is **different** from the **Northwest Passage** which is a **series of possible shipping routes** connecting the **Atlantic and Pacific Oceans** through the **Canadian Arctic**.

• The entire route lies in Arctic waters and within **Russia's exclusive economic zone**.

- Due to Climate Change, NSR in Russia is **becoming more accessible**. Usually the route only opens for **two months annually**.

• Significance

- **Energy and time savings** compared to the normally used route via Suez Canal are about 30-40%.
 - It is **one-third of the distance of the traditional route through the Suez Canal**.
- **Piracy risk is non-existent**.
- Easier to **explore, exploit and transport natural resources** of the region.

• Challenges:

- Russia exercising its sovereignty over NSR and **denial of the principle of freedom of navigation** might lead to **geo-strategic conflict**.
- **Arctic fog will reduce sailing time**.
- **Environmental risks and increased operating costs**.



COMMISSION FOR AGRICULTURAL COSTS AND PRICES (CACP) RELEASED REPORT ON PRICE POLICY FOR KHARIF CROPS (2023-24)

- The report contains **recommendations on Minimum Support Price (MSP) for the mandated Kharif crops**, namely, paddy, maize, jowar, bajra, ragi, moong, urad, groundnut, soybean, sunflower etc.
- **Considerations while recommending MSP:**
 - **Demand-supply** and price situation in domestic and world market,
 - Inter-crop price parity,
 - Terms of trade between agriculture and nonagriculture sector,
 - A minimum of 50 percent as margin over the cost of production etc.
- **Key recommendations:**
 - Procurement of grains should be **reduced from the states who impose high mandi fee** and other levies as this restricts inter-state trade and makes markets inefficient.
 - Take appropriate policy measures to **promote rice cultivation in suitable areas and reduce the area under rice in Haryana, Punjab and western Uttar Pradesh.**
 - Launch **National Mission on Edible Oils (NMEO)** with special focus on major oilseeds such as rapeseed & mustard, groundnut, soybean etc.
 - **Yield gap** (gap between actual yields and the potential yields) should be narrowed by promoting integrated crop management, new technologies etc.
 - **Suitable policy measures** should be introduced for **increasing access to rural financial services** for marginal and small farmers.
 - **Collective/group ownership** of machinery through SHGs, FPOs, cooperative societies etc. should be encouraged to **make high cost farm machinery and implements affordable.**

INDIA EMERGED AS THE WORLD'S 2ND LARGEST PRODUCER OF CRUDE STEEL

- India currently ranks as the **World's 2nd Largest Producer of Crude Steel** with the production of crude steel at 133.596 MT.

- It surpassed Japan in 2018.
- **China remains the global leader in crude steel production.**

• About Steel

- Steel is an **alloy of iron and carbon containing less than 2% carbon and 1% manganese and small amounts of silicon, phosphorus, sulphur and oxygen.**
 - Iron is made by removing oxygen and other impurities from iron ore.
- Steel is the world's most important engineering and construction material.
 - It is used in every aspect of our lives; in cars and construction products, refrigerators and washing machines, cargo ships and surgical scalpels.

• Initiatives for steel industry:

- **Steel Scrap Recycling Policy** for promoting the scientific processing and recycling of ferrous scrap;
- **National Steel Policy 2017** set the targets of achieving the **total crude steel capacity of 300 MTPA and total crude steel demand/production of 255 MTPA by 2030-31;**
- Policy for providing **preference to Domestically Manufactured Iron and Steel Products** (DMI & SP Policy);
- **Production Linked Incentive Scheme for domestic production of specialty steel** has been approved in 2021.

CACP

- **About:** It is an attached office of the **Department of Agriculture and Farmers Welfare.**
- **Genesis:** Agricultural Prices Commission (APC) was **set up in 1965** to advise the Government on price policy of major agricultural commodities. Since March 1985, the Commission **has been known as CACP.**
- **Composition:** Consists of a Chairman, one Member (Official), two Members (Non-Official) and a Member Secretary. The non-official members are representatives of the **farming community.**

DECARBONISING INDIAN CITIES

- By 2050, seven billion people will be living in cities. In 2020 itself, cities dumped 29 trillion tonnes of carbon dioxide into the atmosphere.
- Given the significant impact that cities have on the environment, **low-carbon cities** are crucial to **mitigate the effects of climate change.**
- **Ways to Decarbonise cities**
 - **Setor-coupling approach:** Sector coupling refers to the idea of interconnecting (integrating) the energy consuming sectors - buildings (heating and cooling), transport, and industry - with the power producing sector.
 - The **adoption of electricity as the primary source in all energy-related processes**, including transportation, heating, and manufacturing, has the potential to revolutionize the energy landscape.
 - **Carbon capture and storage (CCS) technologies:** Mitigation options on the supply side encompass the gradual elimination of fossil fuels, a greater incorporation of renewables in the energy mix, and the adoption of CCS technologies.
 - **'Avoid, shift, improve' framework:** On the demand side, using the 'avoid, shift, improve' framework would entail reducing the demand for materials and energy, and substituting the demand for fossil fuels with renewables.
 - **Carbon-dioxide removal (CDR) technologies:** To tackle residual emissions in the energy sector, the implementation of CDR technologies should be explored.

DIFFERENT STRATEGIES FOR DIFFERENT CITIES

- Transitioning to renewable energy sources also needs considerations of city's characteristics
- Various considerations like the city's **spatial form, land-use pattern, level of development, and the state of urbanisation.**

5TH STATE FOOD SAFETY INDEX (SFSI) RELEASED BY FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA (FSSAI)

FSSAI has developed the Index to measure the performance of states on various parameters of Food Safety.

➤ **FSSAI** is a statutory body established under **Food Safety and Standards Act, 2006**.

➤ It functions under the **Ministry of Health & Family Welfare** with a **mandate to ensure public health at large**.

➤ The **1st State Food Safety Index** was released in **2019**

• SFSI **aims to foster healthy competition and catalyze positive change in the food safety ecosystem throughout the country**, ultimately ensuring the provision of safe and wholesome food to all residents.

➤ SFSI is a dynamic quantitative and qualitative benchmarking model that provides an **objective framework for evaluating food safety across all States/UTs**.

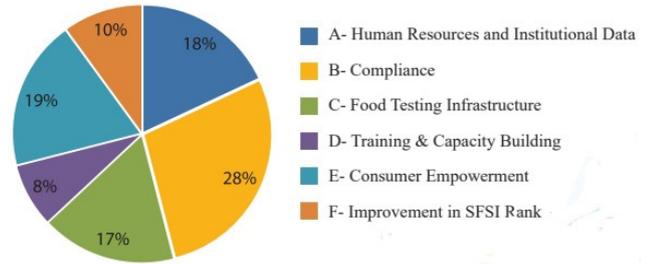
• This index is based on performance of State/ UT on **different parameters (see infographics)**

• **Key highlight of report**

➤ Similar states are compared in categories of **Large states (20), small states (8) and UTs (8)**

➤ Top performers in 5th edition were **Kerala (Large states), Goa (small state) and J&K (UTs)**.

➤ The report highlights **specialised testing labs** and **trained food safety officers** along with multiple efforts are initiated.



ALSO IN NEWS



India-U.S. Strategic Trade Dialogue (IUSSTD)

• Recently, **India and USA signed India-U.S. Strategic Trade Dialogue (IUSSTD)** to streamline their export control regimes for critical technologies.

• **Key Highlights**

➤ It will serve as the **key mechanism for strategic collaborations envisaged under India-US iCET**.

➤ It will **facilitate development and trade of technologies** in critical domains such as semiconductors, space, telecom, quantum, AI, defense, biotech etc.

➤ The **main objective** is to **build and diversify resilient supply chains for strategic technologies**. For example - GE- jet engine sales to India

➤ A **regular monitoring group** was agreed upon to review the progress.



Exploration of Coal and Lignite Scheme

• The Cabinet **approved the continuation** of the Central Sector Scheme of "Exploration of Coal and Lignite scheme"

➤ It will **run from 2021-22 to 2025-26**.

• **About Exploration of Coal and Lignite Scheme**

➤ Exploration for Coal and Lignite is conducted in two broad stages: **Promotional (Regional) Exploration and Detailed Exploration in Non-Coal India Limited blocks**.

➤ Importance: It proves and **gives an estimated coal resources available in the country** which helps in preparing detailed project report to start coal mining.

➤ The Geological reports prepared through these exploration is **used for auctioning new coal blocks**.



Vaccine for respiratory syncytial virus (RSV)

• Recently, the European Union approved the first vaccine for common **respiratory virus respiratory syncytial virus (RSV)**.

➤ The virus was **first discovered in 1956** as a common respiratory virus.

➤ It **causes mild cold-like symptoms** and can be serious especially for **infants and elderly**.

• **Vaccine**

➤ The vaccine named **Arexvy** is designed to **protect people aged 60 and over**.

➤ It contains a **recombinant subunit pre-fusion RSV glycoprotein antigen (RSVPreF3)**.

➤ Some short lived **side-effects** include injection **site pain, fatigue, mild to moderate muscle or joint aches, or headache**.

 <p>Financial Services Institution Bureau (FSIB)</p>	<ul style="list-style-type: none">• The FSIB selected new chiefs for General Insurance Corporation of India (GIC Re) and National Insurance Company (NIC).• About FSIB: Set up under Department of Financial Services (DFS), Ministry of Finance. It replaced Banks Board Bureau (BBB).• Functions<ul style="list-style-type: none">➤ Mandated to recommend whole-time directors and non-executive chairpersons on Boards of financial services institutions.➤ Advise on certain other matters relating to personnel management in these institutions.• Composition<ul style="list-style-type: none">➤ Chairperson to be nominated by Central Government.➤ Ex officio members: Secretary in charge of DFS, Department of Public Enterprises, Chairperson of IRDAI, Deputy Governor of RBI.➤ Several part-time members with subject matter knowledge.
 <p>Homo naledi</p>	<ul style="list-style-type: none">• New evidence suggests that Homo naledi, an extinct human species, may have buried their dead and carved meaningful symbols in a cave.<ul style="list-style-type: none">➤ The burials are older than any known Homo sapiens burials by at least 100,000 years.• Features of Homo naledi<ul style="list-style-type: none">➤ They walked fully upright and had hands that were similar to ours.➤ Shoulders were built for climbing and teeth were shaped like that of older primates.➤ Brain size was just one-third of that of modern humans.• Humankind's earliest ancestors: Ardipithecines, Australopithecines, Homo habilis, Homo ergaster/erectus, Homo neanderthalensis, Denisovans
 <p>Exercise Ekatha</p>	<ul style="list-style-type: none">• It is an annual exercise conducted between the navies of India and Maldives.
 <p>Places in News</p>	<p>Serbia (Capital City: Belgrade)</p> <ul style="list-style-type: none">• The President is on a state visit to Serbia. The visit is the first by an Indian President to Serbia.• Political features:<ul style="list-style-type: none">➤ Location: A landlocked country in South East Europe which covers part of the Pannonian Plain and Central and Western Balkan Peninsula.➤ Border countries: Hungary, Romania, Bulgaria, North Macedonia, Kosovo, Croatia, Bosnia and Herzegovina, and Montenegro.• Geographical features:<ul style="list-style-type: none">➤ Climate: Continental, with a gradual transition between the four seasons.➤ Rivers: Danube, Sava and Tisa etc.➤ Highest Point: Daravica <p>Fiji (capital: Suva)</p> <ul style="list-style-type: none">• Fiji reconsiders security ties with China amid Pacific tensions.• Political Boundaries:<ul style="list-style-type: none">➤ Fiji is an archipelago in the South Pacific Ocean.➤ It surrounds the Koro Sea about 1,300 miles (2,100 km) north of Auckland, New Zealand.• Geographical Features:<ul style="list-style-type: none">➤ The Fiji islands are largely the product of volcanic action, sedimentary deposit, and formations of coral.➤ Of the 300 islands, about 100 are inhabited.➤ Highest point: Tomanivi➤ Largest Island: Viti Levu ("Great Fiji").  