

ECONOMY**AERA Amendment Bill, 2021**

Recently, the Lok Sabha passed the Airports Economic Regulatory Authority of India (AERA) Amendment Bill, 2021. It was first introduced in March 2021 and subsequently referred to a parliamentary standing committee on transport, tourism and culture, which approved it without any changes. It seeks to amend the Airports Economic Regulatory Authority of India Act, 2008.

Key Points**Major Provisions:**

- **Definition :** It proposes to amend the definition of major airport to include a group of airports. The 2008 Act designates an airport as a major airport if it has an annual passenger traffic of at least 35 lakh. The central government may also designate any airport as a major airport by a notification.
- **Tariff :** It will allow AERA to regulate tariff and other charges for aeronautical services for not just major airports with annual passenger traffic of more than 35 lakh, but also a group of airports.
- **Profitable Clubbing :** The government will be able to club profitable and non-profitable airports as a combination/package to bidders to make it a viable combination for investment under PPP (Public-Private Partnership) mode.

Significance:

- It will help in expanding the air connectivity to relatively remote areas and as a result, expediting the UDAN regional connectivity scheme.
- It will encourage development of smaller airports.

Concern:

- Lack of clarity in the bill on the criterion for deciding which airports will be clubbed together to qualify under 'a group of airports' definition, whether it will be the passenger traffic of more than 3.5 million or some other factors too.

Airports Economic Regulatory Authority of India**Background:**

- Initially, the Airports Authority of India (AAI) was running and managing the airports. After some time, a change was made in the civil aviation policy as some private players were also given airports to run. The reason behind this was to provide consumers with great services.
- Typically, airports run the risk of becoming a monopoly because cities usually have one civilian airport which controls all aeronautical services in that area.
- To ensure that private airport operators do not misuse their monopoly, the need for an independent tariff regulator in the airport sector was felt.

About:

- The Airports Economic Regulatory Authority of India Act, 2008 (AERA Act) was passed which set up the AERA as a statutory body.
- It was set up, keeping in mind that the country needs to have an independent regulator who has transparent rules and can take care of the interests of the service providers as well as that of the consumers.

Functions : The AERA regulates tariffs and other charges (development fee and passenger service fee) for aeronautical services (air traffic management, landing and parking of aircraft, ground handling services) at major airports.

GOVERNOR**New Initiatives for Education Sector**

Recently, the Prime Minister launched multiple initiatives in the education sector at a conference, to mark the completion of one year of reforms under the National Education Policy 2020 which aims at making India a global knowledge superpower.

Key Points**Academic Bank of Credit:**

- It is envisaged as a digital bank that holds the credit earned by a student in any course. It is a major instrument for facilitating multidisciplinary and holistic education. It will provide multiple entry and exit options for students in Higher education.
- It will make the youth future-oriented and open the way for an Artificial Intelligence (AI) - driven economy.

Engineering in Regional Languages:

- 14 engineering colleges in eight States are going to start engineering studies in five Indian languages: Hindi, Tamil, Telugu, Marathi and Bangla.
- 1. This emphasis on mother tongue as the medium of instruction will instil confidence in the students from poor, rural and tribal backgrounds.
- 2. In a recent survey, the All India Council of Technical Education (AICTE) discovered that 42% of the students surveyed nationally, favoured pursuing Engineering in regional languages.
- The AICTE is creating a database of resources to allow colleges to offer more programmes in regional languages and developed a tool to translate engineering content into 11 languages.

Vidya Pravesh & SAFAL:

- Vidya Pravesh, a three month play based school preparation module for Grade 1 students will be released along with SAFAL (Structured Assessment For Analyzing Learning Levels), a competency based assessment framework for Grades 3, 5 and 8 in CBSE schools.

National Digital Education Architecture (NDEAR):

- It will help in building up a new education ecosystem that will create a digital foundation leading to self-governance of all parties involved, particularly states and the Centre.
- It lets educationists do evaluation based on talents and abilities, helping students understand their area of specialties that can be utilised in their future profession.

National Education Technology Forum (NETF):

- It will provide independent evidence-based advice to central and state government agencies on technology-based interventions. A special focus will be on improving technology access at the grassroot education level. Schools will be required to have skilled professionals. In addition, schools will have to hire qualified candidates to teach emerging technological skills to students.
- Once the forum is set up, school-wise information will be sought on how technology is being used for imparting academic content and what steps are being taken to enhance research.
- It will be funded by the government but at a later stage, private funding and support from industry bodies would be invited.

NISHTHA 2.0:

- It will provide training to teachers as per their needs and they will be able to give their suggestions to the department. It will have 68 modules including 12 generic and 56 subject-specific modules and will cover around 10 lakh teachers. NISHTHA is the largest teachers' training programme, first of its kind in the world to motivate and equip teachers to encourage and foster critical thinking in students.

Sign Language as a Subject:

- Indian sign language, for the first time, has been accorded the status of language subject. Students will be able to study it as a language also.
- There are more than 3 lakh students who need sign language for their education. This will give a boost to Indian sign language and will help the divyang people.

Related Previous Initiatives

1. National Programme on Technology Enhanced Learning.
2. Rashtriya Ucchatar Shiksha Abhiyan (RUSA).
3. Prime Minister's Research Fellowship (PMRF).
4. Scheme for Promotion of Academic and Research Collaboration (SPARC).
5. Sarva Shiksha Abhiyan.
6. NEAT.
7. PRAGYATA.
8. Mid Day Meal Scheme.
9. Right To Education (RTE) Act, 2009.
10. Beti Bachao Beti Padhao.

2.Social Audit of Social Sector Schemes

The Ministry of Social Justice and Empowerment has formulated a scheme, namely Information-Monitoring, Evaluation and Social Audit (I-MESA) in FY 2021-22.

Key Points**About the I-MESA Scheme:**

- Under this scheme, Social Audits are to be conducted for all the schemes of the Department starting FY 2021-22.
- These social audits are done through Social Audit Units (SAU) of the States and National Institute for Rural Development and Panchayati Raj.

Important Schemes of the Ministry of Social Justice and Empowerment:

• **Schemes for Economic Development:**

1. Credit Enhancement Guarantee Scheme for the Scheduled Castes (SCs)
2. National Safai Karamcharis Finance and Development Corporation (NSKFDC)
3. National Scheduled Castes Finance and Development Corporation (NSFDC)
4. Special Central Assistance to Scheduled Caste Sub Plan (SCA to SCSP)
5. Scheme of Assistance to Scheduled Castes Development Corporations (SCDCs)

• **Self Employment:**

1. Scheme for Rehabilitation of Manual Scavengers (SRMS)
2. Venture Capital Fund For Scheduled Castes

• **Schemes for Social Empowerment:**

1. Centrally Sponsored Scheme for implementation of the Protection of Civil Rights Act, 1955 and the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989
2. Pradhan Mantri Adarsh Gram Yojana (PMAGY)

Social Audit

• **About:**

1. Meaning: Social Audit is the audit of a scheme jointly by the Government and the people, especially by those who are affected by the scheme or its beneficiaries.
2. Benefits: It is a powerful tool to promote transparency, accountability and people's participation in the schemes meant for them. A social audit helps to narrow gaps between vision/goal and reality, between efficiency and effectiveness.

• **Status:**

1. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was the first Act to mandate Social Audit by the Gram Sabha of all the projects taken up in the Gram Panchayat.
2. Most States have set up an independent Social Audit Unit (SAU) and some have even begun to facilitate Social Audit in other programmes, including Pradhan Mantri Awas Yojana, National Social Assistance Programme, Midday Meal Scheme and Public Distribution System.

Challenges:

- The lack of adequate administrative and political will in institutionalising social audits to deter corruption has meant that social audits in many parts of the country are not independent of the influence of implementing agencies.
- Social audit units, including village social audit facilitators, continue to face resistance and intimidation and find it difficult to even access primary records for verification.
- People's participation has been minuscule due to the lack of education, awareness and capacity building among the common masses.
- There is an absence of an independent agency to investigate and act on social audit findings.

Suggestions:

- Citizens groups need to campaign for strengthening social audits and make real progress in holding the political executive and implementing agencies accountable.
- Team of social audit experts should be established in each district who are responsible for training social audit committee members (stakeholders).
- Training programmes should be created on social auditing methods such as conducting and preparing social audit reports, and presentation at Gram Sabha.
- The system of social audits needs a synergetic endorsement and a push by multiple authorities to establish an institutionalised framework which cannot be undermined by any vested interests.

BIODIVERSITY & ENVIRONMENT

International Tiger Day

Recently, at the virtual meeting celebrating International Tiger Day (29th July), Prime Minister of India reiterated India's commitment to ensuring safe habitats for its tigers and nurturing tiger-friendly eco

systems. Also, at this meeting, 14 Tiger Reserves in India received the accreditation of the Global Conservation Assured Tiger Standards (CATS).

Key Points

Conservation Status of Tiger:

- Indian Wildlife (Protection) Act, 1972: Schedule I
- International Union for Conservation of Nature (IUCN) Red List: Endangered.
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix I.

Significance of Tiger Conservation:

- Tiger conservation is a symbol of conservation of forests.
 - The tiger is a unique animal which plays a pivotal role in the health and diversity of an ecosystem.
 - It is a top predator which is at the apex of the food chain and keeps the population of wild ungulates (primarily large mammals) in check. Thus, Tiger helps in maintaining the balance between prey herbivores and the vegetation upon which they feed.
 - Therefore, Tiger Conservation is not just about saving a beautiful animal. It is about making sure that we live a little longer as the forests are known to provide ecological services like clean air, water, pollination, temperature regulation etc.
 - Further, the significance of Tiger conservation can be reflected by the Status of Leopards, Co-predators and Megaherbivores-2018' report.
1. According to the report, the overall leopard population in the tiger range landscape of India in 2018 was estimated at 12,852.
 2. This is a significant increase from the 2014 figure that was 7,910 in forested habitats of 18 tiger bearing states of the country.
 3. The report is a testimony to the fact that conservation of tigers leads to the conservation of the entire ecosystem.

Tiger Conservation Projects in India:

- **Project Tiger 1973:** Project Tiger is a Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change (MoEFCC) launched in 1973. It provides havens for tigers in the country's national parks.
- **National Tiger Conservation Authority (NTCA):** It is a statutory body under the MoEFCC and was established in 2005 following the recommendations of the Tiger Task Force.

India's Tiger Conservation Status:

- India is home to over 70% of the tiger population globally.
- India is home to 51 tiger reserves spread across 18 states and the last tiger census of 2018 showed a rise in the tiger population.
- India achieved the target of doubling the tiger population four years ahead of schedule (2022) of the St. Petersburg Declaration on tiger conservation.
- India's strategy of tiger conservation attaches topmost importance to involving local communities.

Conservation Assured Tiger Standards (CATS):

- CATS has been agreed upon as an accreditation tool by the global coalition of Tiger Range Countries (TRCs) and has been developed by tiger and protected area experts. There are currently 13 tiger range countries - India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.
- CATS is a set of criteria which allows tiger sites to check if their management will lead to successful tiger conservation.
- It was officially launched in 2013.
- The Global Tiger Forum (GTF), an international NGO working on tiger conservation, and World Wildlife Fund India are the two implementing partners of the National Tiger Conservation Authority for CATS assessment in India.
- 14 Tiger Reserves which have been accredited are:
 1. Manas, Kaziranga and Orang Tiger Reserve in Assam,
 2. Satpura, Kanha and Panna Tiger Reserve in Madhya Pradesh,
 3. Pench Tiger Reserve in Maharashtra,
 4. Valmiki Tiger Reserve in Bihar,

5. Dudhwa Tiger Reserve in Uttar Pradesh,
6. Sunderbans Tiger Reserve in West Bengal,
7. Parambikulam Tiger Reserve in Kerala,
8. Bandipur Tiger Reserve of Karnataka
9. Mudumalai and Anamalai Tiger Reserve in Tamil Nadu.

2. Sutlej River Pollution

The pollution in river Sutlej has posed serious health threats to the people living around the Indira Gandhi Canal.

The National Green Tribunal (NGT) has directed Punjab and Rajasthan governments to submit quarterly compliance reports to Jal Shakti ministry about remedial action being taken to curb the inflow of effluent discharge into the Satluj and Beas.

Key Points

Source of Sutlej's Pollution:

- Three Major Sources Polluting the Buddha Nallah: Buddha Nallah (Tributary) is a major source of pollution in the river Sutlej.
 1. Untreated sewage waste from Ludhiana city sewage treatment plants (STP).
 2. Untreated industrial effluents from dyeing units and outlets that directly release sewage and industrial waste into the stream.
 3. Small-scale industries like units on electroplating, hosiery, steel rolling mills, etc mainly contribute to the wastewater in the nallah.
- **High Biological Oxygen Demand (BOD):** Buddha Nallah contributes about 16,672 kilogram a day of BOD load and East Bein (a rivulet in Doaba in Punjab) contributes about 20,900 kg/day of BOD load. The more organic matter there is (e.g., in sewage and polluted bodies of water), the greater the BOD; and the greater the BOD, the lower the amount of dissolved oxygen available for higher animals such as fishes.
- **Leather Industry:** Another seasonal rivulet, Chitti Bein and its sub-drain, Kala Sanghian drain, in the Jalandhar district are equally responsible for high pollution in the Sutlej river. The untreated discharge from Jalandhar's leather goods industry is one of the major reasons behind Chitti Bein's pollution.

Component of Pollutants:

- Traces of chromium and arsenic can be found in the Sutlej after the confluence of Buddha Nallah.
- Prevalence of mercury, lead, chromium, cadmium and selenium in more than permissible limits (MPL) in the groundwater and surface water in and around drains like Buddha Nallah, Chitti Bein and Kala Sanghian.
- Heavy metals and pesticides were also detected in fodder, vegetable, milk, urine and blood samples.

Impact on Indira Gandhi Canal:

The Indira Gandhi Canal is the longest canal in the country. It starts from Harike Barrage, a few kilometres below the confluence of the Satluj and Beas rivers in Punjab, flows through Ludhiana and terminates in the Thar Desert in northwest Rajasthan.

The canal is a source of drinking and irrigation in the north and western Rajasthan. It provides water to 1.75 crore people living in 7,500 villages across eight districts in the state.

The water in the Indira Gandhi canal has apparently turned black due to the presence of pollutants in it. The pollution has caused several health complications among people such as skin diseases, gastroenteritis, indigestion and loss of eyesight.

IMPORTANT FACTS FOR PRELIM

Near-Surface Shear Layer of the Sun

Recently, Indian astronomers from Aryabhata Research Institute of Observational Sciences (ARIES), and Indian Institute of Science, Bangalore, have for the first time given the theoretical explanation of the existence of a near-surface shear layer (NSSL) in the Sun. ARIES is an autonomous institute under the Department of Science and Technology.

Key Points

About Near-Surface Shear Layer (NSSL):

- Apart from differentiation rotation between equator and poles, the helioseismology has revealed that the Sun has a Near-Surface Shear Layer (NSSL).

- The NSSL is the region very close to the visible solar surface, where there is a change in the rotation profile of the Sun.
- This layer exists very close to the solar surface, within which the angular velocity decreases rapidly with radius.
- This NSSL is thought to play a significant role in defining the nature of large-scale convective patterns that drive the Sun's magnetism.

Findings of the Study:

- In their study, they have used an equation called the thermal wind balance equation. It explains how the slight difference in temperature between solar poles and equator, called thermal wind, is balanced by the centrifugal force appearing due to solar differential rotation.
- Understanding NSSL is crucial for the study of several solar phenomena like sunspot formation, solar cycle, and it will also help in understanding such phenomena in other stars.

About Differential Rotation of the Sun:

- It was long known that the Sun has Differential rotation, which means different parts of the Sun rotate at different speeds. The Sun rotates faster at the equator than at the poles.
 - Over time, the Sun's differential rotation rates cause its magnetic field to become twisted and tangled.
1. The "tangles" in the magnetic field lines can produce very, very strong localized magnetic fields.
 2. These localised magnetic fields on the surface of the Sun are active regions where sunspots occur. Sunspots are areas that appear dark on the surface of the Sun (photosphere). They appear dark because they are cooler than other parts of the Sun's surface.
 3. Further, these active regions often generate solar storms: solar flares and coronal mass ejections (CMEs).

DAILY ANSWER WRITING PRACTICE

Qns. Elaborate upon the distinct features of cities of Indus Valley Civilization located in Western India. (250 words)

Ans:

Introduction

Dholavira, the archaeological site of a Harappan-era city, received the UNESCO world heritage site tag recently. While Dholavira became the fourth site from Gujarat and 40th from India to make the list, it is the first site of the ancient Indus Valley Civilisation (IVC) in India to get the tag.

The IVC acropolis is located on a hillock near present-day Dholavira village in Kutch district, from which it gets its name. It was discovered in 1968 by archaeologist Jagat Pati Joshi.

Body

The distinct features of cities of Indus Valley Civilization located in Western India:

- Dholavira is an exceptional example of a proto-historic Bronze Age urban settlement pertaining to the Harappan Civilization.
- After Mohen-jo-Daro, Ganweriwala and Harappa in Pakistan and Rakhigarhi in Haryana of India, Dholavira is the fifth largest metropolis of IVC.
- The site has a fortified citadel, a middle town and a lower town with walls made of sandstone or limestone instead of mud bricks in many other Harappan sites.
- The configuration of the city with segregated urban residential areas based on differential occupational activities, and a stratified society is an outstanding example of a planned city.
- It is known for its unique characteristics, such as its water management system, multi-layered defensive mechanisms, extensive use of stone in construction and special burial structures.
- These characteristics reflect the unique position Dholavira held in the entire gamut of Harappan Civilization.
- Unlike other Harappan antecedent towns normally located near to rivers and perennial sources of water that facilitated internal as well as external trade to the Magan (modern Oman peninsula) and Mesopotamian regions.
- The location of Dholavira in the island of Khadir was strategic to harness different mineral and raw material sources such as copper, shell, agate-carnelian, steatite, lead, banded limestone, among others.

- Thus, during the excavations, artefacts made of copper, stone, jewellery of terracotta, gold and ivory have been found.
- With extremely rich artefacts, it depicts a vivid picture of a regional centre with its distinct characteristics and contributes significantly to the existing knowledge of Harappan-era as a whole.
- Unlike graves at other IVC sites, no mortal remains of humans have been discovered at Dholavira.
- Remains of a copper smelter indicate Harappans, who lived in Dholavira, knew metallurgy.
- It was also a hub of manufacturing jewellery made of shells and semi-precious stones, like agate and used to export timber.
- The origin of the Buddhist Stupas in memorials in found in Dholavira.

Conclusion

The multi-cultural and stratified society of Dholavira City flourished for nearly 1,500 years. From 2000 BC, Dholavira entered a phase of severe aridity due to climate change and rivers like Saraswati drying up. Because of a drought-like situation, people started migrating toward the Ganges valley or towards south Gujarat and further beyond in Maharashtra. In those times the Great Rann of Kutch, which surrounds the Khadir island on which Dholavira is located, used to be navigable, but the sea receded gradually and the Rann became a mudflat.

DAILY QUIZ

Q1. With reference to Academic Bank of Credit (ABC), consider the following statements:

1. The scheme is in line with the Right to Education Act, 2009.
2. It provides students with the flexibility to move between institutes while pursuing one degree or leave a course.

Which of the given above statements is/are correct?

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

Q2. Dalit Bandhu is the latest flagship programme of the

- a. Karnataka Government
- b. Andhra Pradesh Government
- c. Uttara Pradesh Government
- d. None of the above**

Q3. The term 'pre-packs' was in news recently, is related to which of the following?

- a. FSSAI guidelines on labelling of food products
- b. Kind of bankruptcy procedure**
- c. Some type of muscle-building supplements
- d. None of the above

Q4. Consider the following statements about Food Systems Summit:

1. It is an initiative of Food and Agriculture Organization.
2. It seeks to boost agricultural production and productivity in sub-Saharan Africa.

Which of the given above statements is/are correct?

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

Q5. The 'Bhut jolokia' is also known as 'ghost pepper', is a famous chilli from:

- a. Assam
- b. Nagaland**
- c. Manipur
- d. Mizoram