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SEPTEMBER

10.09.2021

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THE HINDU

GS 2 : Polity, Governance, International Relations

1. 13th BRICS summit seeks 'inclusive' intra-Afghan dialogue

In News :

- The **13th BRICS summit** was held virtually under the chairmanship of India.

Afghanistan issue:

- The summit was dominated by the developments in Afghanistan.
- The BRICS leaders called for an **inclusive intra-Afghan dialogue for stability, civil peace, law and order in Afghanistan**.
- The countries stressed the need to prevent attempts by terrorist organisations to use Afghan territory as a terrorist sanctuary and to carry out attacks against other countries.
- The document issued at the end of the summit, titled the New Delhi Declaration, also called for **addressing the humanitarian situation in Afghanistan**, and urged the need to uphold the rights of women, children and minorities.
- This consensus is all the more significant given that the BRICS countries are evidently divided on engagement with the Taliban with Russia and China adopting a proactive policy on the issue.

Counter Terrorism Action Plan BRICS

- The member nations also adopted the BRICS Counter Terrorism Action Plan during the summit.
 - The BRICS Counter Terrorism Action Plan is aimed at strengthening cooperation between BRICS countries in areas such as preventing and combating terrorism, radicalisation, financing of terrorism, misuse of the internet by terrorists, curbing travel of terrorists, border control, protection of soft targets, information sharing, capacity building, international and regional cooperation.

Counter pandemic cooperation:

- The summit also discussed the COVID-19 pandemic and the strategy to strengthen counter-pandemic cooperation.

Space sector cooperation:

- The agreement on **Remote Sensing Satellite Constellation** between the **member country space agencies** will deepen the cooperation in the space sector.

Other issues:

- The summit also declared the need for **urgent reforms in multilateral institutions** to make them more representative and equitable.
- The BRICS leaders also took up the conflicts in Myanmar, Syria, the tension in the Korean peninsula, Israel-Palestine violence and other territorial disputes. The **New Delhi Declaration emphasized the inadmissibility of the threat or use of force** against the territorial integrity or political independence of any State or in any other manner inconsistent with the purposes and principles of the United Nations.

Challenges to the BRICS grouping:

- Though the grouping has made some notable progress, it still faces multiple challenges.

Dominance of China:

- **China's economic rise has created a serious imbalance within BRICS.** China's centrality and dominance of intra-BRICS trade flows have made countries like India, Brazil and South Africa reluctant on agreeing to establish a free trade agreement in the BRICS grouping. Thus the **intra-BRICS trade continues to remain low** despite immense potential and opportunities.
- While China is on track to global dominance, Brazil and South Africa continue to face serious internal challenges. The increasing difference in the economic power of the member states does not augur well for the grouping.

Intra-group differences:

- **China's aggressive policy, especially against India has put BRICS solidarity under exceptional strain.** China's support to Pakistan despite India's reservations on Pakistan's reliance on using terrorism as a state policy against India has only further deepened the difference between India and China.
- The strained relations of China and Russia with the West and **India's increasing strategic alignment with countries like the U.S. and France** in a bid to counter China's increasing assertiveness have cast doubts on the future of the BRICS grouping.

2. 'Thamirabarani civilisation 3,200 years old'

In News :

- The **carbon dating analysis** of an excavated specimen found at Sivakalai in Thoothukudi district of southern Tamil Nadu has yielded the date of 1155 BCE.
 - Radiocarbon dating, also referred to as carbon dating, is a method for determining the age of an object containing organic material by using the properties of radiocarbon, a radioactive isotope of carbon.

About:

- The finding has established that the **Porunai river Thamirabarani civilisation dates back to 3,200 years.**
- Also, the recent excavations in **Keeladi, Kodumanal** and other sites in Tamil Nadu, including Northern Black Polished ware and a good number of pot shreds with Brahmi inscriptions indicate that contacts between South India and North India might be as early as 600-700 BCE or even earlier.
- The Tamil Nadu government has announced that it will carry out archaeological excavations in other States and countries to establish the Tamil links.
 - In the first phase, studies would be undertaken at the ancient port of **Musiri, now known as Pattanam, in Kerala, Vengi in Andhra Pradesh, Thalaikadu in Karnataka and Palur in Odisha.**
 - Tamil Nadu Archaeology Department would also conduct research at **Quseir al-Qadim and Pernica Anekke in Egypt, Khor Rori in Oman.**
 - Notably, pot shreds with Tamil scripts have been found in these places.

3. Al-Qaeda may seek a comeback in Afghanistan: Pentagon chief

In News :

- U.S. Defense Secretary has cautioned that **al-Qaeda may attempt to regenerate in Afghanistan** following the American withdrawal and the assent of the Taliban to power.

Background:

- Notably, the Taliban had provided al-Qaeda with sanctuary while it ruled Afghanistan from 1996 to 2001. The **US went to war with the Taliban ruled**

Afghanistan after it refused to turn over al-Qaeda leaders following the September 11, 2001 attack on the United States.

- In the February 2020 agreement with the then U.S. administration, **the Taliban leaders pledged not to support al-Qaeda or other extremist groups** that would threaten the United States in return for American troop withdrawal from Afghanistan.

Details:

- U.S. Defense Secretary noted that the nature of al-Qaeda and other terror organizations such as the Islamic State group is such that they will always attempt to find space to grow and regenerate where ever they find space and support.
- With the Taliban back in power in Afghanistan, it is extremely likely that al-Qaeda will find a base in the war-torn country.
- Instead of being one centralised outfit with a base in one country, **al-Qaeda has metastasized across the world**. If al-Qaeda was concentrated in Afghanistan before September 11, they decentralised themselves and spread to different parts of the world like **Iraq, Syria and Libya**.
- The U.S. plans to contain al-Qaeda by using surveillance and strike aircraft based in the region, including in the Gulf.

4. The fall of Afghanistan, the fallout in West Asia

Three weeks after they walked into Kabul without any resistance, the Taliban now has announced an interim Council of Ministers.

Chord with Pakistan: Crowing of its puppets

- Pakistan appears to have got its way. This government formation was tightly controlled the head of its Inter-Services Intelligence (ISI).
- Afghanistan's acting PM is Mullah Hassan Akhund, close associate of former Taliban founder Mullah Omar.
- Abdul Ghani Baradar is his deputy, but again, this could be a token position.
- Baradar had been arrested in 2010 by the Pakistanis for pursuing a dialogue with the Hamid Karzai government without Pakistani sanction and jailed for eight years.
- Pakistan's true proteges are Sirajuddin Haqqani, the acting interior minister, and Mohammed Yaqoob, the acting defence minister, a son of Mullah Omar, who is also close to Haqqani.

The West Asian players

Saudi Arabia, Qatar and Iran have been direct role-players in Afghan affairs for over 25 years.

- **Sheikhdom involvement:** In the 1990s, the first two were supporters and sources of funding for the Taliban, while Iran was an antagonist. After the 9/11, all three countries became deeply involved with the Taliban. From 2005, the Gulf sheikhdoms have contributed millions of dollars to different Taliban leaders and factions.
- **Iran's defiance of US:** Iran began a substantial engagement with various Taliban leaders from 2007 and provided funding, weapons, training and refuge, when required. It wanted the Taliban to maintain pressure on the U.S. forces to ensure their speedy departure from the country.
- **Regional competition:** In the 2010s, when the US began to engage with Iran on the nuclear issue, Saudi Arabia became more directly involved in Afghan matters to prevent Iran's expanding influence among Taliban groups. Thus, besides Syria and Yemen, Iran and Saudi Arabia have also made Afghanistan an arena for their regional competitions.
- **Earliest acknowledgement of the Taliban:** In 2012, Qatar, on U.S. request, allowed the Taliban to open an office in Doha as a venue for their dialogue with the Americans. This has made Qatar an influential player in Afghan affairs, with deep personal ties with several leaders, many of whom keep their families in Doha.

Competitions for influence

The low-key reactions of the Gulf countries to recent developments in Kabul reflect the uncertainties relating to the Taliban in power.

Nature of the govt: Their ability to remain united, their policies relating to human rights, and, above all, whether the Taliban will again make their country a sanctuary for extremist groups.

Fractionalization within terror groups: The country already has several thousand foreign fighters, whose ranks could swell with extremists coming in from Iraq and Syria, and threaten the security of all neighbouring states.

Three sets of regional players are active in Afghanistan today:

1. **Pakistan-Saudi coalition:** This has been the principal source of support for the Taliban-at-war. They would like to remain influential in the new order, but neither would like to see the Taliban revert to their practices of the 1990s that had justifiably appalled the global community.
2. **Turkey and Qatar:** They represent the region's Islamist coalition and, thus, share an ideological kinship with the Taliban. Both would like to see a moderate and inclusive administration.
3. **Iran:** While many of its hardliners are overjoyed at the U.S. "defeat", more reflective observers recall the earlier Taliban emirate which was viscerally hostile to Shias and

Iran. Iran also sees itself as the guardian of the Tajik, Uzbek and Hazara minorities in the country.

Options Available: The outlook for security

Linking with Israel-Palestine Conflict: The region now has two options: one, an Israel-centric security order in which the Arab Gulf states would link themselves with Israel to confront Iran. This is being actively promoted by Israeli hawks since it would tie Israel with neighbouring Arab states without having to concede anything to meet Palestinian aspirations.

Comprehensive regional security arrangement: The other option is more ambitious: The facilitators and guarantors of this security arrangement are likely to be China and Russia: over the last few years, both have built close relations with the major states of the region. i.e., Iran, Saudi Arabia, Turkey, Afghanistan and Pakistan.

Consensus to ward away the US

- The Gulf Cooperation Council (GCC) states led by Saudi Arabia lifted the over three-year blockade of Qatar.
- The discussions between Iran and Saudi Arabia and plans are in place for the next meetings.
- Turkey has initiated diplomatic overtures towards Egypt and Saudi Arabia.
- None of these initiatives involves the Americans.

Conclusion: A new order is in making

- These developments suggest that the germ of a new regional security order in West Asia is already sown in fertile ground.

Way forward for India

- The Indian policies are at a crossroads. Continued bandwagoning with the US makes no sense.
- Indian diplomacy should harmonize with the regional capitals, including Beijing, which can be a natural ally on issues of terrorism.
- The bottom line is that India's vital interests remain to be secured.
- Demonizing the Taliban can only be counterproductive.

GS 3 : Economy, Science and Technology, Environment

5. Incentive dues of Rs. 56,000 cr. Will release by centre in relief to exporters

- The Centre will release Rs. 56,027 crore in the current fiscal to disburse all pending export incentives relating to **Merchandise Exports from India Scheme (MEIS)**, **Service Exports from India Scheme (SEIS)**, **Rebate of State and Central Taxes and Levies (RoSCTL)**, other scrip-based schemes relating to earlier policies and the remission support for **Refund of Duties and Taxes on Exported Products (RoDTEP)** and RoSCTL for exports.
- The benefits will be disbursed to more than 45,000 exporters, of which 98% are MSMEs.
- The government expects the move will spur higher growth after a 67% increase in goods export.

6. PLI Scheme for Textiles

The Union Government has approved Production Linked Incentive (PLI) Scheme for Textiles. This move is a part of the overall announcement of PLI Schemes for 13 sectors made earlier during the Union Budget 2021-22.

PLI Scheme

- As the name suggests, the scheme provides incentives to companies for enhancing their domestic manufacturing apart from focusing on reducing import bills and improving the cost competitiveness of local goods.
- PLI scheme offers incentives on incremental sales for products manufactured in India.
- The scheme for respective sectors has to be implemented by the concerned ministries and departments.

Criteria laid for the scheme

- Eligibility criteria for businesses under the PLI scheme vary based on the sector approved under the scheme.
- For instance, the eligibility for telecom units is subject to the achievement of a minimum threshold of cumulative incremental investment and incremental sales of manufactured goods.
- The minimum investment threshold for MSME is Rs 10 crore and Rs 100 crores for others.
- Under food processing, SMEs and others must hold over 50 per cent of the stock of their subsidiaries, if any.

- On the other hand, for businesses under pharmaceuticals, the project has to be a greenfield project while the net worth of the company should not be less than 30 per cent of the total committed investment.

What are the incentives involved?

- An incentive of 4-6 per cent was offered last year on mobile and electronic components manufacturers such as resistors, transistors, diodes, etc.
- Similarly, 10 percent incentives were offered for six years (FY22-27) of the scheme for the food processing industry.
- For white goods too, the incentive of 4-6 per cent on incremental sales of goods manufactured in India for a period of five years was offered to companies engaged in the manufacturing of air conditioners and LED lights.

What is in the box for Textiles?

- The PLI scheme for textiles aims to promote the production of high value Man-Made Fibre (MMF) fabrics, garments and technical textiles.
- Any person or company willing to invest a minimum of Rs 300 crore in plant, machinery, equipment and civil works (excluding land and administrative building cost) to produce products of MMF fabrics, garments and products of technical textiles will be eligible.
- Investors willing to spend a minimum of Rs 100 crore under the same conditions shall be eligible.

Benefits offered

- PLI scheme for Textiles will promote production of high value MMF Fabric, Garments and Technical Textiles in country.
- The incentive structure has been so formulated that the industry will be encouraged to invest in fresh capacities in these segments.
- This will give a major push to the growing high-value MMF segment which will complement the efforts of the cotton and other natural fiber-based textiles industry.
- This will help to generate new opportunities for employment and trade, resultantly helping India regain its historical dominant status in global textiles trade.

7. Catching up

In News:

- The Union Cabinet has cleared an outlay of Rs. 10,683 crore on a **production linked incentive scheme in the man-made fibre (MMF) apparel, fabrics, and technical textiles sectors.**
 - The scheme will specifically focus investment attention on 40 MMF apparel product lines, 14 MMF fabric lines and 10 segments or products of technical textiles.

Background:

- The textile industry plays a significant role in the Indian economy by providing direct employment to an estimated 35 million people, by contributing 4 per cent of GDP and accounting for 35 per cent of gross export earnings. The textile sector contributes 14 per cent of the value-addition in the manufacturing sector.

Significance:

- The new initiative marks a belated but much-needed acknowledgement by the Government of the **major shift that has happened in the global textiles trade and India's failure to adapt to the changed trends.**
 - The shift in consumer preferences and fashion trends has seen **MMF** surpass cotton as the fibre of choice. They **account for about 75% share in worldwide textile consumption.**
 - **India's textile and clothing exports remain dominated by cotton and other natural fibre-based products,** with MMF contributing to less than 30% of the country's overall sectoral exports in 2017-18.

The initiative will **help align India's textile sector in line with the global market for textiles.**

- The 64 items chosen under the scheme rank among the top-traded lines in the global market as well as India having less than a 5% share in each of them.

Conclusion:

- The success of the scheme is likely to hinge on how new entrepreneurs and existing companies weigh the risk-reward equation, especially at a time when the pandemic-spurred uncertainty has already made private businesses wary of making a fresh capital expenditure.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1) 13th BRICS Summit 2021

- Prime Minister Shri Narendra Modi will chair the 13th BRICS Summit on 9 September 2021 in virtual format.
- The theme for the Summit is '**BRICS@15: Intra-BRICS cooperation for continuity, consolidation and consensus**'.
- India had outlined four priority areas for its Chairship. These are
 - Reform of the Multilateral System,
 - Counter Terrorism,
 - Using Digital and Technological Tools for achieving SDGs and
 - Enhancing People to People exchanges.
- In addition to these areas, the leaders will also exchange views on the impact of the COVID-19 pandemic and other current global and regional issues.
- This is the second time Prime Minister Modi will be chairing the BRICS Summit. Earlier he had chaired the Goa Summit in 2016.
- The Indian Chairship of BRICS this year coincides with the fifteenth anniversary of BRICS, as reflected in the theme for the Summit.
- The priority under this pillar are:
 - BRICS Economic Partnership Strategy 2020-25 - Implementation of this strategy will be discussed.
 - BRICS Agriculture Research Platform - The platform's operations will be discussed.
 - Cooperation on Disaster Resilience
 - Innovation Cooperation
 - Digital Health and Traditional Medicine
- Cultural and People to People - The cultural and personal exchanges always enhance intra-group bonding and the BRICS 13th Summit is set to discuss the same.

Salient Features : The 13th BRICS summit held virtually called for an “inclusive intra-Afghan dialogue” for stability in Afghanistan.

- The virtual summit, chaired by Prime Minister Narendra Modi, was dominated by the developments in Afghanistan, and **adopted the BRICS Counter Terrorism Action Plan**.
- With the agreement on Remote Sensing Satellite Constellation between our space agencies, a new chapter of cooperation has begun.
- The discussion on Afghanistan at the event attended by the leaders of India, Russia, China, Brazil and South Africa was held against the backdrop of the Taliban announcing an interim government in Kabul.
- The BRICS leaders called for “settling the situation by peaceful means”, and condemned the terrorist attacks at the Hamid Karzai International Airport which killed at least 100 persons, including several U.S. military personnel.
- “We stress the need to contribute to fostering an inclusive intra-Afghan dialogue so as to ensure stability, civil peace, law and order in the country. We underscore the priority of fighting terrorism, including preventing attempts by terrorist organisations to use Afghan territory as terrorist sanctuary and to carry out attacks against other countries,” declared a joint statement issued at the end of the summit.
- The document, titled the **New Delhi Declaration**, also called for addressing the humanitarian situation in Afghanistan, and urged the need to uphold rights of women, children and minorities.
- The meeting gave an opportunity to the BRICS countries to discuss the situation in Afghanistan especially as two of the five members – Russia and China – continue to have a diplomatic presence in Kabul where an interim Taliban government is expected to take formal charge in few days.
- BRICS countries are evidently divided on engagement with the Taliban with Russia and China adopting a proactive policy on the issue. A Russian media report said the Taliban has invited Turkey, Qatar, China and Iran for the swearing-in ceremony.

2. How India and Germany can work together to tackle climate change?

This op-ed talks about how India and Germany, both nations with innovative economies and many highly-trained people can tackle the climate challenge.

India-Germany Relations: A backgrounder

Freedom struggle: Subhas Chandra Bose, a prominent freedom fighter for Indian independence, made a determined effort to obtain India’s independence from Britain by seeking military assistance from the Axis powers. The Indische Legion was formed to serve as a liberation force for British-ruled India principally made up of Indian prisoners of war.

Diplomacy: India maintained diplomatic relations with both West Germany and East Germany and supported their reunification in 1990. Contrary to France and the UK, Germany has no strategic footprint in Asia.

Past contentions: Germany condemned India for liberating Goa from Portuguese rule in 1961 and supported Portugal's dictatorial regime under Salazar against India. It was critical of India for intervening in the 1971 Bangladesh Liberation War. It rejected India's 1998 nuclear tests.

Quest for UNSC: India and Germany both seek to become permanent members of the UNSC and have joined with Japan and Brazil to coordinate their efforts via the G4 collective.

Cultural ties: Germany has supported education and cultural programs in India. Germany helped establish the IIT Madras after both governments signed an agreement in 1956 and increased its cooperation and supply of technology and resources over the decades to help expand the institution.

Trade and investment: Germany is India's largest trading partner in Europe. Germany is the 8th largest foreign direct investor (FDI) in India.

Common concerns

- In South Asia and Europe, we have become used to extremely hot weather, flooding, dramatic depletion of groundwater tables and drought.
- The EU has adopted an ambitious Green Deal to achieve net-zero greenhouse gas emissions by 2050 and to decouple economic growth from consumption of natural resources.

Why the two?

- India is one of few countries that looks set to deliver on the national goals it set itself as part of the Paris agreement.
- Compared to other G20 countries, its per capita emissions are very low.
- Germany recently adopted laws on reducing greenhouse gases more quickly, achieving climate neutrality by 2045 and stopping the use of coal for electricity production by 2038.

Collaborated efforts to date

- In 2015, India's PM and Germany's Federal Chancellor agreed to further strengthen the two countries' strategic partnership.

- On this basis, Germany and India have succeeded in building up a cooperation portfolio worth almost 12 billion euros.
- Already, nine out of 10 measures support climate goals and SDGs together.

Indo-German development cooperation focuses on three areas:

1. Transition to renewable energies
2. Sustainable urban development and
3. Sustainable management of natural resources

What does Germany have to offer?

- As a pioneer of energy transition, Germany is offering knowledge, technology transfer and financial solutions.
- The pandemic has shown global supply chains are vulnerable.
- Yet, when it comes to agriculture and natural resources, there are smart solutions that are being tested in India and Germany for more self-reliance, including agro-ecological approaches and sustainable management of forests, soils and water.
- Experience in India has shown that these methods also boost incomes for the local population and make them less dependent on expensive fertilizers, pesticides and seeds.

3.National Institute Ranking Framework

The Ministry of Education has launched the **sixth edition** of the National Institute Ranking Framework (NIRF).

- **IIT-Madras**, IISc-Bangalore, and IIT-Bombay have emerged as the country's **top three** higher education institutions.

About National Institute Ranking Framework:

- NIRF is the **first-ever effort** by the government to rank higher education institutions (HEIs) in the country.
- NIRF was launched in **2016**. Earlier, HEIs were usually ranked by private entities, especially news magazines.
- Participation in NIRF was **voluntary** in the initial years, but made **compulsory** for all government-run educational institutions in **2018**.
 - Roughly 6,000 institutions participated in NIRF in 2021.

Parameters:

- All education institutions are assessed on **five parameters**:

1. Teaching, learning and resources
 2. Research and Professional practices
 3. Graduation Outcomes
 4. Outreach and Inclusivity
 5. Peer Perception
- NIRF lists out best institutions across **11 categories** – overall national ranking, universities, engineering, college, medical, management, pharmacy, law, architecture, dental and research.

Rankings of 2021:

- Indian Institute of Technology dominated the **overall rankings**, with seven of the top 10 positions.

1. Overall rank:

- **IIT-Madras** ranked **first**, Indian Institute of Science, Bengaluru ranked **second**, followed by IIT-Bombay, IIT-Delhi, IIT-Kanpur, IIT-Kharagpur, IIT-Roorkee, IIT-Guwahati, Jawaharlal Nehru University and Banaras Hindu University.

2. Among Universities:

- **Indian Institute of Science** was ranked **one**, followed by JNU, BHU, Calcutta University, Amrita Vishwa Vidyapeetham in Coimbatore, Jamia Millia Islamia in New Delhi, Manipal Academy of Higher Education, Jadavpur University, University of Hyderabad and Aligarh Muslim University at rank 10.

Significance:

- NIRF aims to bring more and more institutions under the ranking framework, set a benchmark for HEIs and establish India as a preferred global study destination.

GS 3 : Economy, Science and Technology, Environment

4. Himalayan Day 2021

The **National Mission for Clean Ganga (NMCG)** organised **Himalayan Diwas** in association with Naula Foundation on 9th September.

About Himalayan Diwas:

- Himalaya Diwas is celebrated annually on 9th September in Uttarakhand since **2015**.
- It is celebrated with the **aim to conserve Himalayan ecosystem** and region.
- **Theme 2021:** Contribution of Himalayas and our responsibilities.

Himalayan Range:

- The Himalayas are a **mountain range in Asia** separating the plains of the Indian subcontinent from the Tibetan Plateau.
- The range runs **west-northwest to east-southeast** in an arc 2,400 kms long.
- It is the **youngest** mountain range, formed due to **subduction** of Indian tectonic plate under the Eurasian Plate.
- The range is spread in **five countries**: Bhutan, India, Nepal, Tibet (China), and Pakistan.
- They are **bordered** on:
 - Northwest by **Karakoram** and **Hindu Kush ranges**
 - North by **Tibetan** Plateau
 - South by **Indo-Gangetic Plain**
- It varies in **width** from 350 km in the west to 150 km in the east.
- The range has some of the planet's **highest peaks**, including the highest **Mount Everest**.
 - Over 100 peaks **exceeding** 7200 m in elevation lie in the Himalayas.
- World's **major river systems**- Indus, Ganges, and Tsangpo-Brahmaputra rise from Himalayas with combined home to some 600 million people around the river basins.

Concerns:

- Himalayan hill towns face several challenges because of:
 - Poor Building Planning & Designs
 - Poor Infrastructure (Roads, Sewage, Water Supply etc.)
 - Unprecedented cutting of trees
 - Natural disasters
 - Climate change

Importance of Himalayas:

- Himalayas trigger the **Monsoons** every year, and protect India from the **cold and dry winds** of Central Asia.
- They are a source of diverse **medicinal plants** and multiple **rivers** and **streams**.

- Himalayan host **biodiversity** and provide **firewood** and a large variety of raw material for forest-based industries.
- They provide **defence**, tourism, hydroelectricity, forest wealth, minerals and pilgrimage.
- The rivers originating from Himalayas **carry fertile soil** from the mountains to the plains.

Various projects in Himalayas:

NMCG has sanctioned various projects for the conservation of Himalayas:

- **Rejuvenation of dying springs** in Tokoli Gad Catchment of Tehri Garhwal district using Geo-chemical & Geo-physical techniques' by IIT Roorkee.
- **Cultural mapping** of river Ganga from Gaumukh to Ganga Sagar by Indian National Trust for Art and Cultural Heritage (**INTACH**).
 - Under the project, the tangible and intangible heritage of river Ganga and the cities, is being documented.
 - Uttarkashi, Tehri Garhwal, Haridwar & Rudraprayag are important Himalayan cities covered.
- **Uttarakhand river's atlas**: It intends to **map all rivers** in Uttarakhand and give them a unique identification number.

5.Tasks accomplished by the Chandrayaan-2

The failure of Chandrayaan-2, India's second mission to the Moon, to make a soft landing on the lunar surface had led to much disappointment. But that did not mean the entire mission had been wasted.

Chandrayaan-2: A quick recap

- Chandrayaan-2 consisted of an Orbiter, Lander and Rover, all equipped with scientific instruments to study the moon.
- The Orbiter would watch the moon from a 100-km orbit, while the Lander and Rover modules were to be separated to make a soft-landing on moon's surface.
- ISRO had named the Lander module as Vikram, after Vikram Sarabhai, the pioneer of India's space programme, and the Rover module as Pragyaan, meaning wisdom.

Utility of the Orbit

- The Orbiter part of the mission has been functioning normally. It is carrying eight instruments.
- Each of these instruments has produced handsome amount of data that sheds new light on the moon, and offers insights that could be used in further exploration.

Some of the most significant results so far:

(a) Water

- The presence of water on the Moon had already been confirmed by Chandrayaan-1, India's first mission to the Moon that flew in 2008.
- Using far more sensitive instruments, the Imaging Infra-Red Spectrometer (IIRS) on board Chandrayaan-2 has been able to distinguish between hydroxyl and water molecules, and found unique signatures of both.
- This is the most precise information about the presence of H₂O molecules on the Moon till date.
- Previously, water was known to be present mainly in the polar regions of the Moon.
- Chandrayaan-2 has now found signatures of water at all latitudes, although its abundance varies from place to place.

(b) Minor elements

- The Large Area Soft X-Ray Spectrometer (CLASS) measures the Moon's X-ray spectrum to examine the presence of major elements such as magnesium, aluminium, silicon, calcium, titanium, iron, etc.
- This instrument has detected the minor elements chromium and manganese for the first time through remote sensing, thanks to a better detector.
- The finding can lay the path for understanding magmatic evolution on the Moon and deeper insights into the nebular conditions as well as planetary differentiation.
- CLASS has mapped nearly 95% of the lunar surface in X-rays for the first time.
- Sodium, also a minor element on the Moon surface, was detected without any ambiguity for the first time.

(c) Study of Sun

- One of the payloads, called Solar X-ray Monitor (XSM), besides studying the Moon through the radiation coming in from the Sun, has collected information about solar flares.
- XSM has observed a large number of microflares outside the active region for the first time.
- This has great implications on the understanding of the mechanism behind heating of the solar corona, which has been an open problem for many decades.

Utility of this Data

- While the Orbiter payloads build upon existing knowledge of the Moon in terms of its surface, sub-surface and exosphere, it also paves the path for future Moon missions.

- Four aspects – mineralogical and volatile mapping of the lunar surface, surface and subsurface properties and processes involved, quantifying water in its various forms across the Moon surface, and maps of elements present on the moon – will be key for future scope of work.
- A key outcome from Chandrayaan-2 has been the exploration of the permanently shadowed regions as well as craters and boulders underneath the regolith, the loose deposit comprising the top surface extending up to 3-4m in depth.
- This is expected to help scientists to zero in on future landing and drilling sites, including for human missions.

Who is going to use it?

- Some key future Moon missions that hope to make use of such data include the Japan Aerospace Exploration Agency (JAXA)-ISRO collaboration Lunar Polar Exploration (LUPEX) mission scheduled for launch in 2023/2024.
- Its aim is to obtain knowledge of lunar water resources and to explore the suitability of the lunar polar region for setting up a lunar base.
- NASA's Artemis missions plan to enable human landing on the Moon beginning 2024 and target sustainable lunar exploration by 2028.
- The Chinese Lunar Exploration Programme too plans to establish a prototype of the International Lunar Research Station (ILRS) at the lunar south pole and build a platform supporting large-scale scientific exploration.

What was missed because of the crash-landing?

- The most obvious miss has been the opportunity to demonstrate the technology to make a soft-landing in outer space.
- The lander Vikram and rover Pragyaan were carrying instruments to carry out observations on the surface.
- These were supposed to pick up additional information about the terrain, and composition and mineralogy.
- While the instruments on board the Orbiter are making "global" observations, those on the lander and rover would have provided much more local information.
- The two diverse sets of data could have helped prepare a more composite picture of the Moon.

Future with the Chandrayaan-3

- ISRO scientists maintain that the accident was caused by a relatively small error that has been identified and corrected.
- But, to demonstrate this technology all over again, ISRO would have to send a fresh mission, Chandrayaan-3, planned for next year.
- It is expected to have only a lander and rover, and no Orbiter.

6. Tokenisation can make Transactions Safer

Reserve Bank of India has allowed for tokenisation of cards while making payments, which can reduce the risk of card data being stolen.

Major Highlights:

- RBI has extended **tokenisation of Card-on-File (CoF) transactions** – where card details used to be stored by merchants.
 - In a CoF transaction, a cardholder has authorised a merchant to store his or her Mastercard or Visa payment details, and to bill the stored account.
- RBI has directed the merchants **not to store card details** in their systems from **January 1, 2022**.
 - From January 1, 2022, no entity in the card transaction or payment chain, **other than card issuers and card networks**, should store the actual card data.

What is tokenisation?

- It refers to **replacement of card details** with an alternative code called a '**token**'.
- Token is **unique** for combination of card, token requestor (the entity that accepts a request from the customer for tokenisation of a card) and the device.
- **Tokenisation** is allowed through mobile phones or tablets for all use cases and channels like contactless card transactions, payments through QR codes and apps.
- The **tokens** are generated by companies like Visa and MasterCard, which act like Token Service Providers (TSPs).
- They provide the **tokens to mobile payment** or e-commerce platforms so that they can be used during transactions instead of the customer's credit card details.
- The token can be used to perform **contactless card transactions** at point-of-sale (PoS) terminals and QR code payments.
- It reduces the **chances of fraud** arising from sharing card details.

Procedure:

- The **cardholder** can get the **card tokenised** by initiating a request on the app provided by the token requestor.
- The **token requestor** will forward the request to the card network which, with the consent of the card issuer, will issue a token corresponding to the combination of the card, the token requestor, and the device.

7.Account Aggregator Network (AAN): A financial data-sharing system

The Account Aggregator system in banking has been started off with eight of India's largest banks. In this newscard, we shall learn it in a FAQ manner.

What is an Account Aggregator?

- An Account Aggregator (AA) is a type of RBI regulated entity (with an NBFC-AA license) that helps an individual securely and digitally access and share information from one financial institution they have an account with to any other regulated financial institution in the AA network.
- Data cannot be shared without the consent of the individual.
- There will be many Account Aggregators an individual can choose between.
- Account Aggregator replaces the long terms and conditions form of 'blank cheque' acceptance with a granular, step by step permission and control for each use of your data.

How would it improve an average person's financial life?

- India's financial system involves many hassles for consumers today.
- This includes sharing of physical signed and scanned copies of bank statements, stamp documents, or having to share your personal username and password to give your financial history to a third party.
- The AAN would replace all these with a simple, mobile-based, simple, and safe digital data access & sharing process.
- This will create opportunities for new kinds of services – eg new types of loans.
- The individual's bank just needs to join the Account Aggregator network.

How is AAN different to Aadhaar eKYC data sharing?

- Aadhaar eKYC and CKYC only allow sharing of four 'identity' data fields for KYC purposes (eg name, address, gender, etc).
- Similarly, credit bureau data only shows loan history and/or a credit score.
- The AAN allows sharing of transaction data or bank statements from savings/deposit/current accounts.

What kind of data can be shared?

- Today, banking transaction data is available to be shared (for example, bank statements from a current or savings account) across the banks that have gone live on the network.

- Gradually the AA framework will make all financial data available for sharing, including tax data, pensions data, securities data (mutual funds and brokerage), and insurance data will be available to consumers.
- It will also expand beyond the financial sector to allow healthcare and telecom data to be accessible to the individual via AA.

Can AAs view or 'aggregate' personal data? Is the data sharing secure?

- Account Aggregators cannot see the data; they merely take it from one financial institution to another based on an individual's direction and consent.
- Contrary to the name, they cannot 'aggregate' your data.
- AAs are not like technology companies which aggregate your data and create detailed profiles of you.
- The data AAs share is encrypted by the sender and can be decrypted only by the recipient.
- The end to end encryption and use of technology like the 'digital signature' makes the process much more secure than sharing paper documents.

Can a consumer decide they don't want to share data?

Yes. Registering with an AA is fully voluntary for consumers.

- If the bank the consumer is using has joined the network, a person can choose to register on an AA, choose which accounts they want to link, and share their data.
- A customer can reject a consent to share request at any time.
- If a consumer has accepted to share data in a recurring manner over a period (eg during a loan period), it can also be revoked at any time later as well by the consumer.

Duration of the data shared

- The exact time period for which the recipient institution will have access will be shown to the consumer at the time of consent for data sharing.

How can a customer get registered with an AA?

- One can register with an AA through their app or website.
- AA will provide a handle (like username) which can be used during the consent process.
- Today, four apps are available for download (Finvu, OneMoney, CAMS Finserv, and NADL) with operational licenses to be AAs.
- Three more have received in principle approval from RBI (PhonePe, Yodlee, and Perfios) and may be launching apps soon.
- A customer can register with any AA to access data from any bank on the network.

Does a customer need to pay the AA for using this facility?

- This will depend on the AA. Some may charge a small user fee.
- Some AAs may be free because they are charging a service fee to financial institutions.

What new services can a customer access if their bank has joined the AA network of data sharing?

The two key services that will be improved for an individual is access to loans and access to money management.

- If a customer wants to get a small business or personal loan today, there are many documents that need to be shared with the lender.
- This is a cumbersome and manual process today, which affects the time taken to procure the loan and access to a loan.
- Similarly, money management is difficult today because data is stored in many different locations and cannot be brought together easily for analysis.
- Through Account Aggregator, a company can access tamper-proof secure data quickly and cheaply, and fast track the loan evaluation process so that a customer can get a loan.
- Also, a customer may be able to access a loan without physical collateral, by sharing trusted information on a future invoice or cash flow directly from a government system like GST or GeM.

Prelims Practice Questions

1. With reference to the cultural history of India, the term 'Panchayatan' refers to

- a. An assembly of village elders
- b. A religious sect
- c. A style of temple construction
- d. An administrative functionary

Answer: c

Explanation:

- The main shrine is built on a rectangular plinth with four subsidiary shrines that are smaller and at the 4 corners.

- There are a total of five shrines and hence the name, Panchayatana.

2. Consider the following statements:

1. The GST Council is a statutory body.
2. The GST Council is chaired by the Prime Minister of India.

Which of the statements given above is/are correct?

- A 1 only
B 2 only
C Both 1 and 2
D Neither 1 nor 2

Answer : D

Explanation

- The **GST Council is a constitutional body (Article 279A)** for making recommendations to the Union and State Government on issues related to Goods and Services Tax. **Hence, statement 1 is not correct.**
- The **GST Council is chaired by the Union Finance Minister** and other members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation of all the States. **Hence, statement 2 is not correct.**
 - It is considered as a federal body where both the centre and the states get due representation.

3. Therukoothu, a street theatre form, is practised in the State of

- a. Andhra Pradesh
- b. Karnataka
- c. Kerala
- d. Tamil Nadu

Answer: d

Explanation:

- It is a street theatre form practised in the State of Tamil Nadu.
- The stories are derived from the Puranas, the Mahabharata, and the Ramayana.

4. The term 'Panj Piare' recently seen in the news is related to?

- A A fertile land in the Doab region of Punjab.
- B Religious text of Sikhism written by Guru Tegh Bahadur.
- C Land revenue system during Maharaja Ranjit Singh.
- D The men who were initiated into the Khalsa group by Gurus Gobind Singh.

Answer : D

Explanation

- The **Panj Piare** is the term used for the **Five Beloved: the men who were initiated into the khalsa** (the special group of Sikh warriors) **under the leadership of Gobind Singh**, the last of the ten Gurus.
 - They are deeply revered by Sikhs as symbols of steadfastness and devotion.
- Guru Gobind Singh established the institution of Panj Piare while founding the Khalsa on the day of Baisakhi in 1699.
 - To preserve the culture, Guru Gobind Singh asked for five men willing to surrender their lives for him and the cause. With great reluctance by nearly everyone, eventually, five volunteers stepped forward.
 - Guru Gobind Singh himself got baptised from them at the same stage to tell the Sikhs that Panj Piaras have higher authority and decision making power than anyone in the community.
- The original five beloved Panj Piare who played a vital role in shaping Sikh history and defining Sikhism are:
 - **Bhai Daya Singh** (1661 - 1708 CE) from Lahore
 - **Bhai Dharam Singh** (1699 - 1708 CE) from Hastinapur
 - **Bhai Himmat Singh** (1661 - 1705 CE) from Jagannath Puri
 - **Bhai Muhkam Singh** (1663 - 1705 CE) from Dwarka
 - **Bhai Sahib Singh** (1662 - 1705 CE) from Bidar
- Hence, option D is correct.

5. With reference to Khalsa Order, consider the following statements:

1. It was established by Guru Gobind Singh.
2. They are soldier saints who uphold the highest Sikh virtues.
3. Both men and women can join Khalsa.

Which of the above statements is/are correct?

- A 1 only
- B 2 only
- C 1 and 2 only
- D 1, 2 and 3

Answer : D

Explanation

- Guru Gobind Singh **established the Khalsa order** (meaning 'The Pure'), soldier-saints. **Hence, statement 1 is correct.**
- The **Khalsa upholds the highest Sikh virtues** of commitment, dedication and social consciousness. **Hence, statement 2 is correct.**
- The **Khalsa are men and women who have undergone the Sikh baptism ceremony** and who strictly follow the Sikh Code of Conduct and Conventions. **Hence, statement 3 is correct.**
- They wear the prescribed physical articles of the faith (5K's: Kesh (uncut hair), Kangha (a wooden comb), Kara (an iron bracelet), Kachera (cotton underpants) and Kirpan (an iron dagger).

6. Consider the following statements with respect to Edible oil

1. India imports almost 90% of its edible oil requirements in which palm Oil alone accounts for 55% of imports.
2. Palm Oil is rich in Vitamin A and E and coenzymes like ubiquinone.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

Edible oil

- India imports 60% of the edible oil it consumes and runs up an import bill of Rs.80,000 crore.
- Of that, palm oil alone accounts for 55%.
- In the quest for self-sufficiency, the government introduced the National Mission for Edible Oil and Oil Palm (MNEO-OP), which targets to grow it on 3 million hectares over the next decade.
- Palm oil is rich in vitamin A and E, and in coenzymes like ubiquinone.
- It is the efficient source of vegetable oil.

Mains Practice Questions

1. Explain the term earthquake swarms and how they are different from aftershocks and foreshocks.

Approach

- Start the answer by briefly defining the term earthquake swarms
- Discuss what you mean by aftershocks & foreshocks.
- Discuss the characteristics of the earthquake swarms and compare them with aftershocks & foreshocks.
- Conclude Suitably.

2. Model Code of conduct has been a remarkable step in ensuring free and fair elections in India. However, the present digital era has posed challenges to it. Comment.

Approach

- Start the answer by briefly discussing about the Model Code of Conduct.
- Discuss the limitations faced by the model code of conduct in the digital age.
- Conclude Suitably.