



# EXCEL QUEST

VOLUME - 41, MAY 2023



Heat Wave



3rd session of National Platform For Disaster Risk Reduction (NPDRR) concludes



China, India and the Promise of the Power of Two



Ways to strengthen Indian Education System



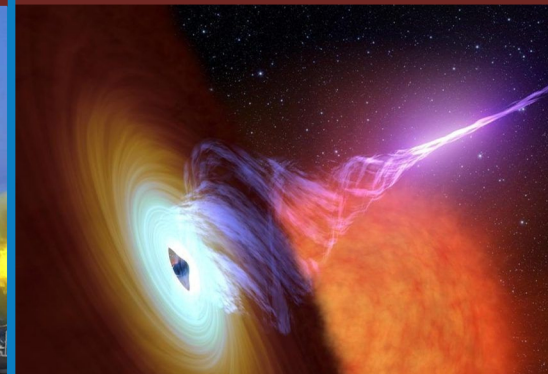
India's Healthcare Crisis: Addressing the Nursing Shortage



Human genome reboot better reflects global population



Indian Navy launches guided missile destroyer INS Imphal



Scary Barbie – The Largest Cosmic Explosion

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## Director's Message

Dear Aspirants,

The Reserve Bank of India (RBI) withdrew the Rs. 2,000 notes from circulation in May 2023. However, the RBI clarified that these notes would still be deemed legal tender. The withdrawal of Rs 2,000 notes is part of currency management. The RBI introduced the 2000 rupee note on November 8, 2016. The introduction of this high-value note was part of the government's demonetization exercise aimed at curbing corruption, black money, and counterfeit currency primarily with the objective of meeting the currency requirement of the economy expeditiously after the legal tender status of Rs 500 and Rs 1000 notes was withdrawn. The objective of introducing 2000 banknotes was satisfied once banknotes in other denominations became available in sufficient quantities. Therefore, the printing of new Rs 2000 banknotes was halted in 2018-19.

The Reserve Bank of India (RBI) has a Clean Note Policy that intends to provide citizens with high-quality currency notes and coins while removing worn-out notes from circulation. Under this policy, banks and financial institutions are expected to withdraw unfit or damaged notes from circulation and replace them with new ones to uphold the integrity of the Indian currency. The RBI routinely monitors the quality of notes in circulation and sets norms for their acceptability.

The reason for withdrawing Rs 2000 notes from circulation is part of the clean note policy of RBI and as per this policy since a majority of the ₹2000 denomination notes were issued prior to March 2017, they are at the end of their estimated life-span of 4-5 years. It has also been noticed that this denomination is not commonly used for majority transactions. According to RBI estimates, the total value of Rs. 2000 notes in circulation has declined from Rs 6.73 lakh crore at its highest on March 31, 2018 to Rs 3.62 lakh crore constituting only 10.8 % of notes in circulation as on March 31, 2023.

The critics of this move by RBI argue that high denomination notes are introduced for ease of transactions as the economy expands and since there is inflation, higher amounts of money is required. In India where a large number of transactions are carried out in cash, there are about 6 crore micro and small business entities and about 11 crore farmers who use cash as working capital. If it is assumed that those with substantial amount of unaccounted wealth in cash hold an average of Rs 10 crore, then if the entire amount of Rs 3.6 lakh crore is used to hold unaccounted wealth then only 36,000 people will have these notes. The implication is that to curb the illegal holdings of this minority, the whole population of 140 crores would be impacted. To tackle illegal income generation what is needed is accountability and transparency at all levels and not demonetization or its mini version even if that is partial.

However, according to observers, it is meaningless to compare the present move of withdrawal of Rs 2,000 notes with the 2016 demonetization exercise. The issuance of a high denomination note of Rs 2,000 was a prerequisite at the time of demonetization in 2016 because the withdrawal of currency had affected 86 percent of the total currency in circulation in the system. But now, the withdrawal of Rs 2,000 notes now will help inject more currency into the system to support the economy.

Citizens with legal sources of Rs. 2000 notes need not panic as there is enough time and facilities offered by the RBI to deposit or exchange these notes in the branches of Banks or authorized RBI centres. There is time until September 30 for the public to do so. This move by the RBI is not demonetization, but the aim perhaps is to end the life of Rs. 2000 notes until it goes completely out of the system. On the positive side, it is not likely to impact the common citizens of the country as they have marched on to use UPI. Hoarders of cash seem to be the target of the government & the RBI, who possibly have been given the last chance to bring the illegally stashed wealth into the legal economy.

Best wishes,

Yours sincerely,



K Rajendra Kumar IPS (Retd)

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## 1. NATIONAL AND INTERNATIONAL RELATIONS

### 1.1 The Significance of Rise in India's Petroleum Product Exports to the EU

#### Frame of reference:

- India's exports of petroleum products to the European Union (EU) have increased significantly in recent months as the continent weans itself off refined goods from Russia as a result of the conflict in Ukraine.
- Higher shipments of processed goods to the EU at a time when India's oil imports from Russia have risen to historic highs suggests that Indian refiners, particularly private sector companies, are trying to partially fill the supply gap for the area as it turns down Russian crude and products.



#### Key Highlights:

- India's petroleum product exports to the EU rose 20.4 per cent year on year in April-January to 11.6 million tonnes as per an analysis of data from the Directorate General of Commercial Intelligence and Statistics (DGCIS).
- In the run-up to the EU's ban on Russian petroleum products from February 5, India saw its refined product exports to the region rise sequentially for five straight months, touching 1.90 million tonnes in January, the highest monthly volume in the first 10 months of the current fiscal.
- In April-January, the EU accounted for close to 15 per cent of India's total petroleum product exports of 79 million tonnes, against 12 per cent in the year- ago period.
- In the four months leading to the EU's ban on Russian refined products, its share in India's petroleum product exports rose from 16 per cent to almost 22 per cent.

#### Directorate General of Commercial Intelligence & Statistics (DGCIS)

- The Directorate General of Commercial Intelligence & Statistics (DGCIS) is the premier organization of Government of India for collection, compilation and dissemination of India's trade statistics and commercial information.
- This Directorate, with its office located at Kolkata, under the Ministry of Commerce, Government of India is headed by the Director General, an Additional Secretary level officer of Indian Statistical Services (ISS).
- It is the first large scale data processing organization functioning as a nodal agency for Export & Import data in the country.

**Significance of the Rise in India's Petroleum Product Exports to the EU?**

- From the global oil markets perspective, suppliers like India are helping maintain a demand-supply balance, while preventing extreme price shocks.
- The EU does not want to buy crude as well as refined fuels and products from Russia.
- Countries like India, which is a major oil refiner, are playing their part in bridging the gap by buying Russian oil on one hand, and increasing supply of refined products to the EU on the other.
- India is a major refiner with an annual refining capacity of about 250 million tonnes.
- While it is also one of the top consumers of crude oil, India's refining capacity is higher than its domestic demand, making the country a net exporter of petroleum products.
- Indian refiners, particularly export-oriented private sector players Reliance Industries and Nayara Energy, stand to gain from the West's punitive action against Russian oil and gas sector.
- This is because it allows Indian refiners to purchase Russian oil at a discount while earning robust margins on product supplies to Europe.
- Hence, even while the EU avoids buying oil and petroleum products directly from Moscow, some of it seems to be making its way to European coastlines via India.
- In the prevailing circumstances, India now finds itself playing an increasingly prominent role in the global crude oil and refined products supply map.

**What are Petroleum products?**

- Petroleum products are materials derived from crude oil (petroleum) as it is processed in oil refineries.
- Unlike petrochemicals, which are a collection of well-defined usually pure organic compounds, petroleum products are complex mixtures.
- The majority of petroleum is converted to petroleum products, which include several classes of fuels.
- The largest share of oil products is used as "energy carriers", i.e. various grades of fuel oil and gasoline.
- These fuels include or can be blended to give gasoline, jet fuel, diesel fuel, heating oil, and heavier fuel oils.
- Heavier (less volatile) fractions can also be used to produce asphalt, tar, paraffin wax, lubricating and other heavy oils.
- Refineries also produce other chemicals, some of which are used in chemical processes to produce plastics and other useful materials.
- Since petroleum often contains a few percent sulfur-containing molecules, elemental sulfur is also often produced as a petroleum product.

- Carbon, in the form of petroleum coke, and hydrogen may also be produced as petroleum products.

### **What are the views of the Western Countries on Higher Petroleum Product exports to the EU?**

- International media reports indicate that while the West was displeased with India's rising purchases of Russian oil in the wake of Moscow's invasion of Ukraine, major Western powers like the US are at ease with expanding supplies of Indian refined goods to Europe.
- This is mainly because in their view, refiners in countries like India are ensuring that the global oil and refined products market remains balanced and adequately supplied.
- In fact, numerous experts see higher purchases of Russian oil and rising exports of petroleum products from countries like India as critical for the success of the price caps on Russian oil and refined products—imposed by G7 countries and their allies—without causing a global supply shock.
- To that extent, the West does not seem to mind Indian refiners benefitting from discounts on Russian crude and high margins on product supplies to the EU.

### **1.2 Saudi-Iranian Normalization: New Challenges Emerge in West Asia**

#### **Frame of reference:**

- Recently, Saudi Arabia and Iran, represented by their national security advisers, signed an agreement in Beijing, to re-establish diplomatic ties, respect each other's sovereignty and maintain non-interference in the other's domestic affairs.
- This agreement ends seven years of diplomatic estrangement between the two Gulf neighbors.



#### **Background of Relations:**

- The rivalry between the two dates back to pre-revolution Iran when they competed with each other for regional dominance.
- After the 1979 revolution brought down the Iranian monarchy and turned the country into a Shia theocratic republic, sectarian and ideological flavors were added to the mix.
- In recent times, it had turned into a cold war with both sides supporting their proxies across West Asia.
- Formal ties between them collapsed in 2016 after the Saudi embassy in Tehran was overrun by protesters following Riyadh's execution of a revered Shia cleric.
- Now, under China's mediation, they have agreed to start a new beginning.



**Provisions of Agreement:**

- According to reports, Iran has agreed to prevent further attacks against Saudi Arabia, especially those from the Houthi-controlled parts of Yemen (Iran backs Houthis, a Shia militia in Yemen while the Saudis back the government forces).
- Saudi Arabia agreed to rein in Iran International, a Farsi news channel that is critical of the Iranian regime (which the Iranian intelligence has termed a terrorist organization).
- The Foreign Ministers of both countries would meet soon to thrash out the terms of the reconciliation before reopening embassies in each other's capitals in two months.

**Why did Saudi Arabia reach out to Iran?**

- West Asia has been undergoing strategic realignments in recent years.
- In 2020, the UAE became the first Arab country to normalize relations with Israel in a quarter century.
- In the following years, Israel and Arab countries deepened their partnerships.
- One of the key drivers of these realignments is the U.S.'s deprioritisation of West Asia.
- The U.S. has bigger foreign policy challenges in its hand now such as the Russian war in Ukraine and China's rise in the Indo-Pacific.
- Additionally, relations between Saudi Arabia and the U.S. have been rocky in recent years.
- The bedrock of the partnership was America's security guarantees in return for Saudi oil.
- The U.S. is now one of the top oil producers in the world and is not as dependent on the Gulf Arabs as it used to be during the Cold War.
- This allowed American Presidents to expedite the U.S.'s deprioritisation of the region.
- When Saudi oil facilities were attacked in 2019 (for which Iran was widely blamed), the U.S. looked away.
- This seems to have prompted the Saudis to look for alternative solutions for the Iran problem.
- The solution they came up with was to reach out to the Iranians.

**What led Iran to accept the deal?**

- Iran is going through one of the toughest phases of economic isolation and domestic pressure.
- Tehran knows that getting a reprieve from Western sanctions is not a near-term possibility and at home, despite its crackdown, protests refuse to die down.
- Its economy is deteriorating and its currency is struggling.
- Iran wanted Chinese investments and support for its currency.

- Therefore, a deal with Saudi Arabia, under China's mediation, could open economic lifelines for Iran.
- And strategically, Iran knows that such a deal could complicate American efforts to rally Arab countries and Israel against it.
- So economically and strategically, reconciliation is beneficial for Tehran.

#### **What does China gain from the deal?**

- China has economic, regional and strategic interests in playing the role of a peace broker in West Asia.
- China is the world's largest oil buyer and stability in the energy market is essential for its continued rise.
- Regionally, the agreement marks China's arrival as a major power in West Asia.
- If one looks at all the major peace initiatives in the region in the post-War world, the U.S. was a constant presence.
- But in the Saudi-Iran reconciliation, the U.S. is absent.
- This points to larger changes under way in the global order.
- Besides, China is also trying to send a clear message to countries in the Global South.

#### **How does the U.S. look at the deal?**

- U.S. officials have welcomed the reconciliation.
- The public narrative is that peace between two of the major rival powers in West Asia would help stabilize the region and benefit the global energy market.
- But from a strategic point of view, the U.S. would be facing unpleasant questions about the agreement.

#### **What are the diplomatic challenges?**

- Regional security needs the revival of the nuclear agreement, the Joint Comprehensive Plan of Action (JCPOA), and the management of Israel's aggressiveness.
- Although doubts remain on whether the U.S.'s sharply polarized domestic scene will allow such an agreement which would dilute sanctions on Iran.
- Israel's domestic politics, also deeply polarized and dominated by the extreme right wing, is also expected to obstruct the renewal of the JCPOA and maintain a hostile posture towards Iran.
- Saudi-Iran differences will be difficult to resolve: they result from Saudi Arabia's deep sense of strategic vulnerability vis-à-vis its northern neighbor and concerns that might destabilize regional states through the use of Shia proxies.
- Iran will need to play a more proactive role to assure its neighbor of its benign intentions, an effort that would gain credibility with China's active engagement with the two regional powers.

**Way Forward:**

- The agreement addresses the most serious regional confrontation — it reduces regional tensions and puts in place the bases for further dialogue on improving relations and engaging on contentious issues.
- China has affirmed that its role in West Asian affairs is likely to get more active and substantial.
- This poses challenges for Indian diplomacy.
- However, recognising that the management of its ties with China remains its diplomatic priority, India will need to engage with China in West Asia where they have a broad gamut of shared interests in energy security, free and open sea lanes, logistical connectivity, and, above all, regional stability.
- Here, they can work together to further mutual and regional interests.

**Conclusion:**

- China's increase of influence in the Middle East is not a theory anymore, but is happening today in practice.

**1.3 China, India and the Promise of the Power of Two****Frame of reference:**

- As two neighbouring and ancient civilisations, with a combined population of 2.8 billion, China and India are representatives of developing countries and emerging economies.
- China and India have far more common interests than differences.

**Key Highlights:**

- The year 2023 marks an important step in India's diplomacy, with its president ship of the Shanghai Cooperation Organisation (SCO) and the G-20.
- The focus is also on China which held "two sessions" recently: the annual sessions of the National People's Congress of the People's Republic of China and the National Committee of the Chinese People's Political Consultative Conference.

**Development of China at a Glance:****Steady Economic Growth:**

- China's economic strength is steadily reaching new heights.
- In 2022, China's economy grew by 3% with a total of 12.06 million urban jobs added.

- China's GDP increased to 121 trillion yuan (approximately \$18 trillion), registering an annual growth rate of 5.2% over the past five years and an annual growth of 6.2% over the past decade with GDP increasing by nearly 70 trillion yuan.

**People's well-being:**

- As a result of continued efforts of the past eight years, China has historically resolved absolute poverty, with the alleviation of close to 100 million rural residents from poverty.
- Over 70% of the government's expenditure went toward ensuring people's well-being.
- Living standards continue to witness new improvements in China.

**Opening up to the World:**

- In 2022, China's total volume of trade in goods exceeded 40 trillion yuan, registering an annual growth rate of 8.6%.
- China's actual use of foreign capital was up by 8% and the country remained one of the top destinations for foreign investors.
- The overall tariff level continues to fall, from 9.8% to 7.4%.
- China's doors to the outside world are opening even wider.

**Win-win Cooperation:**

- In the period 2013-2021, China's contribution to global economic growth averaged 38.6%, higher than that of G7 countries combined (25.7%).
- Ever since China proposed the Global Development Initiative (GDI) in 2021, more than 100 countries have expressed their support and over 60 countries have joined the Group of Friends of the GDI.

**China-India Trade Relations:**

- China and India are important trading partners, with bilateral trade volume reaching \$135.984 billion in 2022.
- Though there is a trade deficit, India's import of equipment and materials from China does reduce the overall cost of "Made-in-India" products.
- It benefits Indian downstream industries and consumers, enhances the competitiveness of Indian exports, and in turn facilitates India's integration into global industrial and supply chains.
- Investments by Chinese enterprises have created a large number of jobs for the Indian people and contributed to India's economic development.



## **Shanghai Cooperation Organization**

### **About:**

- The Shanghai Cooperation Organization (SCO) is a Eurasian political, economic, and security organization that includes China, Russia, Tajikistan, Kazakhstan, Uzbekistan, Kyrgyzstan, India, Pakistan, and Iran.
- It was founded on 15 June 2001 and is headquartered in Beijing, China.
- India and Pakistan joined SCO in 2017 and Iran was admitted as the 9th member of SCO in the 21st annual summit in 2021.
- It is the world's largest regional organization in terms of geographic scope and population, covering approximately 60% of the area of Eurasia, 40% of the world population, and more than 30% of the global GDP.
- India takes over SCO rotating presidency, to host SCO summit of 2023.

### **Samarkand Declaration:**

- The Samarkand declaration was adopted by the council of heads of government of the SCO.
- It pointed out the series of challenges and headwinds to be faced by humanity in the 21st century.
- It mentioned Climate change, Terrorism, Technological disruptions, Global reduction in investment flows, Instability in the supply chain, increased protectionist measures, and other barriers to international trade.

### **Way Forward:**

- China is advancing modernisation on all fronts:
- The path to modernisation is based on China's practices with a focus on high- quality development.
- It means the modernisation of a huge population, where there is common prosperity for all, and material and cultural-ethical advancement, harmony between humanity and nature, and peaceful development.
- This will spell new opportunities to all countries in the world, especially neighbouring countries.
- India and China are both in the process of national rejuvenation and a crucial period of modernisation where challenges need to be overcome and problems need to be solved.

### **Conclusion:**

- The development and revitalisation of China and India embody a boost to the force of developing countries.
- It is one that will change the destiny of a third of the world's population and having bearing on the future of Asia and beyond.

## **1.4 Australia to Get Nuclear - Powered Submarines under AUKUS Partnership**

### **Frame of reference:**

- Australia, the United Kingdom, and the United States announced a partnership, known as AUKUS, which will see Australia receive up to five nuclear-powered submarines to counter China's growing ambitions in the Indo-Pacific region.



### **Key Highlights:**

- The partnership will involve the United States selling Australia three Virginia- class nuclear-powered submarines, with an option for two more, in the early 2030s.
- The partnership will also result in the trilateral development of a new submarine class, SSN-AUKUS, with the best technologies and capabilities of all three countries.
- The plan involves a phased approach which will culminate in the production and operation of SSN-AUKUS. The phases are,

### **Embedded Personnel and Port Visits:**

- Beginning in 2023, the Australian military and civilian personnel will embed with the US Navy, the UK Royal Navy and within the countries' submarine industrial bases.
- This will accelerate the training and development of Australian personnel to handle nuclear-powered submarines.

### **Submarine Rotational Forces:**

- As early as 2027, the UK and the US plan to establish a rotational presence of one UK Astute class submarine and up to four US Virginia class submarines at HMAS Stirling near Perth, Western Australia.

### **Sale of US Virginia Class Submarines:**

- Beginning in the early 2030s, the US intends to sell Australia three Virginia-class submarines, with the potential to sell two more if needed.
- This will not only give Australia much-needed experience in operating nuclear- powered submarines, it will also be a stop-gap measure to shore up Australia's ageing fleet of conventional submarines till SSN-AUKUS is inducted by the 2040s.

### **SSN-AUKUS:**

- With the combination of the UK's submarine design and advanced United States technology, SSN-AUKUS will be the future attack submarine for both Australia and the UK.

- Both countries intend to build the sub in their domestic shipyards before the end of this decade with the UK expected to receive its first SSN-AUKUS in the late 2030s and Australia expected to receive the submarine in the early 2040s.

### **What is AUKUS?**

- AUKUS is a 2021 defence deal between Australia, the UK and the US, which was struck to help Australia deploy nuclear-powered submarines in the Pacific region.
- Officially, the deal was made to emphasise upon the countries' "shared commitment to a free-and-open Indo-Pacific region".
- In effect, it seeks to combat China's ambitions in the region.
- China has been an aggressive player in the South Pacific and Indian Oceans, staking territorial claims across the resource-rich region which also hosts some of the world's busiest shipping lanes.
- China's increasing aggression against Taiwan and in the South China Sea has been of particular note.
- While China's territorial ambitions have elicited strong reactions from across the West, Australia, a traditional centre of influence in the Pacific, has been most directly impacted.
- Crucially, unlike Australia, China has multiple nuclear-capable submarines.
- Thus, the AUKUS partnership was signed to bolster Australia's naval heft in the region.

### **How will nuclear submarines help Australia?**

- Conventional diesel-engine submarines have batteries that keep and propel the vessel underwater.
- The life of these batteries can vary from a few hours to a few days.
- While newer Air-Independent Propulsion (AIP) submarines have additional fuel cells that increase the submarine's endurance, these are used only at strategic times and can only be replenished in port.
- Both conventional and AIP subs need to come to the surface to recharge their batteries using the diesel engine.
- Nuclear-powered submarines, on the other hand, have an internal nuclear reactor, giving them near-infinite endurance to operate and stay submerged – effectively, a nuclear submarine only needs to port/surface when it is out of food and other essential supplies for the crew.
- Typically, nuclear subs are also faster than conventional submarines.
- This allows them to reach far out into the ocean and launch attacks on the enemy, an important capability for blue water navies.
- Virginia class submarines and SSN-AUKUS will give the Royal Australian Navy the capability to go into the South China Sea to protect its assets and conduct patrols, a capability which it currently does not possess.

**Conclusion:**

- The AUKUS partnership between Australia, the UK, and the US represents a significant move towards countering China's growing ambitions in the Indo-Pacific region.
- The phased approach of the partnership is expected to provide Australia with much-needed experience in operating nuclear-powered submarines, while also shoring up its ageing fleet of conventional submarines.
- Overall, the AUKUS partnership underscores the importance of maintaining strategic alliances in the face of evolving security challenges.

**1.5 International Criminal Court issues arrest warrant against Vladimir Putin over Ukraine ‘War crimes’****Frame of reference:**

- Recently, The International Criminal Court issued an arrest warrant for Russian President Vladimir Putin on the war crime accusation of unlawfully deporting Ukrainian children.

**Key Highlights:**

- Moscow dismissed the orders as “void” and War-battered Ukraine welcomed the ICC announcement.
- Neither Russia nor Ukraine is member of the ICC, but Kyiv has accepted the court’s jurisdiction.
- Since Russia is not a party to the ICC so it was unclear if or how Mr. Putin could ever end up in the dock.
- Russia denies allegations of war crimes by its troops.
- Since its launch in 2002, the court has issued arrest warrants for three sitting world leaders: Sudan's Omar al-Bashir, Libya's Moammar Gadhafi and now Putin.
- None have stood trial. (Gadhafi was killed and al-Bashir remains at large.)

**What can the ICC do?**

- The ICC has jurisdiction over four types of crimes: genocide, war crimes, crimes against humanity and crimes of aggression.
- However, with no armed body to enforce its warrants, the ICC has minimal power to arrest people and instead must rely on the security forces of member states.

**What is the court's prosecution record?**

- With more than 900 staff members and an annual budget of nearly \$250 million, 31 cases have gone before the International Criminal Court.
- Its judges have issued 38 arrest warrants, according to the ICC's website.



- Twenty-one of those have led to a suspect being arrested by a member state and held in the court's detention centre.
- The court has issued 10 convictions and four acquittals.

<b>International Court of Justice</b>	<b>International Criminal Court</b>
<p>The International Court of Justice is the <b>primary judicial branch</b> of the United Nations.</p> <p>Seated in the Peace Palace in The Hague, Netherlands, the court settles legal disputes submitted to it by states and provides advisory opinions on legal questions submitted to it by duly authorized international branches, agencies, and the UN General Assembly.</p> <p><b>Subject Matter:</b> Settles legal disputes i.e. sovereignty, boundary disputes, maritime disputes, trade, natural resources etc.</p> <p><b>Parties:</b> Only States are either members of the United Nation or ICJ or both.</p> <p><b>Jurisdiction:</b> Contentious Jurisdiction and Advisory opinion</p> <p><b>Funding:</b> UN Funding</p> <p><b>United Nation Judiciary organ</b></p>	<p>The International Criminal Court (ICC or ICt) is an <b>intergovernmental organization and international tribunal</b> that sits in The Hague in the Netherlands.</p> <p>The ICC has the jurisdiction to prosecute individuals for the international crimes of genocide, crimes against humanity, and war crimes.</p> <p><b>Subject Matter:</b> Trial criminal offenses i.e. genocide, crimes against humanity, war crimes, crimes of aggression.</p> <p><b>Parties:</b> Individuals either ratified members of ICC or accept the jurisdiction of ICC. <b>Jurisdiction:</b> Criminal prosecution of individuals</p> <p><b>Funding :</b> Member States and voluntary funding from UN and others</p>

### What can be the implications of the Warrants?

- Human rights groups hailed the warrant as an important step toward ending impunity for Russian war crimes in Ukraine.
- While an arrest might be unlikely, the warrant will make diplomatic and business endeavors more difficult for Putin and his allies.
- The likelihood of a trial while Putin remains in power appears slim since the court cannot try defendants in absentia, and Russia has said it will not surrender its own officials.
- Putin's isolation in the West deepens, and his movements overseas could be limited.

- If he travels to a state that is a party to the ICC, that country must arrest him according to its obligations under international law.
- It is essential for the international community to dig in for the long term and to send a clear message that they will not sweep these crimes under the carpet and that the perpetrators will be pursued and will one day be brought to justice.

**Conclusion:**

- During the first 20 years of operations, the ICC has tried and resolved cases of significance for international justice, shedding light on the crimes committed by the use of child soldiers, the destruction of cultural heritage, sexual violence, or attacks on innocent civilians.

**1.6 Schemes like OPS will only exacerbate the Gap between Richer and Poorer States****Frame of reference:**

- India's states have matured and are eager to make their own decisions such as implementing different welfare schemes, choosing types of pension schemes, and deciding how universities should admit students.
- However, the states do not have the financial resources to implement these decisions or the freedom to mobilize finances on their own.

**Freedom without finances:**

- The current standoff between the Union government and the states over various issues like freebies versus welfare, reversion to the old pension scheme, imposition of conditions for financial grants on states, and so on are all manifestations of this syndrome of "freedom without finances."
- The recent uproar over the old versus new pension scheme is a classic example.

**OPS in Different States:**

- States such as Rajasthan, Punjab, Himachal Pradesh, Chhattisgarh, Jharkhand, and Bengal want to implement the old pension scheme (OPS), but the Centre opposes it because they have to provide the financial resources eventually.
- Large states such as Maharashtra, Tamil Nadu, Karnataka, and Gujarat are resisting pressure from their government employees to revert to OPS because of its dangerous financial implications.

**Financial Implications:**

- States that want to implement OPS have much higher debt levels (40% of GDP) than the states that are reluctant to switch to OPS (22%).

- The implementation of OPS will increase the financial burden of these states in the long run, which will affect their ability to cater to the basic needs of their citizens.
- For instance, Punjab has a debt of 48% of its GDP and spends nearly one-fifth of its income on pensions for government employees, who constitute only 6% of the total families in the state.
- Similarly, Himachal's debt levels are 42%, with a pension expenditure of 21% for just one-fifth of the households.
- When these states spend so much of their income on just 20 percent of the families, they will not have enough resources to cater to the basic needs of the remaining 80 percent, which forces them to borrow more money.

#### **Dependency on the Centre for Resources:**

- States implementing OPS neither have the financial muscle nor the powers to raise their own finances and are dependent on the Centre to provide funds either through devolution of taxes collected from other states or by borrowing and lending.
- The problem arises because just four large states – Maharashtra, Tamil Nadu, Karnataka, and Gujarat – are net contributors to the Union government's tax pool, while most other states are net takers.
- For example, for every Rs 100 that an average Maharashtra pays in all forms of taxes to the Union, nearly Rs 70 is sent to other states. But for every Rs 100 that the average Punjabi or Rajasthani pays to the Union government, they get back Rs 150.
- In other words, the Punjab or Himachal government claiming the right to decide on OPS is paid for indirectly by future generations of people in Maharashtra, Gujarat, Tamil Nadu, and Karnataka through the Union government.

#### **Impact of OPS on the Gap between Richer and Poorer States:**

- Such redistribution from richer states to needier ones is neither unique to India nor confined just to the OPS. However, the gap between the “net giving” and “net taking” states has only increased over time, leading to financial disparities.
- For instance, the gap between the debt levels of states that have implemented OPS (Bengal, Rajasthan, Punjab, Jharkhand, Chhattisgarh, Himachal) vis-à-vis the states that have resisted OPS (Maharashtra, Tamil Nadu, Gujarat, Karnataka) has increased from 13% in 2003 to 20% of GDP in 2023.

#### **Sustainability and Efficacy of Redistribution:**

- The pattern of richer states giving and the needier states taking more without closing the gap is unsustainable and dangerous.
- Schemes like OPS that lavish money on the small creamy layer of government workers at the expense of the vast majority of their poor will only exacerbate the gap between richer and poorer states.

- At some point, the richer states will start to question the efficacy of such redistribution and the need for them to continue to fund regressive schemes such as OPS in poorer states.

**Conclusion:**

- The decision on what to spend money on may be a state's right, but the money is a national issue.
- Duly elected state governments must have the right to frame their policies, but they must also be accountable for their financial decisions.
- Schemes like OPS will only exacerbate the gap between richer and poorer states. It is time for the states to realize their financial limitations and adopt more responsible programs and policies.
- Otherwise, the fiscal elephant in the federalism room of the nation will continue to grow, resulting in long-term financial instability.

**1.7 What is Generative AI and why are Tech Companies focusing on it?****Frame of reference:**

- Recently, OpenAI announced GPT-4, a newer model that is “multimodal” because it can perceive not only text but images as well.
- Generative artificial intelligence has become a buzzword this year, capturing the public's fancy and sparking a rush among Microsoft and Alphabet to launch products with the technology they believe will change the nature of work.

**What is Generative AI?**

- Generative AI (GenAI) is the part of Artificial Intelligence that can generate all kinds of data, including audio, code, images, text, simulations, 3D objects, videos, and so forth.
- It takes inspiration from existing data, but also generates new and unexpected outputs, breaking new ground in the world of product design, art, and many more.
- The technology, it should be noted, is not brand-new.
- Generative AI was introduced in the 1960s in chatbots.
- But it was not well known until 2014, with the introduction of generative adversarial networks, or GANs- a type of machine learning algorithm- that generative AI could create convincingly authentic images, videos and audio of real people.
- This newfound capability has opened up opportunities that include better movie dubbing and rich educational content.



- But it also unlocked concerns about deep fakes, digitally forged images or videos, and harmful cybersecurity attacks on businesses, including nefarious requests that realistically mimic an employee's boss.

### **How does it work?**

- Generative AI starts with a prompt that could be in the form of a text, an image, a video, a design, musical notes, or any input that the AI system can process.
- Various AI algorithms then return new content in response to the prompt.
- Content can include essays, solutions to problems, or realistic fakes created from pictures or audio of a person.
- Early versions of generative AI required submitting data via an API or a complicated process.
- Now, pioneers in generative AI are developing better user experiences that let you describe a request in plain language.
- After an initial response, you can also customize the results with feedback about the style, tone and other elements you want the generated content to reflect.

### **Where can it be used?**

- Generative AI can be applied in various use cases to generate virtually any kind of content.
- The technology is becoming more accessible to users of all kinds thanks to emerging innovations like GPT that can be tuned for different applications.
- Some of the use cases for generative AI include the following:
- Implementing chatbots for customer service and technical support.
- Generative AI likewise can take notes during a virtual meeting.
- It can draft and personalize emails, and it can create slide presentations.
- Suggesting new drug compounds to test.
- Improving dubbing for movies and educational content in different languages.
- Deploying deep fakes for mimicking people or even specific individuals.
- Writing music in a specific style or tone.
- Writing email responses, dating profiles, resumes and term papers.
- Creating photorealistic art in a particular style.
- Improving product demonstration videos.

- Designing physical products and buildings.
- Optimizing new chip designs.

**What are the benefits of it?**

- Generative AI can be applied extensively across every area of the business.
- It can make it easier to interpret and understand existing content and automatically create new content.

**Some of the potential benefits to consider in implementing generative AI include the following:**

- Automating the manual process of writing content.
- Reducing the effort of responding to emails.
- Improving the response to specific technical queries.
- Creating realistic representations of people.
- Summarizing complex information into a coherent narrative.
- Simplifying the process of creating content in a particular style.

**What are the limitations of it?****Here are some of the limitations to consider when implementing or using generative AI apps:**

- It can be difficult to understand how to tune for new circumstances.
- It does not always identify the source of content.
- Realistic-sounding content makes it harder to identify inaccurate information.
- It can be challenging to assess the bias of original sources.
- Results can gloss over bias, prejudice and hatred.

**What are the possible concerns?**

- It can provide inaccurate and misleading information.
- It is more difficult to trust without knowing the source and provenance of information.
- It can promote new kinds of plagiarism that ignore the rights of content creators and artists of original content.
- It might disrupt existing business models built around search engine optimization and advertising.
- It makes it easier to generate fake news.
- It makes it easier to claim that real photographic evidence of wrongdoing was just an AI-generated fake.
- It could impersonate people for more effective social engineering cyber attacks.

**Way Forward:**

- Continually assessing the potential consequences of generative AI models and making adjustments as needed to minimize any negative impact are necessary.
- Add adequate policy, regulation, awareness, and education to develop and use Generative AI services ethically and responsibly.

**Conclusion:**

- AI can not only boost our analytic and decision-making abilities but also heighten creativity.

**1.8 Brahmaputra fire: NGT's Principal Bench imposes ₹100 crore penalty on Kochi Corporation****Frame of reference:**

- The Principal Bench of the National Green Tribunal has imposed an environmental compensation of ₹100 crores on Kochi Corporation for its continuing neglect of duties, resulting in the crisis at its dump site in Brahmapuram following the major fire that occurred recently.

**Key Highlights:**

- The Bench issued the orders after it took suo motu notice of The Hindu report titled “Kochi chokes as fire at waste dump still rages.”
- Solid waste management is a critical challenge faced by Indian cities, as urbanization and consumption patterns lead to a growing volume and complexity of waste.
- The inadequate and inefficient management of solid waste has numerous adverse impacts on public health, environment, and economy.
- It is crucial to address this issue comprehensively and sustainably, by identifying and overcoming the challenges and implementing effective solutions.

**National Green Tribunal**

- The National Green Tribunal (NGT) is a specialized judicial body established in India in 2010 under the National Green Tribunal Act, 2010, to handle cases related to environmental protection and conservation.
- The tribunal is headquartered in New Delhi and has regional benches in several cities across India.
- The NGT has the power to hear all civil cases related to environmental issues and disputes arising out of the implementation of laws aimed at protecting the environment and enforcing pollution control measures.

- It has the authority to hear appeals against any order or decision made by any regulatory authority under the relevant laws.
- The tribunal comprises a chairperson and several judicial and expert members, who are appointed by the central government.
- The NGT is empowered to take punitive action against individuals, industries, or government agencies that violate environmental norms or fail to comply with its orders.

### **What is Solid Waste Management?**

- Solid waste management is the process of collecting, treating, disposing, and managing solid waste in a manner that is environmentally sound, safe, and efficient.
- Solid waste refers to any garbage, refuse, sludge, or discarded material resulting from human activities, including household, commercial, industrial, and construction waste.
- The goal of solid waste management is to reduce the amount of waste generated, as well as to minimize the adverse environmental and public health impacts of waste disposal.
- The various steps involved in solid waste management include collection, transportation, treatment, and disposal.

### **Policy and Legal Framework for SWM in India:**

- The Government of India (GOI) enacted various acts, rules, and regulations regarding SWM.
- Amongst which, Municipal Solid Waste (Management and Handling) Rules, 2000 is the most vital legislation.
- New SWM Rules, 2016 replaced these old rules. The new rules now apply beyond municipal areas and included urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, special economic zones, places of pilgrimage, religious and historical importance, and state and central government organizations in their ambit.
- According to the 12th Schedule of the Constitution of India, urban local bodies (ULBs) are responsible for keeping cities and towns clean.

### **Recent Government Initiatives:**

- 1) **Swachha Bharat Mission Urban (SBM-U):** With the enactment of new rules, it started door-to-door collection, segregation at source, etc.
- 2) **Swaccha Survekshan:** An annual survey of cleanliness, hygiene and sanitation in cities and towns across India. It launched as a part of the SBM-U under the Ministry of Housing and Urban Affairs (MoHUA). It gives star ratings to garbage-free cities and towns on several factors.
- 3) **Swachhata Hi Sewa Campaign:** for ensuring cleanliness through the various stakeholders' engagement in the "Jan Andolan" (National Movement).

- 4) **Compost Banao, Compost Apnao Campaign:** The aim is to encourage people to convert their kitchen waste into compost to be used as fertilizer and to reduce the amount of waste getting to landfill sites.
- 5) **Collection and disposal of Sanitary Waste under new rules:** The standing committee on urban development revealed that 2,000 tonnes of sanitary waste is generated in India a day.
- 6) **Promotion of Waste to Energy:** Ministry of New and Renewable Energy (MNRE) launched Program on Energy from Urban, Industrial, Agricultural waste/residues and Municipal Solid Waste to promote setting up of Waste-to- Energy projects and to provide central financial assistance.

**The challenges faced by Indian cities in managing their waste are:**

**Lack of awareness and civic responsibility:**

- Many citizens are unaware of the importance of waste segregation, disposal, and recycling, and do not participate in waste management activities. Moreover, there is a lack of civic responsibility and accountability, as people often litter or dump waste on the streets, drains, or open spaces.

**Inadequate infrastructure and technology:**

- Many cities lack proper facilities and equipment for collection, transportation, processing, and disposal of waste.
- The existing infrastructure and technology are often outdated, inefficient, or not optimized for the local context, resulting in poor service quality and high costs.

**Limited financial resources and capacity:**

- Many urban local bodies face budget constraints and limited technical expertise and human resources, which hinder their ability to invest in and manage solid waste management projects effectively.
- Moreover, the central and state governments often do not provide adequate support, funding, or policy guidance for waste management.

**Legal and regulatory gaps and enforcement:**

- The solid waste management rules and regulations in India are complex, overlapping, and often not enforced properly.
- The lack of clear roles and responsibilities, monitoring, and enforcement mechanisms, as well as corruption and political interference, hamper the implementation and compliance of waste management laws.

**Some potential solutions are:**

**Enhancing public awareness and participation:**

- Creating awareness campaigns, providing education and incentives for waste segregation and recycling, involving citizens in waste management activities through partnerships and citizen groups, and holding them accountable for littering and dumping.



**Investing in infrastructure and technology:**

- Upgrading and expanding the collection and transportation system, establishing decentralized processing facilities, adopting innovative and sustainable technologies such as bioreactors, pyrolysis, and waste-to-energy, and using GIS and ICT tools for better planning and monitoring.

**Mobilizing financial and technical resources:**

- Leveraging public-private partnerships, crowdfunding, CSR funds, and grants from national and international agencies for capital and operational expenses, building local capacity and expertise through training and knowledge sharing, and developing a sustainable financing model for waste management.

**Strengthening legal and regulatory frameworks and enforcement:**

- Simplifying and consolidating the solid waste management laws, clarifying roles and responsibilities, establishing a single-window clearance system, empowering the local bodies and community-based organizations, creating a robust monitoring and evaluation system, and imposing strict penalties for non-compliance.

**Conclusion:**

- Solid waste management is a critical and complex issue that requires a multi-dimensional and collaborative approach to overcome the challenges and achieve sustainable outcomes.
- By implementing the suggested solutions and promoting a culture of responsible waste management, Indian cities can improve the quality of life, protect the environment, and foster economic growth.

**1.9 Ways to strengthen Indian Education System****Frame of reference:**

- With a population of around 1.3 billion, it is not an easy task to provide basic resources to citizens of India.
- To provide quality education, there are many issues in our education system which need to be addressed effectively.
- Here is a look at some issues that plague the education system and what can be done to redress them.

**Key Highlights:**

- Education comes under concurrent list of Indian Constitution.
- Despite having the largest base of 900-plus universities in the world, only 15 higher education institutions from India are in the top 1,000.

- India's higher education system is the world's third-largest in terms of students, next to China and the United States.

### **Constitutional Provisions for Education:**

#### **The 86th Amendment Act 2002:**

- It has inserted Article 21(A) as a Fundamental Right providing free and compulsory education for the children of six to fourteen years.

#### **Right to Education (RTE) Act, 2009:**

- It aims at universalizing free and compulsory elementary education for all, India's Right to Education (RTE) Act, 2009.
- It holds local authorities responsible for maintaining a record of children (up to the age of 14 years) residing in their jurisdiction.
- It will ensure that they are enrolled in schools, attending the same, and thereby on their way to completing their elementary education.

#### **Article-45:**

- As amended by 86th Amendment Act 2002, now directs the state to provide early childhood care and education for all children until they complete the age of six years.

#### **Article 51 A(k) :**

- It is a fundamental duty, as newly inserted by 86th Amendment Act 2002, in Article 51 A(k) that a parent or guardian is to provide opportunities for education to his child or ward, between the age of six and fourteen years.

### **National Education Policy 2020**

#### **Salient features of NEP 2020:**

- Ensuring Universal Access at All Levels of schooling from pre-primary school to Grade 12.
- New Curricular and Pedagogical Structure (5+3+3+4).
- No hard separations between arts and sciences, between curricular and extracurricular activities, between vocational and academic streams;
- Emphasis on promoting multilingualism and Indian languages.
- The medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, will be the home language/mother tongue/local language/regional language.
- Assessment reforms - Board Exams on up to two occasions during any given school year.
- Aim to increase the GER to 100% in preschool to secondary level by 2030 whereas GER in Higher Education including vocational education 50% by 2035.

- Setting up of a new National Assessment Center, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development).
- Equitable and inclusive education - Special emphasis given on Socially and Economically Disadvantaged Groups (SEDGs).
- NTA to offer Common Entrance Exam for Admission to HEIs.
- Establishment of Academic Bank of Credit.
- Setting up of Multidisciplinary Education and Research Universities (MERUs);
- Setting up of the National Research Foundation (NRF).
- Single umbrella body for promotion of higher education sector including teacher education and excluding medical and legal education- Higher Education Commission of India (HECI)-with independent bodies for
- Standard setting- the General Education Council;
- Funding-Higher Education Grants Council (HEGC);
- Accreditation- National Accreditation Council (NAC); and
- Regulation- National Higher Education Regulatory Council (NHERC);
- Expansion of open and distance learning to increase Gross Enrolment Ratio (GER).
- Teacher Education - 4-year integrated stage-specific, subject- specific Bachelor of Education
- The Centre and the States will work together to increase the public investment in the Education sector to reach 6% of GDP at the earliest.

**Issues and Solution:****Limited funds and redistribution:**

- The government at the provincial and national levels has to provide resources such as manpower, infrastructure and funds to cater to the country's educational needs and teaching resources.

**Autonomy for education institutions:**

- In India, there is a certain degree of administrative control over the functioning of both public and private educational institutions which sometimes affect them negatively.
- So, High-performing Institutions should be given autonomy in their operations.
- Liberty in the revision of the syllabus, and introduction of new reforms can aid in offering quality education.
- Measures that relieve top-graded/ranked educational institutions from excessive control must be introduced collectively with the state and the central government.

**Expensive higher education :**

- The affordability of professional and technical education has become a crucial component due to the privatization of higher education and the rise of profit- driven education entrepreneurs.
- To make education more affordable, the government can float a new entity that provides education loans at cheaper interest rates or by offering longer repayment tenures.
- A facility to repay the loan by auto-debit from the monthly salary after study can be made available.
- Private institutions should also offer more scholarships to those from economically and socially weaker sections.

**Obsolete curriculum:**

- The curriculum in school and college focuses mostly on general education, which does not adequately prepare students for life and the challenges they will face.
- Therefore, International standards of education must be taken into consideration while formulating new guidelines.
- Multidisciplinary institutions, with a fully flexible credit-acquiring system may help overcome this problem.
- Students must be free to choose their courses and the number of credits acquired.

**Archaic academic structure:**

- Assessment and evaluation of students need to be brought on par with the latest international standards.
- More practical and vocational courses are the need of the hour.
- The areas of education must be streamlined, and the students must be assessed based only on that particular skill.
- As envisioned in the NEP 2020, institutions should follow the continuous evaluation; a formative assessment model, and do away with the rote system of summative assessment.

**Inferior primary education infrastructure:**

- According to a report shared by UNICEF, due to inadequate or poor infrastructure, 29% of boys and girls leave school before completing their elementary education.
- This has financial implications for society and also leads to the wastage of capable human resources.
- More focus should be on skill development and vocational education for job creation at the middle school level.
- Most students who drop out of school/college are earning members of the family, and their education cost is considered a liability.

**Aptitude to Teach:**

- Teaching jobs are widely regarded as safe, well-paid and risk-free jobs.
- Most of the teachers do not want to change.
- As they become experienced, they get septic and do not even think of the nature and needs of the students.
- Understanding the present generation is a necessity.
- Guidelines should be made in this direction.

**Conclusion:**

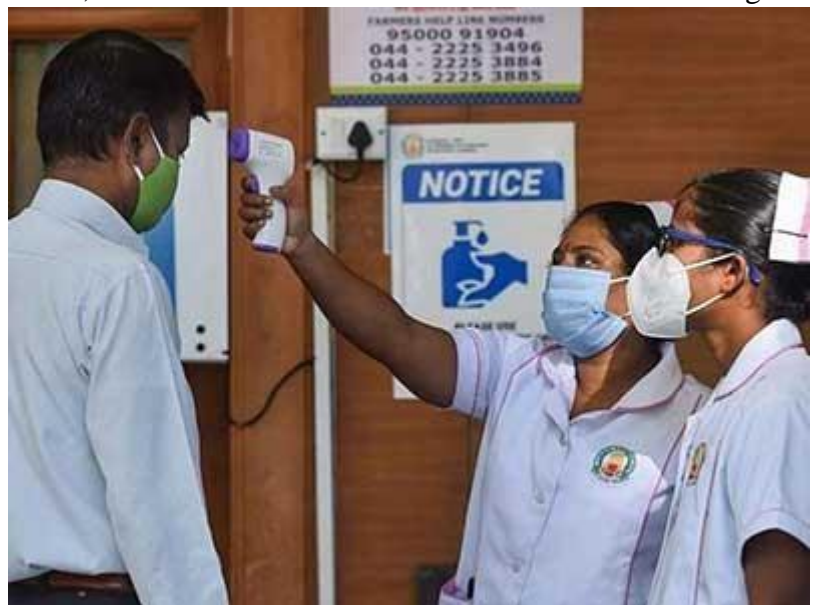
- Therefore, to reach and achieve future requirements there is an urgent need to relook at the Financial Resources, Access and Equity, Quality Standards, Relevance, and Infrastructure.

**1.10 India's Healthcare Crisis: Addressing the Nursing Shortage****Frame of reference:**

- Expanding nursing colleges is a positive move, but there is a need to improve the skill sets of nursing professionals as well.

**Key Highlights**

- India is currently facing a severe healthcare crisis, with the demand for medical services far exceeding the supply. This situation is further exacerbated by the shortage of nursing professionals in the country.
- The quality of healthcare in India is often below par, and patients struggle to get access to basic care. The government's recent announcement to set up 157 nursing colleges to address the shortage of nursing professionals in the country is a welcome move.
- However, this initiative is just the beginning of the country's efforts to equip its healthcare facilities with the requisite care giving expertise.

**The Current Situation**

- India's healthcare professionals are severely under-resourced. According to official estimates, India currently has less than two nurses for every 1,000 people in the country.
- This figure is far below the World Health Organization's (WHO) recommended number of three nurses for every 1,000 people.



- However, this figure is a conservative estimate, and the number of allied healthcare professionals needs to increase eight times to meet the country's needs over the next 25 years.
- India's population is expected to reach 1.5 billion by 2030, which creates a massive demand for healthcare professionals.

### **The Skew in Nursing Education**

- More than 40% of nursing colleges in India are located in southern states such as Kerala, Andhra Pradesh, Tamil Nadu, and Karnataka, which has created a significant skew in the distribution of nursing education.
- This issue has been addressed to some extent by the allotment of new nursing colleges to Rajasthan, Uttar Pradesh and Madhya Pradesh.
- However, there is still a long way to go to ensure equitable distribution of nursing education for healthcare facilities across the country.

### **Skills to Be Taught**

- Increasing the number of nursing professionals is one part of addressing the healthcare crisis in India.
- The other requirement is to equip these caregivers with the necessary skill sets required in a medical setup.
- Medical setups throw up new challenges, and old problems remain unresolved. Proper communication training could help resolve the acrimony between patients and healthcare professionals.
- The nursing cadre must also familiarize themselves with the rapidly changing technologies in medical care, which would help equip them to work autonomously.
- Experts suggest that institutes in India currently do not provide nurses with adequate training to take up leadership positions.
- The Indian nursing education curriculum needs to be revamped to achieve this, and continuous up skilling must be provided to maintain competency.

### **Improving Remittances and Revenue Generation**

- Migrant nurses, most of them from southern states, have been a significant source of remittance.
- These professionals are in high demand in hospitals in Europe, the Americas, and West Asia.
- Investing in nursing education will help enhance the revenue-generating capacity of potential migrants.
- This will promote the emigration of highly skilled professionals, which would increase opportunities for Indian professionals outside the country.

**Conclusion**

- The Indian government's decision to set up 157 new nursing colleges is a positive step in addressing the healthcare crisis in the country.
- However, it is essential to ensure that the education imparted in these colleges is of high quality, and students have access to the latest technologies and trends in the field.
- It is equally crucial to ensure that nursing professionals are given proper communication training, familiarised with rapidly changing technologies in medical care, and equipped to work autonomously.
- Additionally, the up skilling of nurses to take on leadership positions must be done through continuous training.
- The nursing curriculum in India needs to be revamped to ensure that it is in line with the latest healthcare trends and technologies.
- Institutes should focus on providing theoretical and practical knowledge to nursing students, covering all aspects of healthcare, including geriatric care, paediatrics, and critical care.

## 2. ECONOMY

### 2.1 **APEDA entrusted to promote Indian millets in international market during international year of millets 2023**

- The Agricultural & Processed Food Products Export Development Authority (APEDA) has been entrusted with the task of promoting Indian millets in the international market, the following steps, inter-alia, are being taken to meet the export demand during International Year of Millets 2023:
  - i. APEDA has published e-catalogues for 30 major millet importing countries and for 21 millet-producing Indian states. The e-catalogues have information on individual country profile; Indian millets and millet value-added basket; millet production scenario, India's export of millets; international standards of millets; and contact list of exporters, startups, FPOs, importers, and Indian missions in the country.
  - ii. APEDA has identified three knowledge partners - Indian Institute of Millet Research (IIMR); Centre of Excellence on Millets University of Agriculture Sciences, Bengaluru; and Yes Bank. These knowledge partners collaborate for preparation of content for publication of millet promotion material; identification of participants for the millet-promotion events to be organized by Indian Missions abroad; and millets value chain development.
  - iii. APEDA has planned promotion of Indian millets across international trade fairs and hold B2B (business-to-business) meetings for the year 2023.
  - iv. A millet-specific web portal has also been launched. The portal contains information about millets, their health benefits, production and export statistics, millet exporters' directory, and other relevant information.
  - v. APEDA has been conducting capacity-building programs throughout the country to facilitate export of millet and millet products. Start-ups on millets are being mobilized for export promotion of value-added products such as Ready to Eat (RTE) and Ready to Serve (RTS) categories, including noodles, pasta, breakfast cereal mix, biscuits, cookies, snacks, sweets, and other millet-based products.
  - vi. A knowledge book titled "Superfood Millets: A USD 2 Billion Export Opportunity for India" has been published by APEDA, in association with a knowledge partner. This book will help the prospective exporters of millets.
  - vii. An e-platform for Virtual Trade Fairs (VTFs) has been created specifically for millets. This platform is designed to invite buyers and visitors from across the globe to interact with exhibitors showcasing millet-based products.
  - viii. APEDA has stepped into brand building of Indian millets; '*Shree Anna*' to promote the consumption of millets and to create a niche market for Indian millets across the globe. Various sampling and tasting campaigns are being organized at significant destinations. Millets and millet-products are being promoted using cutting-edge comprehensive campaigns; encompassing social media, and digital branding.
- In order to reorient APEDA and enable it to effectively pursue market access, provide commercial intelligence, promote quality and adherence to standards in agriculture exports, and handle Sanitary and

Phytosanitary Measures (SPS) issues, the Government has approved restructuring of APEDA. Creation of 20 new posts has been approved under the restructuring plan. The restructuring plan also enables APEDA to hire Subject Matter Experts in various fields for a specific purpose and time.

## **2.2 Agri exports show 6.04% rise during Apr 22– Jan 23 over the corresponding period of the previous FY**

- The Government has been monitoring export performance including that of agricultural and processed food products in the current financial year i.e. 2022-23 vis a vis 2021-22. No targets have been fixed yet for export for the year 2023-24. During the current financial year (Apr. 2022 – January 2023), the agricultural exports have amounted to USD 43.37 billion, registering an increase of 6.04% over the exports of USD 40.90 billion during the corresponding period of the previous financial year i.e. April 2021 to January 2022. During the financial year 2021-22, India's agricultural export touched the highest ever level of USD 50.21 billion.
- Rise in agricultural exports improves realisations for farmers and has a positive impact on their income. In order to ensure that the farmers benefit from exports, the Government has launched a Farmer Connect Portal for providing a platform for Farmer Producer Organisations/Companies (FPOs/FPCs) and cooperatives to directly interact with exporters.
- The Government has taken several steps at State and District level to promote agriculture exports. State specific Action Plans have been prepared and State Level Monitoring Committees (SLMCs), Nodal Agencies for agricultural exports and Cluster Level Committees have been formed in a number of States. The Government is utilising the District as Export Hub (DEH) initiative to achieve the objectives of Agriculture Export Policy (AEP). Under the DEH initiative, products including agricultural and processed food products with export potential have been identified in all 733 districts across the country. State Export Strategy has been prepared in 28 States/UTs.
- The Agricultural & Processed Food Products Export Development Authority (APEDA) is constantly engaged in export promotion activities for agricultural & processed food products and has played an important role. APEDA implements the 'Agriculture & Processed Food Products Export Promotion Scheme'. Various developmental activities are undertaken and assistance to exporters is provided under different components of the scheme viz. Infrastructure Development, Market Development and Quality Development.
- APEDA has also been collaborating with the Indian Missions abroad for participating in various international trade fairs and exhibitions, organising virtual trade fairs, buyer-seller meets and export promotion of GI products. APEDA has also facilitated trial shipments for new products with export potential and for new destinations. To address the issue of stakeholders' participation in the decision making process for export promotion activities, the Department of Commerce has established Export Promotion Forums (EPFs) for individual products under the aegis of the APEDA. The EPFs have representation from trade/industry, line ministries/departments, regulatory agencies, research institutes,

state governments etc. In all 9 EPFs have been formed for rice, banana, grapes, mango, onion, dairy products, nutri-cereals, pomegranate and floriculture respectively. APEDA has also played an important role in opening up of new markets for agricultural products in the recent past such as Canada, China, South Korea, Taiwan, Portugal, Indonesia, Iran etc. APEDA has been organising capacity building/training programs in the Agri-export clusters and States in association with the State Departments, State Agriculture Universities, and Krishi Vikas Kendras for farmers, farmer-producer organizations (FPOs) and exporters in order to provide export-market linkage to the farmer groups and to facilitate entrepreneurs in becoming prospective exporters. APEDA has also made efforts to establish synergy with the Ministry of Agriculture & Farmers Welfare, Ministry of Food Processing Industries, Department of Animal Husbandry & Dairying and Directorate General of Foreign Trade (DGFT) to ensure optimum utilization of resources for development of agriculture exports.

**APEDA:** The Agricultural and Processed Food Products Export Development Authority (APEDA) is an Indian Apex-Export Trade Promotion Active government body.

APEDA is the premier body of export promotion of fresh vegetables and fruits. It provides the crucial interface between farmers, storehouses, packers, exporters, surface transport, ports, Railways, Airways, and all others engaged in export trade to the international market.

### **2.3 Trade Infrastructure for Export Scheme (TIES) being implemented for creation of appropriate infrastructure for the growth of exports**

- The Department of Commerce, Government of India, is implementing the Trade Infrastructure for Export Scheme (TIES) w.e.f. FY 2017-18 to assist Central and State Government agencies in creating appropriate infrastructure for the growth of exports. Under the scheme, financial assistance in the form of grants-in-aid is provided to Central/State Government owned agencies (or their Joint Ventures with major stake-holding by them) for setting up or up-grading export infrastructure in States/UTs. The States can avail of the scheme through their implementing agencies for infrastructure projects with significant export linkages like Border Haats, Land customs stations, quality testing and certification labs, cold chains, trade promotion centres, export warehousing and packaging, SEZs and ports/airports cargo terminuses.
- Further, Central Board of Indirect Taxes and Customs (CBIC), Department of Revenue is the responsible agency for streamlining export data to include District level details in Shipping Bills. The same has been done to more effectively capture export data at the level of districts which would assist in efforts for promotion of exports.
- Department of Commerce has been actively interacting and engaging with the State Governments / Union Territories to create an enabling environment to boost goods and services exports from the country by way of assisting them in formulating a comprehensive export strategy based on an assessment of State's strengths.

## **2.4 Startups & innovation ecosystem are engines of growth for any country**

- Under the Startup India initiative, the Government constantly undertakes various efforts for the development and growth of startup ecosystem across the country.
- The flagship Schemes namely, Fund of Funds for Startups (FFS), Startup India Seed Fund Scheme (SISFS) and Credit Guarantee Scheme for Startups (CGSS) are supporting startups at various stages of their business cycle to enable startups to graduate to a level where they will be able to raise investments from angel investors or venture capitalists or seek loans from commercial banks or financial institutions. The Government also implements flagship annual exercises and programs including States' Startup Ranking, National Startup Awards and Innovation Week which play an important role in holistic development of the startup ecosystem. The Government through stakeholder consultations seeks regulatory and policy related recommendations for enhancing ease of doing business and reducing compliance burden for startup ecosystem. The Government also facilitates participation and engagement of Indian startup ecosystem at international platforms.

**Details of such programs implemented under Startup India initiative by the Government to support startup ecosystem across the country are placed as follows:**

### **Programs Implemented under Startup India initiative**

The details of various programs undertaken by the Government to promote startups under Startup India initiative across the country are as under:

- **Startup India Action Plan:** An Action Plan for Startup India was unveiled on 16th January 2016. The Action Plan comprises of 19 action items spanning across areas such as “Simplification and handholding”, “Funding support and incentives” and “Industry-academia partnership and incubation”. The Action Plan laid the foundation of Government support, schemes and incentives envisaged to create a vibrant startup ecosystem in the country.
- **Fund of Funds for Startups (FFS) Scheme:** The Government has established FFS with corpus of Rs. 10,000 crore, to meet the funding needs of startups. DPIIT is the monitoring agency and Small Industries Development Bank of India (SIDBI) is the operating agency for FFS. The total corpus of Rs. 10,000 crore is envisaged to be provided over the 14th and 15th Finance Commission cycles based on progress of the scheme and availability of funds. It has not only made capital available for startups at early stage, seed stage and growth stage but also played a catalytic role in terms of facilitating raising of domestic capital, reducing dependence on foreign capital and encouraging home grown and new venture capital funds.
- **Credit Guarantee Scheme for Startups (CGSS):** The Government has established the Credit Guarantee Scheme for Startups for providing credit guarantees to loans extended to DPIIT recognized startups by Scheduled Commercial Banks, Non-Banking Financial Companies (NBFCs) and Venture Debt Funds (VDFs) under SEBI registered Alternative Investment Funds. CGSS is aimed at providing credit



guarantee up to a specified limit against loans extended by Member Institutions (MIs) to finance eligible borrowers viz. DPIIT recognised startups.

- **Regulatory Reforms:** Over 50 regulatory reforms have been undertaken by the Government since 2016 to enhance ease of doing business, ease of raising capital and reduce compliance burden for the startup ecosystem.
- **Ease of Procurement:** To enable ease of procurement, Central Ministries/ Departments are directed to relax conditions of prior turnover and prior experience in public procurement for all DPIIT recognised startups subject to meeting quality and technical specifications. Further, Government e-Marketplace (GeM) Startup Runway has been developed which is a dedicated corner for startups to sell products and services directly to the Government.
- **Support for Intellectual Property Protection:** Startups are eligible for fast-tracked patent application examination and disposal. The Government launched Start-ups Intellectual Property Protection (SIPP) which facilitates the startups to file applications for patents, designs and trademarks through registered facilitators in appropriate IP offices by paying only the statutory fees. Facilitators under this Scheme are responsible for providing general advisory on different IPRs, and information on protecting and promoting IPRs in other countries. The Government bears the entire fees of the facilitators for any number of patents, trademark or designs, and startups only bear the cost of the statutory fees payable. Startups are provided with an 80% rebate in filing of patents and 50% rebate in filling of trademark vis-a-vis other companies.
- **Self-Certification under Labour and Environmental laws:** Startups are allowed to self-certify their compliance under 9 Labour and 3 Environment laws for a period of 3 to 5 years from the date of incorporation.
- **Income Tax Exemption for 3 years:** Startups incorporated on or after 1st April 2016 can apply for income tax exemption. The recognized startups that are granted an Inter-Ministerial Board Certificate are exempted from income-tax for a period of 3 consecutive years out of 10 years since incorporation.
- **International Market Access to Indian Startups:** One of the key objectives under the Startup India initiative is to help connect Indian startup ecosystem to global startup ecosystems through various engagement models. This has been done through international Government to Government partnerships, participation in international forums and hosting of global events. Startup India has launched bridges with over 15 countries (Brazil, Sweden, Russia, Portugal, UK, Finland, Netherlands, Singapore, Israel, Japan, South Korea, Canada, Croatia, Qatar and UAE) that provides a soft-landing platform for startups from the partner nations and aid in promoting cross collaboration.
- **Faster Exit for Startups:** The Government has notified Startups as 'fast track firms' enabling them to wind up operations within 90 days vis-a-vis 180 days for other companies.

- **Startup India Hub:** The Government launched a Startup India Online Hub on 19th June 2017 which is one of its kind online platform for all stakeholders of the entrepreneurial ecosystem in India to discover, connect and engage with each other. The Online Hub hosts Startups, Investors, Funds, Mentors, Academic Institutions, Incubators, Accelerators, Corporates, Government Bodies and more.
- **Exemption for the Purpose Of Clause (VII)(b) of Sub-section (2) of Section 56 of the Act (2019):** A DPIIT recognized startup is eligible for exemption from the provisions of section 56(2)(viib) of the Income Tax Act.
- **Startup India Showcase:** Startup India Showcase is an online discovery platform for the most promising startups of the country chosen through various programs for startups exhibited in a form of virtual profiles. The startups showcased on the platform have distinctly emerged as the best in their fields. These innovations span across various cutting-edge sectors such as Fintech, EnterpriseTech, Social Impact, HealthTech, EdTech, among others. These startups are solving critical problems and have shown exceptional innovation in their respective sectors. Ecosystem stakeholders have nurtured and supported these startups, thereby validating their presence on this platform.
- **National Startup Advisory Council:** The Government in January 2020 notified constitution of the National Startup Advisory Council to advise the Government on measures needed to build a strong ecosystem for nurturing innovation and startups in the country to drive sustainable economic growth and generate large scale employment opportunities. Besides the ex-officio members, the council has a number of non-official members, representing various stakeholders from the startup ecosystem.
- **Startup India Seed Fund Scheme (SISFS):** Easy availability of capital is essential for entrepreneurs at the early stages of growth of an enterprise. The capital required at this stage often presents a make-or-break situation for startups with good business ideas. The Scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization. Rs. 945 crore has been sanctioned under the SISFS Scheme for period of 4 years starting from 2021-22.
- **National Startup Awards (NSA):** National Startup Awards is an initiative to recognize and reward outstanding startups and ecosystem enablers that are building innovative products or solutions and scalable enterprises, with high potential of employment generation or wealth creation, demonstrating measurable social impact. Handholding support is provided to all the finalists across various tracks viz. Investor Connect, Mentorship, Corporate Connect, Govt. Connect, International Market Access, Regulatory Support, Startup Champions on Doordarshan and Startup India Showcase, etc.
- **States' Startup Ranking Framework (SRF):** States' Startup Ranking Framework is a unique initiative to harness strength of competitive federalism and create a flourishing startup ecosystem in the country. The major objectives of the ranking exercise are facilitating states to identify, learn and replace good

practices, highlighting the policy intervention by states for promoting startup ecosystem and fostering competitiveness among states.

- **Startup India Innovation Week:** The Government organises Startup India Innovation week around the National Startup Day i.e. 16th January, with the primary goal was to bring together the country's key startups, entrepreneurs, investors, incubators, funding entities, banks, policymakers, and other national/international stakeholders to celebrate entrepreneurship and promote innovation.

## **2.5 Release of 'Basic Animal Husbandry Statistics 2022'**

**The major highlights of “Basic Animal Husbandry statistics 2022” are given below:**

- Total milk production in the country during 2021-22 is **221.06 million tonnes**.
- In the current year 2021-22, the milk production has registered an annual growth rate of **5.29%**.
- Top five major milk producing States are Rajasthan (15.05%), Uttar Pradesh (14.93%), Madhya Pradesh (8.06%), Gujarat (7.56%) and Andhra Pradesh (6.97%).
- In 2021-22, the total egg production in the country is **129.60 billion nos** which has increased by **6.19%** as compared to previous year.
- Total five major egg producing States are Andhra Pradesh (20.41%), Tamil Nadu (16.08%), Telangana (12.86%), West Bengal (8.84%) and Karnataka (6.38%).
- The total meat production in the country is **9.29 million tonnes** for the year 2021-22 with an annual growth rate of **5.62%**.
- The total five major meat producing States are Maharashtra (12.25%), Uttar Pradesh (12.14%), West Bengal (11.63%), Andhra Pradesh (11.04%), and Telangana (10.82%).
- The total wool production in the country during 2021-22 is **33.13 thousand tonnes** which has decline by 10.30% as compared to previous year.
- The top five major wool producing States are Rajasthan (45.91%), Jammu and Kashmir (23.19%), Gujarat (6.12%), Maharashtra (4.78%) and Himachal Pradesh (4.33%).
- The per-capita availability of milk is **444 gram/day** during 2021-22 increased by 17 gram/day over previous year.
- In 2021-22, the per-capita availability of egg is **95 nos/annuum** increased by 5 nos/annuum over previous year.
- The per-capita availability of meat is **6.82 kg/annuum** during 2021-22 increased by 0.30 kg/annuum over previous year.
- During 2014-15 and 2020-21, the value addition of sector grew at a compound annual growth rate of 7.93%.
- In 2020-21, the share of Livestock at constant prices in Agriculture Sector and total GVA was 30.13% and 4.9% respectively.

## **2.6 National Single Window System (NSWS) Portal used for all proposals seeking Govt. approval under FDI route**

- To promote foreign investment, the Government has put in place an investor friendly policy, wherein most sectors, except certain strategically important sectors, are open for 100% FDI under the automatic route. Further, the policy on FDI is reviewed on an ongoing basis, to ensure that India remains an attractive and investor friendly destination. To simplify the approval process of foreign Investment and to promote ease of doing business, the erstwhile Foreign Investment Promotion Board (FIPB) has been abolished in May 2017 and a new regime has been put in place. Under the new regime, process for granting FDI approvals has been simplified wherein the work relating to processing of applications for FDI has been delegated to the concerned Ministries/ Departments and DPIIT is the nodal department for facilitating the process. Detailed standard operating procedure for approval process has been issued by DPIIT. Further, all proposals seeking Government approval under FDI route are now filed on National Single Window System (NSWS) Portal.
- FDI policy provisions have been progressively liberalized and simplified across various sectors in the last eight years, such as Pension, Other Financial Services, Asset reconstruction Companies, Broadcasting, Pharmaceuticals, Single Brand Retail Trading, Construction & Development, Power Exchanges, e-commerce activities, Coal Mining, Contract Manufacturing, Civil Aviation etc. In the recent past, reforms in the FDI Policy have been undertaken in sectors such as Defence, Insurance, Petroleum & Natural Gas and Telecom. FDI in defence sector is now allowed up to 74% (from earlier 49%) through automatic route for companies seeking new industrial license. In insurance sector, FDI limit has been raised from 49% to 74% for insurance companies under the automatic route and foreign ownership and control has been allowed with safeguards. FDI up to 20% in Life Insurance Corporation of India (LIC) has been permitted under automatic route. Further, FDI up to 100% under the automatic route has been permitted in Telecom sector.

## **2.7 Taxes on Cooperative Societies**

**As per Budget announcement 2023-24, following income tax related benefits are being proposed for the Cooperative Societies:**

- i. The new co-operative society formed on or after 01.04.2023, which commences manufacturing or production by 31.03.2024 and do not avail of any specified incentive or deduction, is proposed to be allowed an option to pay tax at a concessional rate of 15 per cent similar to what is available to new manufacturing companies. This announcement would benefit new cooperatives engaged in manufacturing/production activities.
- ii. For sugar co-operatives, for years prior to assessment year 2016-17, if any deduction claimed for expenditure made on purchase of sugarcane has been disallowed, same shall be recomputed after allowing such deduction upto the price fixed or approved by the Government for such previous years.

This decision of the Government will provide benefit of approximately ₹10,000 crore of principal amount of Income-Tax to sugar cooperatives. For this purpose, all sugar co-operatives, who are eligible for deduction, are required to approach the assessing officer, suitably.

- iii. A higher limit of Rs. 2 lakh per member for cash deposits to and loans in cash by Primary Agricultural Cooperative Societies (PACS) and Primary Cooperative Agricultural and Rural Development Banks (PCARDBs) has been provided.
- iv. A higher limit of Rs. 3 Crore for TDS on cash withdrawal has been provided to cooperative societies.

**Similarly, during Financial Year 2022-23, following tax benefits were also provided to Cooperative Societies:**

- a. **Reduction in Minimum Alternate Tax (MAT):** MAT reduced for cooperatives from 18.5% to 15%.
- b. **Reduction in surcharge on cooperative societies:** Surcharge reduced from 12 % to 7% for co- operative societies having income between Rs. 1 to 10 Cr.

## **2.8 Customs duty full exemption for all imported drugs&Food for Special Medical Purposes for personal use for treatment of all Rare Diseases**

- The Central Government has given full exemption from basic customs duty on all drugs and Food for Special Medical Purposes imported for personal use for treatment of all Rare Diseases listed under the National Policy for Rare Diseases 2021 through a general exemption notification.
- In order to avail this exemption, the individual importer has to produce a certificate from Central or State Director Health Services or District Medical Officer/Civil Surgeon of the district. Drugs/Medicines generally attract basic customs duty of 10%, while some categories of lifesaving drugs/vaccines attract concessional rate of 5% or Nil.
- While exemptions have already been provided to specified drugs for treatment of Spinal Muscular Atrophy or Duchenne Muscular Dystrophy, the Government has been receiving many representations seeking customs duty relief for drugs and medicines used in treatment of other Rare Diseases. Drugs or Special Foods required for the treatment of these diseases are expensive and need to be imported. It is estimated that for a child weighing 10 kg, the annual cost of treatment for some rare diseases, may vary from ₹10 lakh to more than ₹1 crore per year with treatment being lifelong and drug dose and cost, increasing with age and weight.
- This exemption will result in substantial cost savings and provide much needed relief to the patients.
- The Government has also fully exempted Pembrolizumab (Keytruda) used in treatment of various cancers from basic customs duty.

## **2.9 Foreign Trade Policy 2023 announced**

- The Key Approach to the policy is based on these 4 pillars: (i) Incentive to Remission, (ii) Export promotion through collaboration - Exporters, States, Districts, Indian Missions, (iii) Ease of doing business, reduction in transaction cost and e-initiatives and (iv) Emerging Areas – E-Commerce Developing Districts as Export Hubs and streamlining SCOMET policy.
- Foreign Trade Policy (2023) is a policy document which is based on continuity of time-tested schemes facilitating exports as well as a document which is nimble and responsive to the requirements of trade. It is based on principles of ‘trust’ and ‘partnership’ with exporters. In the FTP 2015-20, changes were done subsequent to the initial release even without announcement of a new FTP responding dynamically to the emerging situations. Hereafter, the revisions of the FTP shall be done as and when required. Incorporating feedback from Trade and Industry would also be continuous to streamline processes and update FTP, from time to time.
- The FTP 2023 aims at process re-engineering and automation to facilitate ease of doing business for exporters. It also focuses on emerging areas like dual use high end technology items under SCOMET, facilitating e-commerce export, collaborating with States and Districts for export promotion.
- The new FTP is introducing a one-time Amnesty Scheme for exporters to close the old pending authorizations and start afresh.
- The FTP 2023 encourages recognition of new towns through “Towns of Export Excellence Scheme” and exporters through “Status Holder Scheme”. The FTP 2023 is facilitating exports by streamlining the popular Advance Authorization and EPCG schemes, and enabling merchanting trade from India.

### **Process Re-Engineering and Automation**

- Greater faith is being reposed on exporters through automated IT systems with risk management system for various approvals in the new FTP. The policy emphasizes export promotion and development, moving away from an incentive regime to a regime which is facilitating, based on technology interface and principles of collaboration. Considering the effectiveness of some of the ongoing schemes like Advance Authorisation, EPCG etc. under FTP 2015-20, they will be continued along with substantial process re-engineering and technology enablement for facilitating the exporters. FTP 2023 codifies implementation mechanisms in a paperless, online environment, building on earlier 'ease of doing business' initiatives. Reduction in fee structures and IT-based schemes will make it easier for MSMEs and others to access export benefits.
- Duty exemption schemes for export production will now be implemented through Regional Offices in a rule-based IT system environment, eliminating the need for manual interface. During the FY23-24, all processes under the Advance and EPCG Schemes, including issue, re-validation, and EO extension, will be covered in a phased manner. Cases identified under risk management framework will be scrutinized manually, while majority of the applicants are expected to be covered under the 'automatic' route initially.



**Towns of Export Excellence**

- Four new towns, namely Faridabad, Mirzapur, Moradabad, and Varanasi, have been designated as Towns of Export Excellence (TEE) in addition to the existing 39 towns. The TEEs will have priority access to export promotion funds under the MAI scheme and will be able to avail Common Service Provider (CSP) benefits for export fulfilment under the EPCG Scheme. This addition is expected to boost the exports of handlooms, handicrafts, and carpets.

**Recognition of Exporters**

- Exporter firms recognized with 'status' based on export performance will now be partners in capacity-building initiatives on a best-endeavor basis. Similar to the 'each one teach one' initiative, 2-star and above status holders would be encouraged to provide trade-related training based on a model curriculum to interested individuals. This will help India build a skilled manpower pool capable of servicing a \$5 Trillion economy before 2030. Status recognition norms have been re-calibrated to enable more exporting firms to achieve 4 and 5-star ratings, leading to better branding opportunities in export markets.

**Promoting export from the districts**

- The FTP aims at building partnerships with State governments and taking forward the Districts as Export Hubs (DEH) initiative to promote exports at the district level and accelerate the development of grassroots trade ecosystem. Efforts to identify export worthy products & services and resolve concerns at the district level will be made through an institutional mechanism – State Export Promotion Committee and District Export Promotion Committee at the State and District level, respectively. District specific export action plans to be prepared for each district outlining the district specific strategy to promote export of identified products and services.

**Streamlining SCOMET Policy**

- India is placing more emphasis on the "export control" regime as its integration with export control regime countries strengthens. There is a wider outreach and understanding of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) among stakeholders, and the policy regime is being made more robust to implement international treaties and agreements entered into by India. A robust export control system in India would provide access of dual-use High end goods and technologies to Indian exporters while facilitating exports of controlled items/technologies under SCOMET from India.

**Facilitating E-Commerce Exports**

- E-commerce exports are a promising category that requires distinct policy interventions from traditional offline trade. Various estimates suggest e-commerce export potential in the range of \$200 to \$300 billion by 2030. FTP 2023 outlines the intent and roadmap for establishing e-commerce hubs and related elements such as payment reconciliation, book-keeping, returns policy, and export entitlements. As a starting point, the consignment wise cap on E-Commerce exports through courier has been raised from

₹5Lakh to ₹10 Lakh in the FTP 2023. Depending on the feedback of exporters, this cap will be further revised or eventually removed. Integration of Courier and Postal exports with ICEGATE will enable exporters to claim benefits under FTP. The comprehensive e-commerce policy addressing the export/import ecosystem would be elaborated soon, based on the recommendations of the working committee on e-commerce exports and inter-ministerial deliberations. Extensive outreach and training activities will be taken up to build capacity of artisans, weavers, garment manufacturers, gems and jewellery designers to onboard them on E-Commerce platforms and facilitate higher exports.

### **Facilitation under Export Promotion of Capital Goods (EPCG) Scheme**

The EPCG Scheme, which allows import of capital goods at zero Customs duty for export production, is being further rationalized. Some key changes being added are:

- Prime Minister Mega Integrated Textile Region and Apparel Parks (PM MITRA) scheme has been added as an additional scheme eligible to claim benefits under CSP(Common Service Provider) Scheme of Export Promotion capital Goods Scheme(EPCG).
- Dairy sector to be exempted from maintaining Average Export Obligation – to support dairy sector to upgrade the technology.
- Battery Electric Vehicles (BEV) of all types, Vertical Farming equipment, Wastewater Treatment and Recycling, Rainwater harvesting system and Rainwater Filters, and Green Hydrogen are added to Green Technology products – will now be eligible for reduced Export Obligation requirement under EPCG Scheme

### **Facilitation under Advance authorization Scheme**

- Advance authorisation Scheme accessed by DTA units provides duty-free import of raw materials for manufacturing export items and is placed at a similar footing to EOU and SEZ Scheme. However, the DTA unit has the flexibility to work both for domestic as well as export production. Based on interactions with industry and Export Promotion councils, certain facilitation provisions have been added in the present FTP such as
- Special Advance Authorisation Scheme extended to export of Apparel and Clothing sector under para 4.07 of HBP on self-declaration basis to facilitate prompt execution of export orders – Norms would be fixed within fixed timeframe.
- Benefits of Self-Ratification Scheme for fixation of Input-Output Norms extended to 2 stars and above status holders in addition to Authorised Economic Operators at present.

### **Merchanting trade**

- To develop India into a merchanting trade hub, the FTP 2023 has introduced provisions for merchanting trade. Merchanting trade of restricted and prohibited items under export policy would now be possible.

Merchanting trade involves shipment of goods from one foreign country to another foreign country without touching Indian ports, involving an Indian intermediary. This will be subject to compliance with RBI guidelines, and won't be applicable for goods/items classified in the CITES and SCOMET list. In course of time, this will allow Indian entrepreneurs to convert certain places like GIFT city etc. into major merchanting hubs as seen in places like Dubai, Singapore and Hong Kong.

### **Amnesty Scheme**

- Finally, the government is strongly committed to reducing litigation and fostering trust-based relationships to help alleviate the issues faced by exporters. In line with "*Vivaad se Vishwaas*" initiative, which sought to settle tax disputes amicably, the government is introducing a special one-time Amnesty Scheme under the FTP 2023 to address default on Export Obligations. This scheme is intended to provide relief to exporters who have been unable to meet their obligations under EPCG and Advance Authorizations, and who are burdened by high duty and interest costs associated with pending cases. All pending cases of the default in meeting Export Obligation (EO) of authorizations mentioned can be regularized on payment of all customs duties that were exempted in proportion to unfulfilled Export Obligation. The interest payable is capped at 100% of these exempted duties under this scheme. However, no interest is payable on the portion of Additional Customs Duty and Special Additional Customs Duty and this is likely to provide relief to exporters as interest burden will come down substantially. It is hoped that this amnesty will give these exporters a fresh start and an opportunity to come into compliance.

### 3. ENVIRONMENT

#### 3.1 Heat Wave

- In News: According to a recent IMD Report **decade is India's hottest in 122 years which is likely product of heatwaves.**

#### What is Heat Wave?

- Heat wave is a period of abnormally high temperature that occurs during pre-monsoon summer season around March to June.
- According to the Indian Meteorological Department (IMD), a heat wave is considered if the maximum temperature of a station reaches
  - At least 40°C or more for Plains,
  - 37°C or more for coastal stations
  - 30°C or more for Hilly regions.

Heat wave Scenario	40°C	30°C
Maximum Temperature	Plains	Hills
Heat wave conditions prevail when...	Severe heat wave conditions prevail when....	
Normal maximum temperature	Normal maximum temperature	Normal maximum temperature
Deviation from normal	Deviation from normal	Deviation from normal
Above	Above	Above
40°C	40°C	40°C
4-5°C or more	6°C or more	7°C or more
At or below	At or below	At or below
40°C	40°C	40°C
5-6°C or more	7°C or more	

When should a heat wave be DECLARED?	
Recorded maximum temperature	
At or above	At or above
45°C for all locations	40°C for coastal locations

#### What are the favourable conditions for Heat wave in India ?

- During the month of March to June its **Summer season so no rain** and it leads to prolonged dry spell.
- Development of an **anticyclone in the central part** of India which pushes a lot of air downwards, leading to warmer temperatures near the ground.



#### ANATOMY OF A HEATWAVE

#### What causes a heatwave?

Heatwaves are generally the result of trapped air. They occur when a system of high atmospheric pressure moves into an area and lasts two or more days



#### Madden Julian Oscillation (MJO):

- The MJO is forming a sort of ridge which delays sea breeze to reach the coast.e.g when the sea breeze gets delayed over the Mumbai-Konkan region, the temperature tends to rise.
- Domination the north easterlies (trade wind ) prevail, and they shoot up the temperature for the coastal region as well.
- Southeasterly wind blowing towards central India from very warm regions like Tamil Nadu and Andhra Pradesh.
- La Nina impact** : It has produced a north south pressure pattern over India , as expected during the winter but it seems to be persisting in some form like dust storm,early deep depression,heatwave,cyclon are all part of this phenomenon .

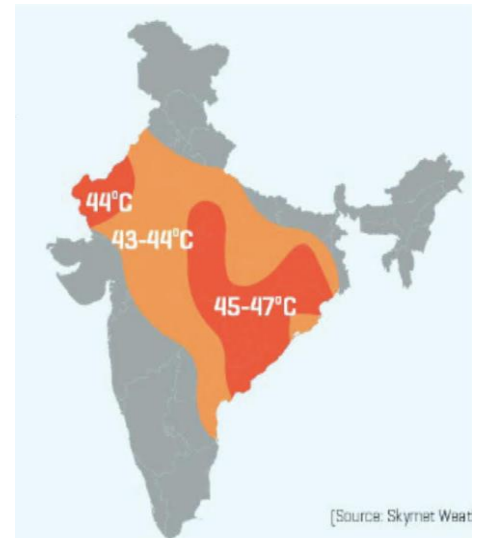
- Deforestation and increasing constructed area are also adding to environment instability and contributing to global warming and climate change leading to heat wave conditions.

### Hotspots of Heatwave in India:

North-Western, Central, and further to south-central region of India are the new hotspot of intense heatwave :

Region which will see more intense heat waves are:

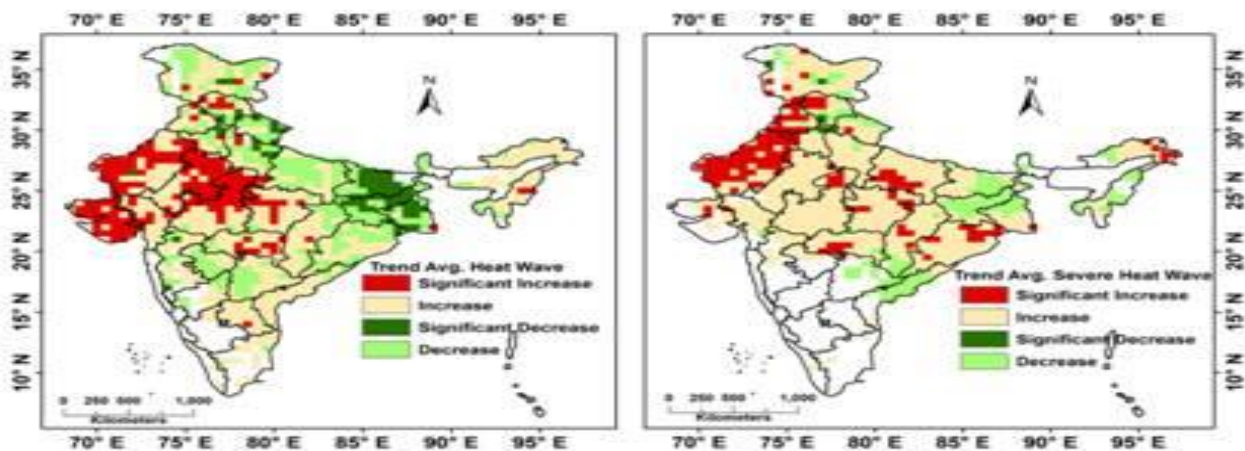
- Parts of northwest India, the Konkan coast, central India and Telangana. East west Rajasthan may experience 'severe' heat waves.
- Cooler areas like Himachal Pradesh, Uttarakhand and Jammu and Kashmir.
- Isolated pockets over West Madhya Pradesh, Vidarbha region in eastern Maharashtra, interior Odisha, Gujarat (Saurashtra and Kutch regions) .



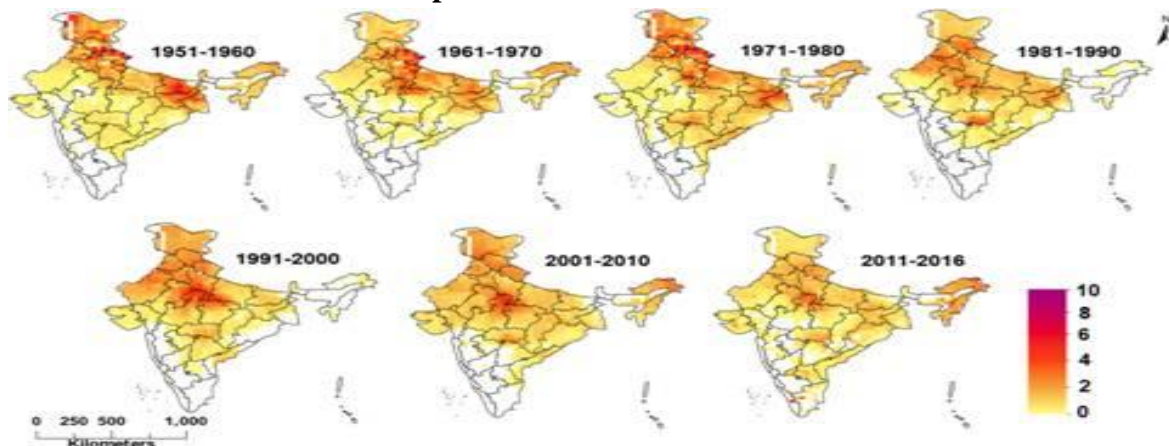
### Spatial-temporal shift in the occurrence of heatwave events:

- The study showed a shift in the Spatio-temporal trend of HW events from the eastern region of Gangetic, West Bengal and Bihar to North-Western, Central and further to the south-central region of India.

### Spatial Variation of Heat Wave:



### Temporal Variation of Heat Wave:



**Fig. Spatio-temporal shift in occurrence of Heat Wave Events over India**

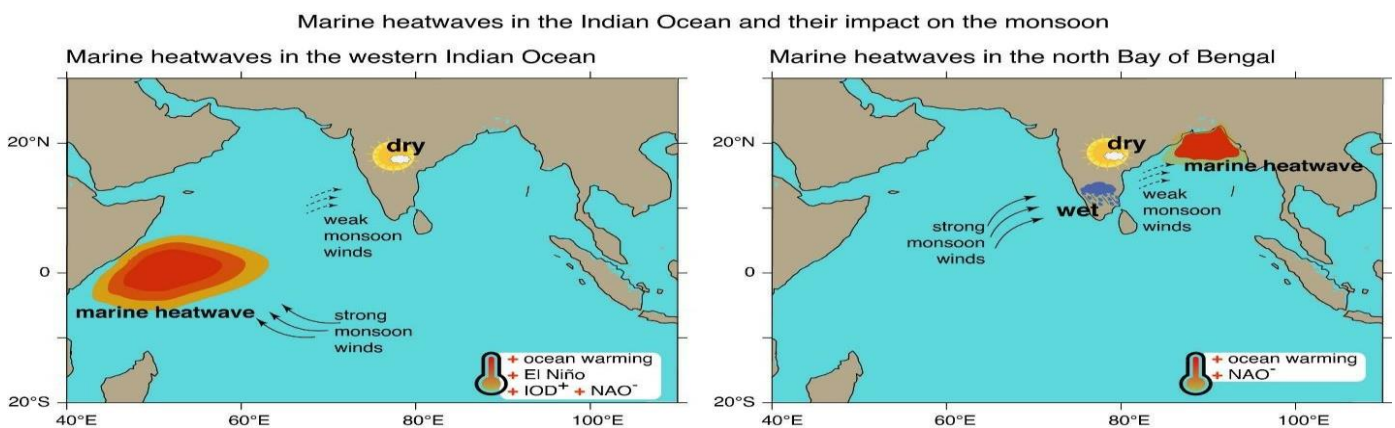


**Heat Wave as disaster:**

- Heat Waves have not been notified as a Disaster as defined under the Disaster Management Act, 2005 by the Government yet.
- Heat waves are not even notified in the list of 12 disasters eligible for relief under National/ State Disaster Response Fund norms.
- Importantly, the HW/SHW events were found to be positively correlated with mortality in Odisha and Andhra Pradesh, highlighting that human health is highly susceptible to severe heat wave disasters.

**Impact of Heat wave on India:****Impact on monsoon :**

- HW leads to increased ocean temperature and rapid warming in the Indian Ocean and aids strong El Niños.
- It impacts the monsoon by reducing the rainfall over the central Indian subcontinent which leads to drought conditions while enhancing it over the southern peninsula (According to IPCC) .

**Impact on Ecosystem:**

- In India, **6.17% of the forests are prone to severe fire damage** and with greater heat stress this is likely to increase.

**Economics impact:**

- Heat waves on land disrupt agricultural yields, which is a vital source of income for farmers living in central and northwestern India.
- Lost work capacity and labour productivity.
- It harms regional tourism.

**Human survivability:**

- In the Indus and Ganga river basins, “deadly” heat waves could cross the limits of human survivability.
- Respiratory and cardiovascular diseases, diabetes mellitus and heat exhaustion, heatstroke, and hyperthermia.



**Infrastructure impact:**

- Critical social infrastructure such as energy, transport, and water get affected by engineering stress .

**Urban Heat Island (UHI) effect:**

- Heat wave impacts are more severe in urban areas where residents are exposed to higher and nocturnally sustained temperatures compared to surrounding areas due to a phenomenon called the Urban Heat Island (UHI) effect.
- Unplanned urban growth and development, changes in land use and land cover, densely populated areas and increasing urban sprawl and unique challenges associated.

Urban Heat Island is caused by a combination of more heat absorbing surfaces (rooftops, buildings and paved surfaces), the trapping of hot air between buildings, limited tree cover and other heat trapping and heat inducing factors such as fuel combustion and air conditioning, can result in average annual temperatures in urban areas being 1-3<sup>0</sup> C hotter than surrounding areas.

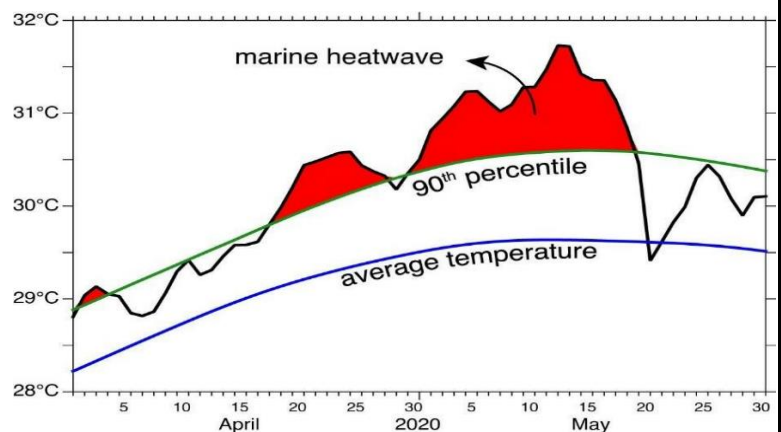
**Impact on marine ecosystems:**

- Most biodiverse marine ecosystems like kelp forests, seagrass meadows, and coral reefs get affected by heat waves.
- e.g In 2011 the west coast of Australia wiped out entire ecosystems causing some species to disappear for hundreds of kilometres due to HW impact.

**Marine Heatwave:**

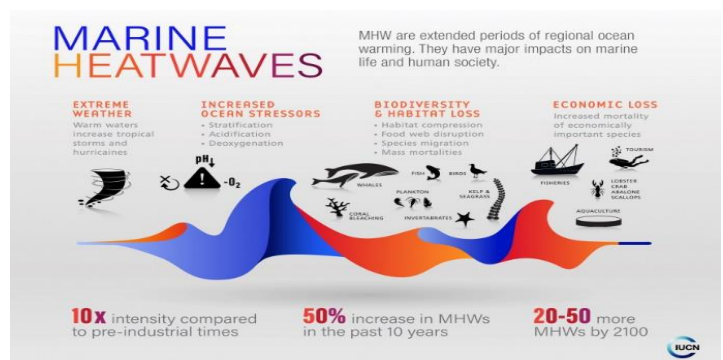
Marine heatwaves are periods of extremely high temperatures in the ocean (above the 90th percentile).

- Ocean warming, El Niño, Indian Ocean Dipole (IOD), and North Atlantic Oscillation (NAO) are the climatic factors responsible for the marine heatwaves.



Above is the example of a marine heatwave in the Bay of Bengal.

- Marine Heat wave events cause habitat destruction due to coral bleaching, seagrass destruction, and loss of kelp forests.
- An underwater survey showed that 85% of the corals in the Gulf of Mannar near the Tamil Nadu coast got bleached after the marine heatwave in May 2020.
- **MHW disrupts the water cycle** making floods, droughts more likely .



- Rationale for **Heat Wave Action Plan (HWAP)**: Heat Waves has **not been notified as a Disaster** as defined under the Disaster Management Act, 2005 by the Government yet. Heat waves are **not even notified in the list of 12 disasters eligible for relief under National/ State Disaster Response Fund** norms.
- The National Disaster Management Authority of India (NDMA) has issued an advisory on what a heatwave affected area should do and not they are as follows:

Do's	Don't
1. Drink enough water and whenever possible, even if not thirsty. Schedule strenuous jobs at cooler times of the day. 2. Increasing the frequency and length of rest breaks when involved in outdoor activities. 3. Planting trees and or even smaller plants will reduce the surface and air temperatures by providing shade and cooling around your house.	1. Avoid going out in the afternoons, especially around 12.00 noon and 3.00 p.m. 2. Do not wear dark, heavy or tight clothing. 3. Drinks like tea, alcohol, coffee and aerated drinks, will dehydrate your body faster. So they must be avoided.

### 3.2 Vembanad Lake

**About news:** Recently, the National Green Tribunal (NGT) imposed a penalty of Rs 10 crore on the Kerala government for failing to protect the Vembanad and Ashtamudi lakes.

#### **About Vembanad Lake:**

- Vembanad is the largest lake in Kerala and the longest Lake in India.
- It is also known as Vembanad Kayal, Vembanad Kol, Punnamada Lake (in Kuttanad) and Kochi Lake (in Kochi).
- The lake has its source in four rivers, Meenachil, Achankovil, Pampa and Manimala.
- It is separated from the Arabian Sea by a narrow barrier island and is a popular backwater stretch in Kerala.



- Vallam Kali (i.e Nehru Trophy Boat Race) is a Snake Boat Race held every year in the month of August in Vembanad Lake.

- In 2002, it was included in the list of wetlands of international importance, as defined by the Ramsar Convention.
- The Government of India has identified the Vembanad wetland under the National Wetlands Conservation Programme.
- The Kumarakom Bird Sanctuary is located on the east coast of the lake.

### **3.3 3rd session of National Platform For Disaster Risk Reduction (NPDRR) concludes**

#### **About news:**

- In recently held 18th Joint Ministerial Commission between India-Australia, both countries have expressed to boost bilateral trade to USD 100 billion by 2030 with critical minerals, mobility, education, sports, space and defence in target.
- To achieve \$100bn target, both countries are keen to sign a Comprehensive Economic Cooperation Agreement (CECA) by end of 2023 to reduce existing trade imbalance, which is in favour of Australia.
- **CECA:** CECA is generally covers negotiation on trade tariff and TRQ (Tariff Rate Quotas) rates only. The deal will be built on Free Trade Agreement (FTA), known as India-Australia Economic Cooperation and Trade Agreement (ECTA), that came into effect between two countries in 2022.
- ECTA slashed away duties on 96% of Indian exports and 85% of Australian exports.
- India- Australia trade relations In 2021, trade in goods and services between both countries was around \$27.5 bn, with Indian exports valued at \$10.5 bn and imports at \$17 bn.
- Australia is 17th largest trading partner of India, while India is Australia's 9th largest partner.

#### **National Platform For Disaster Risk Reduction**

##### **About NPDRR**

- It is a multi-stakeholder platform constituted by the Government of India in 2013 works under Prime Minister's Office to facilitate dialogue, sharing experiences, views, ideas, action-oriented research & explore opportunities in the area of Disaster Risk Reduction (DRR).
- It aims to bring together the whole range of India's disaster risk community from Government, Parliamentarians, Mayors, Media, International Organizations, NGOs, local community representatives, scientific and academic institutions and corporate businesses etc.
- The output from the National Platform will offer a strategic direction and a road map for the formulation of the future National Action Plans on DRR.

##### **Functions**

- To **review the progress** made in the field of disaster management from time to time.

- To **appreciate** the extent and manner in which the **Disaster Management Policy has been implemented** by the Central and State Governments, and other concerned agencies, and to **give appropriate advice in the matter**.
- To advise on coordination between the Central and State Governments/UT Administrations, local self-governments and civil society organizations for Disaster Risk Reduction.
- To advise suo-moto or on a reference made by the Central Government or any other State Government or a Union territory Administration on any question pertaining to disaster management.
- To review the National Disaster Management Policy.

### **Disaster Risk Reduction (DRR)**

- It is aimed at **preventing new and reducing existing disaster risk** and managing residual risk, all of which contribute to **strengthening resilience** and therefore to the achievement of **sustainable development**.
- DRR strategies and policies **define goals and objectives** across different timescales and with concrete targets, indicators and time frames.

### **Sendai Framework for Disaster Risk Reduction 2015-2030**

- It is a global, agreed policy of disaster risk reduction and is set out in the United Nations endorsed Sendai Framework adopted in March 2015 in Sendai Japan, whose expected outcome over the next 15 years is:
- The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.
- It was the first major agreement of the post-2015 development agenda and provides Member States with concrete actions to protect development gains from the risk of disaster.
- The Sendai Framework works hand in hand with the other 2030 Agenda agreements, including The Paris Agreement on Climate Change, The Addis Ababa Action Agenda on Financing for Development, the New Urban Agenda, and ultimately the Sustainable Development Goals.
- It recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.

## 4. SCIENCE & TECHNOLOGY

### 4.1 H5N1 kills 50 million birds, spreads to mammals

#### What is H5N1?

- H5N1 (avian influenza or bird flu) Strains of the influenza virus that primarily infect birds, but can also infect humans.

#### Why in news?

- This year the world has been witnessing one of the worst-ever documented outbreak of the highly pathogenic avian influenza H5N1 killing millions of birds.
- The virus, which is known to cause severe disease and death in birds, has also been detected in mammalian species and also in humans.

#### What is influenza?

- Flu is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and sometimes the lungs. It can cause mild to severe illness, and at times can lead to death.

#### Types of influenza

There are four types of influenza viruses: **A, B, C, and D.**

Types	A Subtypes
<b>Influenza A</b> (Infects a wide range of animals including birds)	Avian (Can infect humans) H5N1 H7N3 H7N7 H7N9 H9N2 H10N8
<b>Influenza B</b> (Mainly infects humans)	Swine (Can infect humans) H1N1 H1N2 H3N2
<b>Influenza C</b> (Infects humans and pigs but more rare than types A and B)	Most common human H1N1 H3N2
<b>Influenza D</b> (Infects cattle)	

### 4.2 U.K. sees success in mitochondrial replacement therapy

- U.K. became the first country in the world to approve a reproductive technique known as mitochondrial replacement therapy (MRT). Last year Australia became the second country to approve this therapy.

#### Does mitochondria contain DNA?

- The mitochondrial genome is built of 16,569 DNA base pairs, whereas the nuclear genome is made of 3.3 billion DNA base pairs.

#### What are mitochondrial genetic disorders?

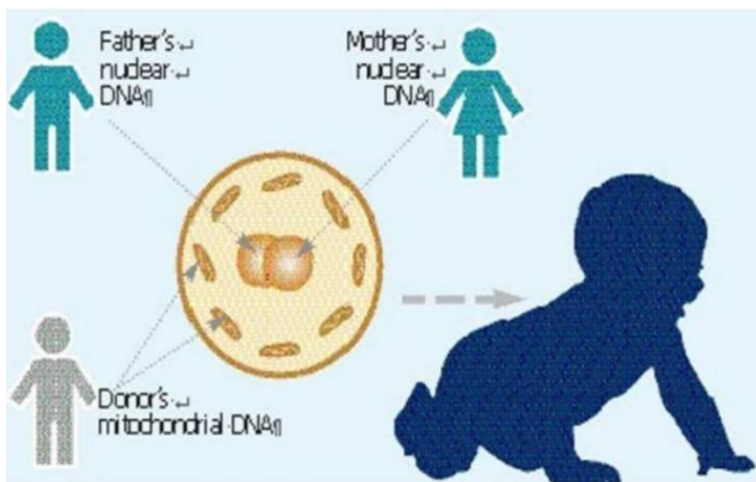
- Mitochondrial encephalopathy, lactic acidosis and stroke-like episodes (MELAS) syndrome. Myoclonic epilepsy with ragged red fibers (MERRF) Neuropathy, ataxia and retinitis pigmentosa (NARP) syndrome.



- Certain mutations in mitochondria can lead to mitochondrial diseases, affecting energy production and impacting various organs, including the brain, nerves, muscles, kidneys, heart, and liver.

### What does mitochondrial replacement therapy do?

- Mitochondrial replacement techniques (MRT) are novel procedures designed to prevent the maternal transmission of mitochondrial DNA diseases. This revolutionary technique, known as mitochondrial replacement therapy (MRT) or three-parent IVF, aims to prevent the inheritance of mitochondrial diseases.



### What is three parent baby technology?

- Three-parent baby, human offspring produced from the genetic material of one man and two women through the use of assisted reproductive technologies, specifically mitochondrial replacement therapy (MRT) and three-person in vitro fertilization (IVF).

## 4.3 Scary Barbie – The Largest Cosmic Explosion

- Astronomers have detected one of the longest, brightest and most energetic cosmic objects ever observed and they've named it "Scary Barbie," in part due to its terrifying power.
- The remote object, an astonishingly bright flash of light that has lasted for more than two years, was discovered lurk. Astronomers have identified the largest cosmic explosion ever observed, a fireball 100 times the size of our Solar System that suddenly began blazing in the distant universe more than three years ago.
- Scientists believe that they have well understood the nature of the "Scary Barbie". In fact, it is a black hole that tears apart a star that inadvertently approached it. It happened at a distance of 7.7 billion light-years from us, so far beyond the local group of galaxies.



Unit	Abbreviation	Conversion
Astronomical Unit	AU	1 AU = $1.5 \times 10^{11}$ m
Light Year	lyr	1 ly = $9.46 \times 10^{15}$ m
Parsec	pc	1 pc = $3.08 \times 10^{16}$ m
		1 pc = 3.26 ly or 1 pc = 206265 AU

### What is black hole?

- A black hole is a place in space where gravity pulls so much that even light can not get out. The gravity is so strong because matter has been squeezed into a tiny space.



**Cosmic explosion:**

- The universe exhibits a wide range of explosive phenomena: Massive stars end their lives with a bright explosion, a “supernova”, which outshines the galaxy in which the explosion takes place; Much brighter, and more rare “gamma-ray burst” explosions outshine the entire observed universe for the few seconds they are active; “X-ray flashes” and “low luminosity gamma-ray bursts” lie in between, with intermediate rates and luminosities.

**4.4 Indian Navy launches guided missile destroyer INS Imphal**

- INS Imphal, Indigenous Stealth Destroyer of Indian Navy. The Imphal is a stealth guided missile destroyer ship built for the Indian Navy by the Mazagon Dock Shipbuilders Limited (MDL). It is India’s 3rd indigenous stealth destroyer under Project 15B class.

**Why in news?**

- Recently, Imphal, India’s 3rd indigenous stealth destroyer under Project 15B class, undertook her maiden sea sortie.
- Development and Design: The Imphal vessel has been designed in-house by the Navy’s Warship Design Bureau and construction by Mazagon Dock Ltd. (MDL).
- **Indigenous Technologies:** Imphal stealth destroyer Ship has been built incorporating numerous specialized technologies and a significant amount of indigenous components.
- **Importance:** Development of Imphal stealth destroyer Ship is a clear demonstration of the Indian Navy’s commitment to the national vision of ‘AatmaNirbhar Bharat’ and the ‘Make in India’ initiative.

**What is project 15B?**

- The Project 15B programme involves the development of the Visakhapatnam class four guided-missile destroyers, an improved variant of the Kolkata-class destroyers (Project 15A destroyers), to be built by Mazagon Dock Limited (MDL) for the Indian Navy.

**What is stealth technology?**

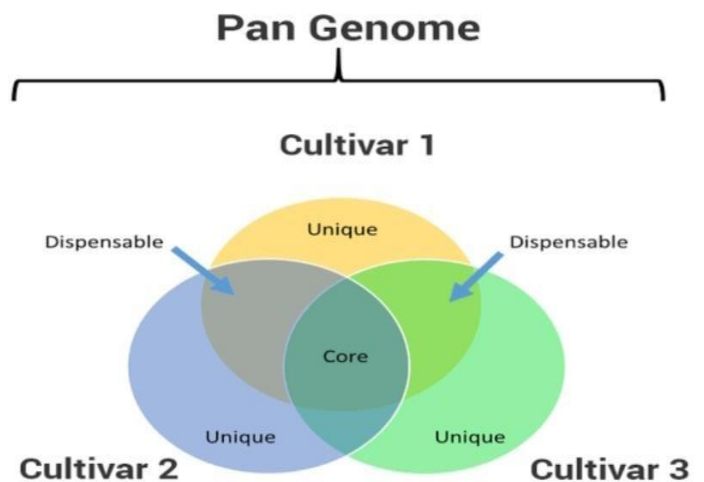
- It is a set of technologies, used in combinations, that can greatly reduce the distances at which a person or vehicle can be detected; more so radar cross-section reductions, but also acoustic, thermal, and other aspects. (Sound Technology Enabling Audibly Lucid Trans component Harmony.)

#### 4.5 Human genome reboot better reflects global population

- The new genome rundown may help clarify the contribution of genetic variation to health and disease, improve genetic testing, and guide drug discovery.
- Pan-genome is the set of all genes that are present in the analyzed dataset. This term refers to a new and more diverse DNA blueprint that holds the potential to revolutionize our understanding of human health and diseases.
- In 2003, scientists achieved a monumental feat by sequencing the first human genome. This accomplishment provided a reference point for comparing and analyzing other human sequences. It paved the way for significant advancements in personalized medicine, enabling the identification of disease-causing genes and shedding light on human evolution.

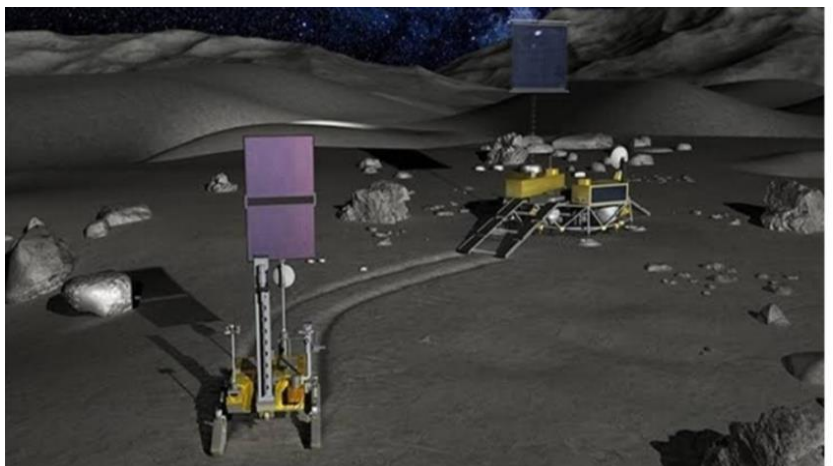
#### **Human pangenome project:**

- The Human Pangenome project is meant to sequence and assemble genomes from various people around the globe for scientists and researchers to better understand and represent the genomic landscape of populations around the world.
- Scientists from the international Human Pangenome Reference Consortium have published a new, high-quality collection of reference human genome sequences. The new research can aid in understanding how genetic diversity is related to health and disease. The new diversified Pangenome, comes 20 years after the first draft in 2003.



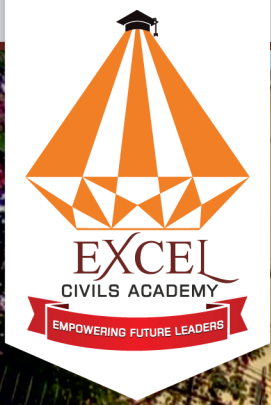
#### 4.6 LUPEX mission

- The Indo-Japanese LUPEX mission is envisaged to explore the permanently shadowed regions or the dark side of the moon. A team from Japan Aerospace Exploration Agency (JAXA) is in India and meeting with ISRO scientists and engineers involved in the LUPEX mission.
- The mission is expected to be launched in the next couple of years. The launch vehicle for the mission will be a Japanese rocket, the lander system will be developed by ISRO while the Rover by JAXA, and its landing point will be the south pole of the moon.



- The Indo-Japanese Lunar Polar Exploration (LUPEX) mission is envisaged to explore the permanently shadowed regions or the dark side of the moon.
- The main objective of the mission is to confirm the presence of water in the polar regions of the moon.





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