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Inner line permit : Since, the situation of COVID-19 in the northeastern state of Arunachal Pradesh is “under control” and in view of the reopening of the tourism sector, the Government of Arunachal Pradesh has issued Inner Line Permits (ILP) for travelers and it has been decided to remove the ban on issuance of 'Protected Area Permit'.

What is Inner Line Permit (ILP)?

An inner line permit is a document required for non-natives to enter or stay in a state protected under the ILP system.

At present, the ILP system is in force in four northeastern states, Arunachal Pradesh, Mizoram, Manipur and Nagaland. Inner Line Permit is also mandatory to enter Lakshadweep.

Through the Inner Line Permit, for a non-native, the length of stay in the state and the area to visit are determined.

ILP is issued by the respective state government and can be obtained either online or by applying in person.

Inner Line Permit is valid only for domestic tourists.

Rationale for 'inner-line permit'

The Inner Line Permit is an extension of the Bengal Eastern Frontier Regulation Act (BEFR) 1873. These are the rules prohibiting entry by the British into certain specified areas.

After the British annexed Northeast India, the colonists began to exploit the region and its resources for economic gain.

They first planted tea plantations in the Brahmaputra valley and started oil industries.

The local tribes living in the hill areas regularly carried out incidents of looting of tea gardens, oil wells and trading posts established by the British East India Company.

Therefore, these rules were made to protect the interests of British rule in some states to prevent 'British subjects' i.e. Indians from doing business in these areas, and in this context BEFR 1873 was implemented.

Jal Jeevan Mission (JJM)

Prime Minister Narendra Modi has launched the Jal Jeevan Mission (JJM) mobile application on the occasion of Gandhi Jayanti on October 2, 2021 to make stakeholders more aware and for greater transparency and accountability of the schemes under the mission.

The Prime Minister also launched the 'Rashtriya Jal Jeevan Kosh', which includes any individual, institution, corporation, or philanthropist, whether in India or abroad, in every rural household, school, anganwadi centre, ashram shaala and other public institutions. can contribute to helping access to tap water.

About Jal Jeevan Mission:

Under the Jal Jeevan Mission, it is envisaged to supply 55 liters of water per person per day through Functional House Tap Connections (FHTC) to all rural households by the year 2024.

This campaign is being implemented by the Ministry of Jal Shakti.

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Under this the following works are included:

To give priority to installation of Functional Household Tap Connection (FHTC) in quality affected areas, villages in drought prone and desert areas, villages under Sansad Adarsh Gram Yojana (SAGY), etc.

To facilitate functional tap connections to schools, Anganwadi centres, Gram Panchayat buildings, health centres, wellness centers and community buildings.

Technological interventions to make water-quality problem areas pollution-free.

execution:

The 'Jal Jeevan Mission' is based on a community approach to water and incorporates comprehensive information, education and dialogue as a key component of the mission.

The objective of this mission is to create a mass movement for water, by which it becomes a priority for everyone.

90:10 for the Himalayan and North Eastern States, by the Center and the States for this mission; in the ratio of 50:50 for other states; And for the Union Territories 100% financial assistance will be provided by the Central Government.

Performance under the scheme:

So far, 'supply of tap water' has been ensured in 772,000 (76 per cent) schools and 748,000 (67.5 per cent) Anganwadi centres.

Brahmaputra Heritage Center

In about 150 years old bungalow in Guwahati, Assam, 'Brahmaputra River Heritage Centre' has been established.

This bungalow used to be the 'military office' of the Ahom rulers in the 17th century.

It was also called Barphukanar Tila, which means the hill of Barphukan.

'Barphukan' was the equivalent of a governor general held by the Ahom king Pratap Simha or Susengpha (1603–1641).

Situated near the Brahmaputra, this hill is mentioned in ancient scriptures as Mandarachal. From this place in March 1671, Ahom general 'Lachit Barphukan' started the battle of Saraighat, in which he defeated the Mughals badly.

Saraighat is regarded as "the greatest naval battle ever fought in the river".

PM Poshan Shakti Nirman Scheme

Recently, the current 'Mid-Day Meal Scheme' issued by the Central Government to 'provide cooked hot meals to students in government and government-aided schools' has been renamed as 'National Pradhan Mantri Poshan Shakti Nirman Yojana'. ' (National Scheme for PM Poshan Shakti Nirman) has been done.

Key Proposals in 'PM Poshan Yojana':

Supplementary nutrition: In the new scheme, special provision has been made for providing supplementary nutritional material to children in aspirational districts and high anaemia districts.

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Decision to fix the diet by the state: It removes the restriction of providing funds mainly for the center, only for wheat, rice, pulses and vegetables. At present, if a state decides to add any other ingredients like milk or eggs to the diet, the additional cost is not borne by the Centre. This restriction has now been removed under the new scheme.

Nutri-gardens: The government will promote the development of school nutrition gardens in schools to give the children first-hand experience with nature and horticulture. Crops from these gardens are used to provide additional micronutrients in the mid-day meal.

Women and Farmer Producer Organizations (FPOs): Participation of Farmer Producer Organizations (FPOs) and Women Self-Help Groups will be encouraged in the implementation of Midday Scheme to promote Vocal for Local for a self-reliant India.

Social Audit: Social audit of the scheme by the students of colleges and universities has been made mandatory for the implementation of the scheme at the ground level.

Tithi-Bhojan: The concept of Tithi-Bhojan will be widely promoted. Tithi Bhojan is a community participation program in which people provide special meals to children on special occasions/festivals.

Direct Benefit Transfer to Schools: Among other procedural changes to promote transparency and reduce fraud, states will be asked to make direct benefit cash transfers of cooking costs into the accounts of each school, and honorarium amount for cooks and cooks. will

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be sent directly to the bank accounts of the assistants.

Holistic nutrition: The purpose of this renamed scheme is to focus on “holistic nutrition” goals. Under this, the use of locally grown traditional foods will be encouraged along with school nutrition gardens.

About Mid-Day Meal Scheme:

The scheme ensures one time meal for all children in government schools, aided schools and aided madrassas under Samagra Shiksha.

Under this scheme, students up to class VIII are provided cooked nutritious food for at least 200 days in a year.

This scheme is implemented by the Ministry of Human Resource Development.

This scheme was implemented as a centrally sponsored scheme on 15th August, 1995 across the country.

It was started as National Program of Nutritional Support to Primary Education: NP-NSPE.

In the year 2004, this program was relaunched as Mid Day Meal Scheme.

Objective:

Eliminating hunger and malnutrition, increasing school enrollment and attendance, improving socialization among different castes, providing employment at the grassroots level, especially women.

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As per Mid-Day Meal Scheme (MDMS) Rules

2015: Food will be served to the children only in the school.

If midday meal is not provided on any day of the school due to non-availability of food grains or any other reason, the State Government will pay the Food Security Allowance by 15th of the following month.

The School Management Committee mandated under the Right of Children to Free and Compulsory Education Act, 2009 will oversee the implementation of the Mid-Day Meal Scheme.

Nutritional Standards: According to the Mid-Day Meal Scheme (MDMS) guidelines, a minimum of 450 calories of energy and 12 grams of protein will be provided per day for the lower primary level, and a minimum of 700 calories of energy and 20 grams of protein will be given for the upper primary level.

According to the MHRD, 100 grams of food grains, 20 grams of pulses, 50 grams of vegetables and 5 grams of oil and fat will be included in the diet of children of primary classes. In the diet of children of upper-primary schools, 150 grams of food grains, 30 grams of pulses, 75 grams of vegetables and 7.5 grams of oil and fat have been made mandatory.

Reactor developed by Indian scientists using solar-light and water for economical production of hydrogen

A team of scientists has developed a large-scale reactor for the first time that uses sustainable sources such as sunlight and water to produce hydrogen in sufficient quantities, an economical and long-lasting process.

For this, scientists have used a chemical called carbon nitride, which is abundantly available on Earth, as a catalyst.

This work is supported by the TDP project of the Department of Science and Technology (DST).

Reactor Working: The team of scientists used a low-cost organic semiconductor made of carbon nitrides, which can be easily manufactured on a large scale using its cheaper precursors, such as urea and melamine.

When sunlight falls on this semiconductor, electrons and holes are produced.

Electrons reduce protons to produce hydrogen, while holes are filled by chemical agents called sacrificial agents.

If these holes are not filled, they will recombine with electrons.

The reactor is about 1 square metre, and where the water flow is maintained, photocatalysts are coated as panels.

Upon irradiation of naturally occurring sunlight, hydrogen is produced and quantified through gas chromatography.

Significance of this achievement: The hydrogen thus generated can be used in many forms, such as, for example, power generation

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through 'fuel cells' in remote tribal areas, to power hydrogen stoves and small gadgets, etc.

In the future, it could be used to fuel transformers and e-vehicles, a long-term goal of ongoing research.

Way ahead: During his Independence Day speech, the PM had announced the launch of a National Hydrogen Mission to accelerate the plan to generate carbon-free fuel from renewable energy as he announced the year 2047 for the country to achieve self-reliance in energy. Target was set.

India has set a target of 450 GW of renewable energy by 2030. To achieve this feat, in the current scenario, researchers across the world are working towards renewable energy solutions that can be sustainable for a long time with limited carbon emissions.

UNECE Water Conference and the Senegal-Mauritanian Aquifer Basin

(UNECE Water Convention and Senegal-Mauritanian Aquifer Basin)

Recently, four West African countries- The Gambia, Guinea Bissau, Mauritania and Senegal- signed a joint declaration to advance cross-border cooperation in the 'Senegal-Mauritanian Aquifer Basin (SMAB)' went.

- These countries have agreed to establish a 'legal and institutional framework' for cooperation on SMAB.
- It will be the first of its kind in West Africa and will pave the way for stronger cooperation on shared groundwater resources around the world.

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About SMAB: The Senegal-Mauritanian Aquifer Basin (SMAB) is the largest basin on the Atlantic side of north-west Africa, with an area of 350,000 square kilometres.

More than 24 million people living in the region depend on this basin for drinking water and other needs.

Need: Such a declaration was requested by Senegal when it joined the United Nations Economic Commission for Europe (UNECE) Water Convention in the year 2018.

Subsequently, the 'Water Convention' Secretariat, together with the 'Geneva Water Hub' and the 'International Groundwater Resources Assessment Centre', have supported the SMAB Declaration.

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About 'Water Convention': • The 'Convention on the Protection and Use of Transboundary Watercourses and International Lakes – Water Convention', i.e. 'Convention on the Protection and Use of Transboundary Watercourses and International Lakes – Water Convention' was adopted in Helsinki in 1992 and came into force in 1996.

- The Convention is a unique legally binding tool to promote the sustainable management of shared water resources, the implementation of the Sustainable Development Goals, the prevention of conflicts, and the promotion of peace and regional integration.

execution:1. Under the Water Convention, participating members are mandated to prevent, control and reduce cross-border impacts, use cross-border waters in a fair and equitable manner, and ensure their sustainable management.

2. The member countries of the Convention sharing the boundary of trans-border water bodies will have to cooperate with each other through specific agreements and the formation of joint bodies.

3. As a framework agreement, the 'Water Convention' does not replace bilateral and multilateral agreements for any specific basin or aquifers; Rather, it promotes their establishment and implementation, as well as further development.

Member: As of September 2018, the 'Water Convention' had been ratified by a total of 43 parties, including 42 nations and the European

Union. This 'convention' has been signed by the United Kingdom but has not been ratified.

The 'External Auditor' for The Hague-based Organization for the Prohibition of Chemical Weapons (OPCW)

(External auditor for Hague-based OPCW)

The 'Conference on Disarmament (CD)' is being organized in Geneva, Switzerland.

At the conference, India expressed deep concern over the proliferation of weapons of mass destruction and their delivery systems endangering peace and security, and at the same time warned the global community of the possibility of such weapons falling into the hands of terrorists. Emphasizing the need to work together to tackle this grave menace.

India has supported the full and effective implementation of the Chemical Weapons Convention and emphasized on empowering the Organization for the Prohibition of Chemical Weapons (OPCW) to fulfill its important mandate.

About 'Disarmament Conference':

The Conference on Disarmament (CD) is a multilateral disarmament negotiating forum recognized by the United Nations General Assembly (UNGA).

It has been established by the international community to negotiate 'arms control and disarmament agreements' based at the Palais des Nations in Geneva. Three separate sessions of this conference are held annually in Geneva.

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This conference was first established in the year 1979 as the 'Committee on Disarmament' as the single multilateral disarmament negotiating forum of the international community. In the year 1984, it was named 'Disarmament Conference'.

Formation: 1984.

Membership: 65 countries. The conference was established with a permanent agenda, also known as the "Decalogue", and it covered the following topics:

Nuclear weapons in all forms

other weapons of mass destruction

conventional weapons

military budget cuts

cut in the armed forces

disarmament and development

Disarmament and International Security

Relations between the United Nations and the Conference on Disarmament:

The Conference on Disarmament is a formally independent body from the United Nations. Although it is not formally an institution of the United Nations, it is associated with it in various ways.

First and foremost, the 'Director-General of the United Nations Office' in Geneva, serves as the Secretary-General of the 'Conference on Disarmament'.

In addition, the 'Convention for Disarmament' prepares its own rules and agenda, however, resolutions recommending specific topics for the 'Convention of Disarmament' can be passed by the United Nations General Assembly.

Finally, the Conference on Disarmament submits a report of its activities annually, or more frequently, as appropriate, to the United Nations General Assembly.

About Organization for the Prohibition of Chemical Weapons (OPCW): It is an international organization established by the Chemical Weapons Convention (CWC), 1997, to enforce and enforce the terms of the 'Non-Proliferation Treaty' (NPT).

The OPCW has the power to conduct inspections to verify the compliance of the 'Agreement' by the signatory countries.

Under the Agreement on Relations between the OPCW and the United Nations, until 2001, the OPCW reported its inspections and other actions to the United Nations through the United Nations Secretary-General.

The organization was awarded the 2013 Nobel Peace Prize for its extensive efforts to eliminate chemical weapons.

The following acts are prohibited by the 'Chemical Weapons Convention':

Developing, producing, acquiring, stockpiling, or retaining chemical weapons.

Direct or indirect transfer of chemical weapons.



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Use of chemical weapons or preparation for military use.

To assist, encourage or induce other states to engage in CWC-prohibited activities.

The use of riot control agents 'as a method of warfare'.

The 'External Auditor' for the Hague-based Organization for the Prohibition of Chemical Weapons (OPCW)

In April 2021, the Comptroller and Auditor General (CAG) of India has been elected as the external auditor of the Organization for the Prohibition of Chemical Weapons (OPCW) for a term of three years. His term will start from the year 2021.

The appointment was made through an election process at the recently held OPCW conference.

During the OPCW conference, India has also been elected as a member of the Executive Council of the OPCW for another two-year term as the Representative of the Asia Group.

About 'Executive Council': It is the governing body of the Organization for the Prohibition of Chemical Weapons (OPCW).

This 'Executive Council' consists of 41 OPCW member states, which are elected in consultation with the member states, and they change every two years.

The Council oversees the programs of the Technical Secretariat and is responsible for promoting the effective implementation and compliance of the Convention.

Each member country has the right to be elected on a sequential basis to the Executive Council.

Chemicals banned for use in firecrackers

The Supreme Court is all set to scrutinize an affidavit filed by the Environment Ministry in October last year on the so-called 'use of green and improved firecrackers'. The hearing of this matter will take a decision on whether or not to have fireworks this Diwali.

Related case: The Ministry of Environment, Forest and Climate Change (MoEFCC) has informed the court that a lot of research and development has taken place in this area after the judgment given by the court in October 2018. The ministry, in its affidavit filed before the court in October 2020, has urged the court to consider various proposals and methods on green/advanced firecrackers.

Supreme Court's decision: The Supreme Court, in its judgment pronounced on October 23, 2018, had banned the sale and production of firecrackers in the Delhi-NCR region and regulated the use of firecrackers across the country.

- 'Barium' based firecrackers were specifically banned.
- Online sale of firecrackers has been completely banned.
- The court's decision was given after hearing a petition seeking a ban on the manufacture and sale of firecrackers across the country to curb air pollution.

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Recent observations by the Supreme Court on the use of firecrackers: • Considering the banning of firecrackers, the Supreme Court said that it cannot infringe on the right to life of other citizens "in the guise of employment of a few".

- A 'balance' has to be made between employment, unemployment and the right to life.

Method of firecrackers: Firecrackers use 'fuels' and 'oxidisers' to produce a combustion reaction, and the resulting explosion of these firecrackers causes the material filled with firecrackers to disintegrate into the atmosphere, in an extremely hot state. She goes. Metal particles added to the explosive mixture 'inflate' and emit light.

Related disputes: Metallic particles added to the explosive mixture of firecrackers have a different arrangement of electrons in the outer shell of their nuclei. Different wavelengths of light are produced in response to the bursting of firecrackers, producing brilliant colours. But, as many studies show, the burning of firecrackers is an unusual and extreme source of pollution arising from particulates and gases.

- In a study conducted in the Italian city of Milan, the amount of several elements in the air during an hour when firecrackers were lit – 120 times that of strontium, 22 times that of magnesium, 12 times that of barium, 11 times that of potassium And a six-fold increase of Copper was determined.

- A study was conducted by the Central Pollution Control Board in Delhi in the year

2016, according to which the level of aluminum, barium, potassium, sulphur, iron and strontium in the air increased rapidly from 'low to very high' on the night of Diwali Was.

- Similar relevant increases have been reported in China and the United Kingdom. Pollution from firecrackers affects the health of people and animals, and worsens the already poor ambient air quality in Indian cities. This has resulted in petitions filed in the court seeking a complete ban on firecrackers, and the court order, in its order, restricting the type of chemicals used in firecrackers as well as their quantity. Many crackers also violate the legal limit on noise.

Can green crackers make a difference? An alternative to firecrackers has been introduced by the 'National Environmental Engineering Research Institute' (CSIR-NEERI), Nagpur of the Council of Scientific and Industrial Research, which has less amount of light and sound emitted and uses potassium nitrate as an oxidant. Small amounts are used, reducing the amount of particulate matter emitted by up to 30%.

These crackers are named 'Safe Water Releaser', and they use less potassium nitrate and sulfur, but the sound they emit is similar to the sound intensity of traditional firecrackers. The use of aluminum is also very low and within safe limits, and they are safe thermite crackers with low amounts of potassium nitrate and sulphur.

Time Required: While deciding to ban firecrackers, the 'fundamental right to

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livelihood' of firecracker manufacturers and the 'right to health' of over 1.3 billion people of the

country need to be kept in mind.

Index Value	Name	Color	Advisory
0 to 50	Good	Green	None
51 to 100	Moderate	Yellow	Unusually sensitive individuals should consider limiting prolonged outdoor exertion
101 to 150	Unhealthy for Sensitive Groups	Orange	Children, active adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion
151 to 200	Unhealthy	Red	Children, active adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else should limit prolonged outdoor exertion
201 to 300	Very Unhealthy	Purple	Children, active adults, and people with respiratory disease, such as asthma, should avoid outdoor exertion; everyone else should limit outdoor exertion
301-500	Hazardous	Maroon	Everyone should avoid all physical activity outdoors.

PM Cares for Children: So far, a total of 845 children orphaned during Kovid-19 have been identified and approved to get benefits under PM CARES Fund.

About the plan: The 'PM CARES for Children' scheme was launched in May 2021.

This scheme has been launched to help and empower children affected by Kovid.

Eligibility: All the children who have lost both the parents or either of the parents, the surviving guardian or the legal guardian/adoptive parent due to Kovid 19 will be given assistance under the scheme 'PM-CARES for Children'.

Key points of this plan: Fixed Deposit in the name of the child: A corpus of Rs 10 lakh will be constituted for each child who completes the age of 18 years.

Schooling: Children below the age of 10 years will be admitted as day scholars in the nearest Kendriya Vidyalaya or private school.

School Education: Children in the age group of 11 -18 years will be admitted to any residential school of the Central Government such as Sainik School, Navodaya Vidyalaya etc.

Assistance for Higher Education: The child will be assisted in getting education loan for

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vocational courses/higher education in India as per the existing education loan norms.

Health Insurance: All such children will be enrolled as a beneficiary under the 'Ayushman Bharat Yojana' (PM-JAY) with a health insurance cover of Rs 5 lakh.

(Note: We have included only the salient points and salient features of the plan here. For full details, please visit.)

The need for these measures: India is currently battling the second wave of the COVID-19 pandemic and the number of deaths of parents of many children is increasing due to this pandemic.

Along with this, the possibility of child trafficking in the guise of adoption of these children has also increased.

There has also been an increase in 'child marriage' related cases during the lockdown implemented due to Covid-19.

Changes in Forest Conservation Act

Recently some amendments have been proposed by the Central Government in the existing Forest Conservation Act (FCA).

proposed changes: Agencies involved in 'national security' projects and 'border infrastructure' projects have been exempted from obtaining prior approval from the Union Ministry of Environment, Forest and Climate Change. Whereas it is necessary to obtain such permission under the Forest Conservation Act (FCA), 1980.

Land acquired by public sector bodies like Railways – before the Forest Conservation Act 1980 came into force – has also been exempted from obtaining prior approval from the Ministry.

Exploitation of oil and natural gas under deep forest land by drilling through 'drillings' from outside the forest areas and facilitated private plantations for exploration or extraction.

Construction in Forests: In order to reduce the grievances of individuals whose land falls within the purview of State specific 'Private Forest Act' or the dictionary definition of 'forest', the 'Ministry' has introduced forest conservation measures as a one-time exemption. including the right to build certified infrastructure and permission to construct residential units up to an area of 250 square meters.

Punishment: The offenses committed under the amended Act shall be punishable with simple imprisonment for a term which may extend to one year and these offenses have been made cognizable and non-bailable.

In the amended Act, a provision has also been made for punitive compensation to compensate for the damage already done.

further actions: Please note that these changes to the Forest Conservation Act are only proposals at present. The draft has been placed for public discussion for 15 days, after which it can be prepared for cabinet and parliamentary approval.

These modifications required: One of the major problems with the current 'Forest Conservation

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Act' is that states commit to the principle of increasing 'forest cover' within their limits, and this allows land-use for infrastructure projects sponsored by state and private entities. becomes difficult.

Displeasure has been expressed by several ministries over how the Act is being interpreted while curtailing the authority of railways and highways.

As of today, any land holding agency (Railways, National Highways Authority of India, Public Works Department, etc.) to use the land originally acquired under the Act for non-forest purposes, has to be obtained from the Union Ministry of Forests. It is necessary to take pre-approval and pay prescribed compensatory charges like Net Present Value (NPV), Compensatory Afforestation (CA) etc.

With more land coming under the definition of "forest", it is becoming increasingly difficult for state governments or private industry to use the land under the definition of "forest" for non-forestry purposes.

Over the years, this problem has led to several legal cases filed in the courts and the legal definition of "forest" is being questioned.

The states have been asked to clarify the definition of 'forest', but considering its political consequences, most of the states have not given any definition. All these factors have given rise to conflicting interpretations of the Forest Conservation Act (FCA) over the years.

The proposed amendment is part of rationalization of existing forest laws.

When was the 'Forest Conservation Act' enacted?

The 'Forest Conservation Act' was first enacted in the year 1980 and was amended in the year 1988.

Even though the states already have notified forest land, there is a recommendation under the 'Forest Conservation Act' to use such forest land for "non-forest purposes" and reclassify this land. It was made necessary to obtain the permission of the Central Government for the constitution of an advisory committee.

The Supreme Court judgment (T N Godvarman Thirumalapad (1996) case) led to the enumeration of the following:

Net Present Value, or the economic value of the portion of forest destroyed by the project supporters for development work.

Creation of Compensatory Afforestation Fund.

To provide 'non-forest land' in place of 'diverted forest'.

Definition of "forest": A broader definition of 'forests' under the Forest Conservation Act was accepted by the Supreme Court in the T N Godvarman Thirumalpada (1996) case. Prior to this decision of the Supreme Court, only the land as defined by the Forest Act of 1927 was treated as 'forest land'.

The court has said that the word 'forest' should be understood according to the meaning given in the dictionary. Under this, all types of forests are statutorily recognized, reserved, protected

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or specified for the purpose of section 2(1) of the Forest Conservation Act.

In addition, all areas recorded as forest in government records fall under the definition of 'forest', regardless of who owns them.

Gujarat High Court order on conservation of Sabarmati river

The Gujarat High Court had taken suo motu cognizance of the gradual death of 'Sabarmati river' due to discharge of waste. Recently, the court has given its verdict in this regard.

High Court Order: 1. Water and electricity will not be provided for industrial units releasing pollutants into the Sabarmati river in Gujarat.

2. These units will be punished and even shamed.

3. All such polluting units shall also be prohibited from participating in any industrial fair, public-private partnership programs etc.

Water as a 'Public Trust': Water resources have been placed in 'Public Trust' in our constitution. Therefore, the court has decided to use the 'Public Trust Doctrine' to enforce stringent provisions against municipal bodies or industries polluting rivers.

Challenges: 120 km of the 371 km long route of the Sabarmati river is on the verge of being dead. This is especially true of the part of the river that flows along the 'Sabarmati Riverfront' in Ahmedabad.

- The excessive presence of pollutants in the river and lack of natural flow has caused irreparable damage to the river.

- Waste and sewage from industrial units are being continuously discharged into the Sabarmati river.

- Despite all this, industrial units have got legal permission to continue these activities.

Time Requirement:

Rivers are our lifeline, as we are completely dependent on them for our existence. The main reason behind this dreadful situation is our complete ignorance and careless attitude towards the environment and maintaining the rivers and river banks and maintaining the banks of rivers and streams.

- Therefore, it is high time that we take some strong steps in this regard.

- Everyone should understand that the rivers belong to all of us.

- Keeping them clean is the joint responsibility of each individual.

About Sabarmati River: • Sabarmati originates from the Dhebar Lake situated in the southern part of the Aravalli ranges in Udaipur district of Rajasthan.

- It flows in south-west direction and passes through Udaipur in Rajasthan and Sabarkantha, Mehsana, Gandhinagar, Ahmedabad and Anand districts of Gujarat.

- After traveling about 371 km, the Sabarmati River falls into the Gulf of Khambhat.

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Global Coral Reef Monitoring Network and its report: Recently, a report on the status of coral reefs around the world has been released by the Global Coral Reef Monitoring Network (GCRMN).

The report, the first of its kind in 13 years, outlines the devastating consequences of 'global warming', and says that 'controlling greenhouse gases can save some coral reefs'.

Key points of the report: In the last decade, about 14 percent of the total coral reefs in the world have been destroyed.

Threats to coral reefs: ocean-acidification, rising ocean temperatures and 'local pressures' such as overfishing, pollution, non-sustainable tourism and poor coastal management.

Effects of Global Warming: Coral reefs around the world are facing continuous crisis due to warming caused by climate change. Events of 'coral bleaching' caused by an increase in high sea surface temperatures (SST) are responsible for the death of 'corals'.

Loss of hard coral cover: During the past four decades, the hard coral cover has been decreasing steadily since the loss of nine percent of the world's coral in 1978. This decrease in this cover is worrying because the living hard coral cover is an indicator of the health of the coral reef.

Algal blooms: Algal blooms on coral ridges indicate pressure on coral reefs. Since 2010, the amount of algae on the world's coral reefs has increased by about 20 percent.

Need for Conservation of Corals: Corals are found in less than one percent of the sea level, but more than a billion people directly benefit from these coral reefs.

The value of goods and services from coral reefs is estimated to be \$2.7 trillion per year. Coral reef tourism alone generates \$36 billion in business.

The 'net economic value' of the world's coral reefs could be around tens of billions of dollars a year.

challenges ahead: Persistent increase in land and sea temperatures is a threat to corals.

If there is a one degree increase in sea surface temperature, the survival of corals is likely to be less than 50 percent.

If the world as a whole does not work together to reduce carbon emissions, then by the end of this century all of the world's coral reefs are likely to be bleached.

What is 'coral bleaching'?

When corals are under stress due to changes in temperature, light or nutrition, they expel the symbiotic algae that live in their tissues called Zooxanthellae, causing the coral to turn white. This phenomenon is called 'coral bleaching' or 'coral bleaching'.

Corals get about 90% of their energy from zooxanthellae algae, rich in chlorophyll and other pigments.

These algae are also responsible for the yellow or reddish brown color of their host corals. In

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addition, 'zoozanthili' can also coexist with jellyfish as 'endosymbionts'/endosymbionts.

When a coral is bleached, it does not die immediately, but comes very close to dying. Some corals may survive this stage and recover once sea surface temperatures return to normal levels.

Global airlines commit to net zero carbon emissions by 2050

In the 77th Annual General Meeting of the International Air Transport Association (IATA), a resolution has been passed for the 'global air transport industry' to achieve 'net-zero carbon emissions' by the year 2050.

This commitment is in line with the goal of keeping global warming below 1.5 °C under the Paris Agreement.

challenges ahead: Achieving the 'Net Zero Emission' target will be a big challenge.

The aviation industry must progressively reduce its emissions while accommodating the growing demand from a world eager to fly.

In the year 2050, to be able to meet the needs of the ten billion people who fly, at least 1.8 gigatonnes of carbon will have to be eliminated that year.

In addition, a 'Net Zero Commitment' implies that a total of 21.2 gigatonnes of carbon will have to be eliminated between the present and 2050.

The resolution passed by IATA calls for commitment from all industry stakeholders to address the environmental impact of their

policies, products and activities with concrete actions and clear timelines, for:

Cost-competitive sustainable aviation fuels will be brought to the market in a big way by fuel producing companies.

Deficiencies in air traffic management and airspace infrastructure will be addressed by governments and air navigation service providers (ANSPs).

More efficient airframe and propulsion technologies will be produced as necessary by aircraft and engine manufacturers.

Necessary infrastructure will be provided by airport operators for supply of 'Conveyable Aviation Fuel' (SAF) SAFs at a reasonable cost and in a cost-effective manner.

Countries to declare 'net-zero' target: The 'Zero Carbon Act' was passed by the New Zealand government in the year 2019 and under this the country was committed to achieve the target of 'Zero Carbon Emissions' by the year 2050.

A law has been passed by the UK Parliament, under which the government has been entrusted with the responsibility of reducing the net emissions of greenhouse gases in the United Kingdom by 100 percent.

US President Joe Biden has announced to cut the country's greenhouse gas emissions by at least 50 percent from 2005 levels by 2030.

The year 2019 saw the launch of 'World War Zero' to bring together reluctant allies on

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climate change and reach the country's goal of 'net-zero' carbon emissions by the year 2050.

EU's 'Fit for 55' plan: Under this, the European Commission has asked all its 27 member countries to cut their emissions by 55 percent from 1990 emissions levels by 2030.

China has announced a goal of achieving 'net-zero' by the year 2060 and has spoken of limiting its emissions to the level of 2030.

India and 'Net-Zero' target: India is the world's third largest emitter of greenhouse gases, after the US and China, and the only major country to fall outside the 'net-zero' target.

India argues that instead of initiating parallel discussions on net-zero targets separate from the 'Paris Agreement' framework, all countries should focus on meeting the targets they have already promised.

India's concerns: As India strives to achieve high growth rate to lift millions of its people out of poverty, India's emissions are likely to grow at the fastest pace in the world over the next two to three decades. No matter how much afforestation or reforestation will be able to compensate for this emission-growth. Furthermore, most of the technologies available for carbon-free so far are either unreliable or too expensive.

What is 'Net-Zero'? 'Net-zero', also called 'carbon-neutrality', does not mean that a country will reduce its gross emissions to zero.

Rather, 'net-zero' is a situation in which a country's emissions are compensated for by the

'absorption and elimination of greenhouse gases from the atmosphere'.

A greater number of carbon sinks, such as forests, can be created to increase the absorption of emissions, while removal or removal of gases from the atmosphere requires cutting-edge technologies such as carbon capture and storage.

Mosquirix: First WHO-supported vaccine for malaria: Recently, a vaccine named RTS,S/ASO1 (RTS.S) has been approved by the World Health Organization (WHO) for the treatment of malaria. The commercial name of this vaccine is 'Mosquirix'.

It is the only and the first vaccine so far that has shown potential to reduce malaria and deadly severe malaria in trials on young African children.

About Mosquirix: The 'Mosquirix' vaccine, globally the deadliest malaria parasite 'P. Very effective against 'Plasmodium falciparum'. Africa has the largest outbreak of this deadly malaria parasite.

The vaccine is also the first malaria vaccine to be offered by the national health ministries of three African countries – Ghana, Kenya and Malawi – through their child immunization programmes.

India's latest and fourth tiger reserve in Chhattisgarh

The National Tiger Conservation Authority (NTCA) has approved the Chhattisgarh government's proposal to declare the combined

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areas of 'Guru Ghasidas National Park' and 'Tamor Pingla Wildlife Sanctuary' as 'Tiger Reserves'.

This new 'Tiger Reserve' is located in the northern part of the state bordering Madhya Pradesh and Jharkhand.

This will be the fourth tiger reserve in Chhattisgarh after Udanti-Sitanadi, Achanakmar and Indravati Tiger Reserves.

Please note that 'Guru Ghasidas National Park' is the last known habitat of Asiatic cheetahs in the country.

How is 'Tiger Reserve' declared?

Firstly, approval for a 'Tiger Reserve' is granted by NTCA under Section 38V(1) of the Wildlife (Protection) Act, 1972.

On the recommendation of the 'National Tiger Conservation Authority' (NTCA) by the state government, an area will be notified as a 'tiger sanctuary'.

'Buddhist Circuit' The 'Buddhist Circuit' / 'Buddhist Circuit' project was announced by the Central Government in the year 2016. Since then, under various schemes, an amount of Rs 343 crore has been sanctioned for this project.

The 'Buddhist Circuit' is a path connecting important places related to the life of Buddha. This route leads from Lumbini in Nepal, the birthplace of the Buddha, to Bodhgaya in Bihar in India—where he attained enlightenment, Sarnath in Uttar Pradesh—where he gave his first sermon, and Kushinagar—where he

attained Maha-Parinirvana. passes through.



Development of the 'Buddhist Circuit':

- Under the Swadesh Darshan Scheme, a flagship scheme of the Ministry of Tourism, several projects have been started in Madhya Pradesh, Bihar, Uttar Pradesh, Gujarat and Andhra Pradesh.
- Under the scheme, there are plans to further develop the sites of Bodh Gaya, Nalanda, Rajgir, Vaishali, Sarnath, Shravasti, Kushinagar, Kaushambi, Sankisa and Kapilvastu in the states of Bihar and Uttar Pradesh.
- At present, about six percent of the total tourists visiting the country are foreign tourists, with Sarnath and Bodh Gaya being the most prominent destinations.

Circuit Detail: Initially, the Buddhist circuit was envisaged to only connect seven major Buddhist pilgrimage sites located in Uttar Pradesh and Bihar, later expanded to 21 other states to make India's 'first international tourist circuit'.

- Under the plan, stupas and viharas have been identified in these 21 states, around which

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small interstate Buddhist areas will be developed.

- The new states to be included in the circuit are Madhya Pradesh, Rajasthan, Kerala, West Bengal, Goa, Gujarat and Jammu and Kashmir.
- At present, four international and two domestic airports are functional in the Buddhist circuit, while work is in progress at two other airports.
- There are also plans to develop helicopter services and improve international connectivity under the 'UDAN' scheme.

Swadesh Darshan Scheme: The scheme was launched by the Ministry of Tourism in the year 2014-15 to develop a 'theme based tourism circuit' in the country.

- It is 100% centrally funded scheme for project components.
- It also has a provision for availing 'voluntary funding' under the 'Corporate Social Responsibility' (CSR) initiative of Central Public Sector Undertakings and the Corporate Sector.



Under this scheme, 13 thematic circuits have been identified for development. These are:

1. Buddhist Circuit,
2. North-East India Circuit,
3. Coastal Circuit,

4. Himalaya Circuit,
5. Krishna Circuit,
6. Desert Circuit,
7. Echo Circuit,
8. Wildlife Circuit,
9. Tribal Circuit,
10. Rural Circuit,
11. Spiritual Circuit,

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12. Ramayana Circuit and

13. Legacy Circuits.

Buddhist Site	Features
Lumbini, Nepal	It is the place where Queen <u>Mayadevi</u> gave birth to Siddhartha Gautama.
<u>Kapilavastu</u> , Uttar Pradesh	<u>Kapilavastu</u> was the capital of Shakya. It was the was the childhood home of Gautama Buddha
Bodh Gaya, Bihar	It is the place where Gautama Buddha is said to have obtained Enlightenment. Mahabodhi Temple, located in Bodh Gaya, is a UNESCO World Heritage Site.
<u>Sarnath</u> , Varanasi, Uttar Pradesh	The deer park in <u>Sarnath</u> is where Gautama Buddha first taught the Dharma. It is also where the Buddhist Sangha came into existence. It was also the site of the Buddha's <u>DhammacakkappavattanaSutta</u> , which was his first teaching after attaining enlightenment.
<u>Rajgir</u> , Nalanda, Bihar	It was the first capital of the kingdom of Magadha. The two rock-cut caves here, were the <u>favourite</u> retreats of the Buddha. It was on <u>Rajgir</u> hill that Buddha preached two of his most famous sermons. <u>Rajgir</u> is equally important for the Jains as well as Hindus.
<u>Shravasti</u> , Uttar Pradesh	It is closely associated with the life of Gautama Buddha, who is believed to have spent 24 <u>Chaturmasas</u> here. <u>Shravasti</u> was the capital of the Kosala Kingdom.
Vaishali, Bihar	Gautama Buddha gave his last sermon here.
<u>Kushinagar</u> , Uttar Pradesh	This is the place where Gautama Buddha attained <u>Parinirvana</u> after his death.

stubble combustion: According to the 'Air Quality Management Commission', this year's 'stubble burning' (Stubble) due to reduction in the area under paddy cultivation in Haryana, Punjab and Uttar Pradesh and less use of paddy varieties that ripen longer by the farmers. Burning) can be seen to decrease.

Because of this: • In eight districts under National Capital Region in Haryana, Punjab and

Uttar Pradesh, the area under paddy crop has decreased by 7.72% during the current year as compared to the previous year.

- Paddy stubble from non-basmati variety rice is expected to reduce by 12.42% during the current year as compared to the previous year.
- Measures are being taken by the State Governments of Haryana, Punjab and Uttar Pradesh and the Central Government to

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diversify the crops as well as reduce the use of Pusa-44 variety of paddy.

- Under the framework and action plan to control stubble burning, emphasis was laid on 'crop diversification' and to eliminate the use of 'Pusa-44' variety which gives high yield in short duration.

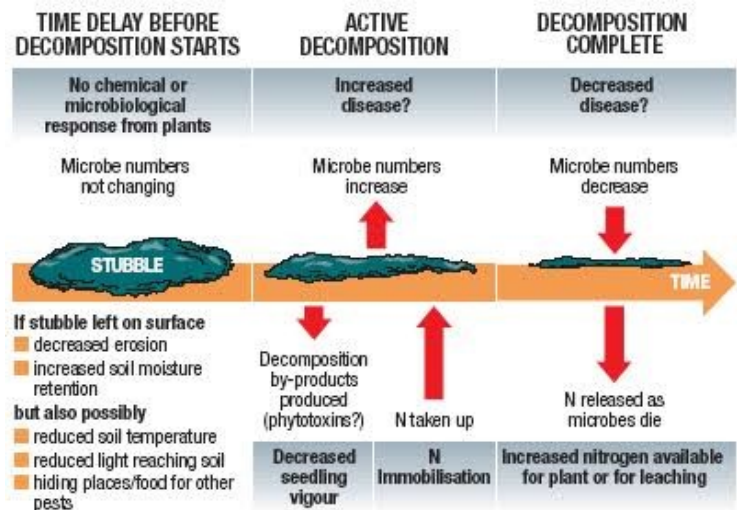
What is 'stubble burning'?

'Parali dahan' or stubble burning, is a common practice by farmers while preparing the field for wheat sowing in November, as there is very little time left between harvesting of paddy and sowing of wheat.

Effect: Burning of stubble emits harmful gases like carbon dioxide, sulfur dioxide, nitrogen dioxide as well as particulate matter.

Reasons for farmers opting for 'stubble burning':

1. Farmers do not have options to utilize the stubble effectively.
2. Farmers are unable to deal with this agro-waste as they cannot afford the new technology available to dispose of the waste material.
3. Often, there is a significant impact on the income of the farmer due to crop failure, in which case the farmer chooses to burn the stubble in the field instead of cutting costs and spending on scientific methods of stubble management.



Benefits of burning stubble:

- It clears the field quickly and is the cheapest option.
- Weeds are destroyed with weed killers.
- Cattle and other insects die.
- Nitrogen bonds are weakened.

Effects of stubble burning:

- Pollution: Open stubble burning releases large amounts of toxic pollutants into the atmosphere, including harmful gases such as methane (CH₄), carbon monoxide (CO), volatile organic compounds (VOCs) and carcinogenic polycyclic aromatic hydrocarbons. Eventually these become the cause of smog.
- Soil Fertility: Burning of stubble in the field destroys the nutrients of the soil, making it less fertile.
- Heat penetration: The heat generated by stubble burning enters the soil, thereby

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destroying the soil moisture and beneficial bacteria.

Alternative measures to avoid stubble burning:

1. Promotion of paddy straw based power plants. This will also create employment opportunities.
2. Incorporation of crop residues into the soil can improve soil moisture, and help to activate the growth of soil microorganisms for better plant growth.
3. Agro-waste can be converted into rich organic manure through composting.
4. Through scientific research, new opportunities for industrial use like 'extraction of yeast proteins' can be discovered.

Requirement: Comments made by the Supreme Court

1. Incentives can be given to those who do not burn the stubble and those who continue this practice can be punished.
2. The existing Minimum Support Price (MSP) scheme should be interpreted in such a way as to deprive the people of agricultural waste burning wholly or partially from the benefit of MSP.

Chhattisgarh Model: An innovative experiment has been done by the Chhattisgarh government by setting up 'Gauthan'.

- 'Gauthans', a collective plot of five acres in each village, where all the people of the village

collect their own unused straw and convert this straw into organic fertilizer by mixing cow dung and some natural enzymes. is converted.

- This scheme also generates 'employment' for the rural youth.
- Assistance is provided by the government in transporting 'Parali' from the farm to the nearest Gauthan.
- So far 2,000 Gauthans have been successfully developed in Chhattisgarh.

Reduction in 'terrestrial water storage' WMO report

Recently, the World Meteorological Organization (WMO) titled 'State of Climate Services 2021' (2021 State of Climate Services) on reduction in 'terrestrial water storage (TWS)' A report has been issued from

What is 'terrestrial water storage'?

'Terrestrial water storage (TWS)' is the total amount of water present on the surface of a terrestrial landmass and its lower surface, i.e. surface water, soil moisture, snow, ice and groundwater.

Key points of the report:

1. Overall, during the last twenty years (2002-2021), terrestrial water storage (TWS) has declined at the rate of 1 cm per year.
2. The greatest reduction in 'terrestrial water storage' has occurred in 'Antarctica' and 'Greenland'.

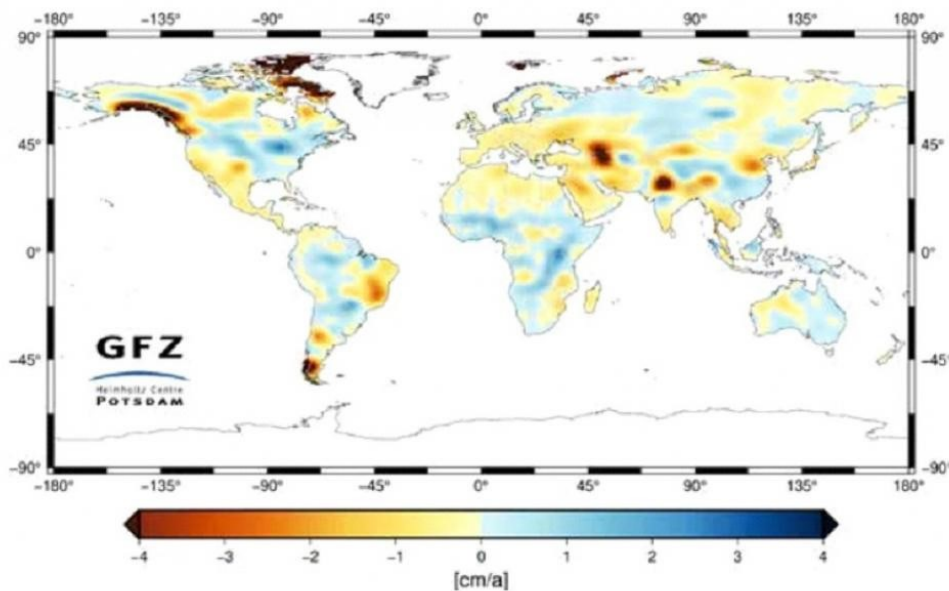
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3. Situation in low latitudes There has been a decrease in 'terrestrial water storage' even in places with high population.

4. India is the biggest hotspot of depletion in terrestrial water storage (TWS). If we leave out the 'water storage' deficit in Antarctica and Greenland, then India has the biggest decrease in 'terrestrial water storage'.

5. In India, TWS has decreased at the rate of 3 cm per year. In some areas, the rate has been more than 4 cm per year.

6. The maximum reduction in TWS within the country occurred in the northern part of India.



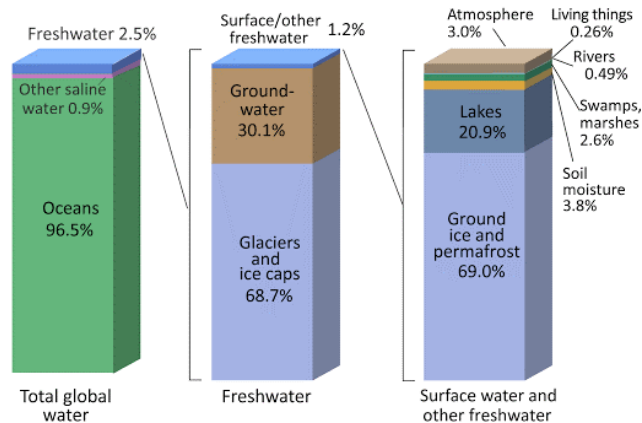
Challenges ahead:

Due to human and naturally induced stresses, water resources all over the world are facing immense pressure.

- These stresses include population growth, urbanization and decreasing availability of fresh water etc.
- Extreme weather events are also responsible for the pressure on 'water resources' in all areas of development and in all parts of the Earth.

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Where is Earth's Water?



Credit: U.S. Geological Survey, Water Science School. <https://www.usgs.gov/special-topic/water-science-school>
 Data source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, Water in Crisis: A Guide to the World's Fresh Water Resources. (Numbers are rounded).

Indian Scenario:

- The availability of water per capita is decreasing due to increase in population in India.
- In the country, the average annual per capita water availability is continuously decreasing. In the year 2001, the per capita water availability in the country was 1,816 cubic meters, which decreased to 1,545 cubic meters in the year 2011.
- According to the Union Ministry of Housing and Urban Affairs, it may further decline in the year 2031 and it may come down to 1,367 cubic meters per person.
- Out of 21 river basins in India, five river basins have reached a state of 'net water scarcity' (per capita water availability is less than 500 cubic metres).

- By the year 2050, there will be 'net water scarcity' in six river basins, 'water scarcity' in six other river basins and 'stressed water situation' in four river basins.

Steps taken by the Government: 1. MGNREGA for water conservation

2. Jal Kranti Abhiyan
3. National Water Mission
4. National Rural Drinking Water Program
5. NITI Aayog Composite Water Management Index
6. Formation of Ministry of Jal Shakti and launch of Jal Jeevan Mission

Athirappilly Hydroelectric Project

Recently, the Kerala government has canceled the proposed 163 MW 'Athirappilly Hydel Power' on the Chalakudy river basin in Thrissur district.

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The Chalakudy River is a tributary of the Periyar River and originates in the Anamalai region of Tamil Nadu.

Reason for cancellation: The Kerala government has taken the decision amid growing protests by environmentalists and tribal organizations against biodiversity and the creation of the state's only riverine-forest.

7 REASONS WHY PROJECT SHOULD BE SHELVED

1 Western Ghats Ecology Expert Panel has recommended that green nod shouldn't be given to large storage dams in eco-sensitive zones (ESZ) 1 & 2. Athirappilly falls under ESZ 1

2 Project would destroy 138ha of forestland. As per project report, over 104.4ha of forests would be submerged, of which 28.4ha is natural forest, 36.8ha reserve forest plantations and 39.2ha riverbed

3 Project's projected power generation capacity is 163MW but there is not enough water for it. Power generated is unlikely to be more than 20 MW

4 Project is estimated to cost between ₹1,200cr and ₹1,500cr. This would significantly increase cost of power

5 Existence of unique low-elevation riparian vegetation with high endemism. A total of 155 species of endemic plants with 33 categorized as rare and endangered by International Union for Conservation of Nature (IUCN)

6 Of 486 bird species recorded in state, 234 can be found in Vazhachal-Athirappilly region. Also home to Malabar grey hornbill, grey hornbill, Malabar pied hornbill, great Indian hornbill

7 High fish diversity. The riparian ecosystem harbours 104 out of the 210 species recorded in Kerala, including 22 endangered and nine critically endangered ones



National Bureau of Fish Genetic Resources had recommended that the Chalakudy River be declared a fish sanctuary

PROJECT TIMELINE

1982: Twin projects of Poringalkuthu Right Bank and Athirappilly proposed

1985: Poringalkuthu project dropped

1989: MoEF rejects environment clearance (EC) for Athirappilly project

1996: Gets techno-economic clearance from Central Electricity Authority (CEC)

1998: MoE&F gives environment clearance (EC) based on a rapid EIA

1997: Stage-I forest clearance by MoE&F

1999: Stage-II forest clearance

2005: MoE&F gives second EC based on another EIA study

2007: Another EC accorded by MoE&F based on HC judgment

2008: CEC's techno-economic clearance expires

2012: EC validity expires

2015: MoE&F extends validity of EC, with effect from 2012

2015: Kadar tribe of Vazhachal invokes community forest rights, passes resolution against project

2017: EC validity for project expires

2018: River protection forum temporarily calls off protests

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Related key points: The 'Kadar tribal community' is facing continuous displacement due to commissioning of various hydroelectric projects in the 'Chalakkudi River Basin'.

- Do you know? Silent Valley was one of the first ecological movements in India with large participation in the late 1970s and early 1980s. This forced the Kerala government to abandon a dam project on the Kunthi River, inside the evergreen tropical forests of the Silent Valley in Kerala's Palakkad district.
- The Madhav Gadgil Report had termed the Athirapally Hydroelectric Project as 'undesirable' and classified it as wasteful on

environmental, technical and economic grounds.

- The 'Kasturirangan Committee' recommended a re-evaluation of the impact of the project on ecological grounds.

Kalapani dispute

According to a statement made by the former Foreign Minister of Nepal, there is a consensus among all Nepalese political parties on the fact that 'Kalapani' in Uttarakhand is part of Nepal's sovereign territory. However, India has rejected this claim.



Location of 'Kalapani':

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Kalapani is situated at the eastern end of Pithoragarh district of Uttarakhand.

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- It borders with the Tibet Autonomous Region under China in the north and with Nepal in the east and south.
- It is situated between Limpiyadhura and Lipulekh.
- The 'Kalapani region' is the biggest territorial dispute between Nepal and India. This area covers at least 37,000 hectares of land in the High Himalayas.

Control over 'Kalapani area':

This area is under the control of India but Nepal claims this area for historical and cartographic reasons.

Reason for dispute:

The name 'Kalapani Kshetra' is derived from the name of 'Kali River' flowing through it. Nepal's claim on this area is based on this river. After the 'Gorkha War' / 'Anglo-Nepal War' in 1814-16, the 'Kali River' was determined as the boundary of Nepal in the 'Treaty of Sugauli' signed between the Gorkha rulers of Kathmandu and the East India Company. The treaty was ratified in 1816.

- Under the treaty, Nepal had to lose its territories of Kumaon-Garhwal in the west and Sikkim in the east.
- According to Article 5 of the treaty, the King of Nepal relinquished his claim on the area west of the Kali River. The Kali River originates from

the High Himalayas and flows through the vast plains of the Indian subcontinent.

- According to the treaty, the British rulers recognized Nepal's right over the area east of the Kali River.

Current Issues:

1. According to the experts of Nepal, the beginning of the eastern region of the Kali river should be considered from the origin of the river. According to them, the source of the river is in the mountains near 'Limpiyadhura', which is at a higher altitude than the rest of the river's flow area.
2. Nepal claims that the high-mountain area located east of the entire stream of the river flowing down from Limpiyadhura belongs to them.
3. India, on the other hand, says that the river originates from Kalapani, and from this its boundary begins.
4. This dispute between the two countries is mainly due to the different interpretation of the origin of the Kali River and its many tributaries flowing through the mountains.
5. Nepal's claim to the area east of the Kali River is based on the Limpiyadhura origin of the river, while India maintains that the river actually originates near Kalapani and hence the name 'Kali'.

present situation:

- Some time ago, a revised official map was published by Nepal, which includes the area

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from Limpiyadhura, the source of Kali River to Kalapani and Lipulekh Pass in the northeast of the triangular region as its territory.

- Last year Prime Minister K.P. Sharma Oli had also presented a constitutional amendment proposal to give constitutional status to the map.
- Indian observers say that this move of the Nepal government may make any future solution on the 'Kalapani issue' almost impossible, because the constitutional guarantee of this proposal will strengthen the position of 'Kathmandu' on this subject.

Bio decomposer to deal with stubble combustion

Spraying of 'Bio-decomposer solution' / 'Bio-decomposer solution' in the fields has been started by the Delhi government to decompose the leftover stubble after harvesting.

background:

The Delhi government sees this 'bio-degradable' solution as a solution for stubble combustion and has been urging other states to adopt this method. The government had first sprayed it last year and claimed positive results.

Manufacture of Bio-degradables:

The bio-degradable solution used in this technique is also called Pusa Decomposer.

Pusa decomposer is a mixture of seven fungi that produces enzymes that break down cellulose, lignin and pectin found in Paddy Straw.

This fungus grows in an environment with a temperature of 30-32 °C, and this is the temperature at the time of harvesting of paddy and sowing of wheat.

How is Pusa decomposer used in the fields?

A 'decomposer solution' is prepared using Decomposer Capsules.

After fermenting the decomposing solution for 8-10 days, the prepared mixture is sprayed in the fields for quick bio-decomposition of crop waste/stubble.

Farmers can prepare 25 liters of decomposer slurry mixture from four Pusa decomposer capsules, jaggery and gram flour, and this is sufficient to spray 1 hectare of land.

The process of biodegradation takes about 20 days to complete. After this, farmers can sow again without burning the stubble.

Benefits of Pusa Decomposer:

The use of this technique improves the fertility and productivity of the soil as the straw acts as a fertilizer for the crops and less manure is required in the future.

It is an effective, cheap and practical technique to prevent crop-waste/stubble burning.

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It is also an eco-friendly and environmentally useful technology.

Proposal to use paddy straw as fodder for cattle

The Punjab government has proposed to use paddy crop waste (parali) as cattle feed.

Potential benefits of this move:

- Every year 20 million tonnes of paddy straw is produced in Punjab. Most of it is burnt by farmers in the fields, causing a lot of air pollution which also spreads to neighboring states.
- Calculated at an average rate of Rs 200 per quintal, the total value of this stubble is around Rs 400 crore. And almost all this stubble is burnt in the fields.
- Economic loss as well as loss of 77,000 tonnes of Nitrogen that can be produced and 5.6 million tonnes of 'Gross Digestible Nutrients' / 'Total Digestible Nutrients' (TDN).
- As nutrients in 20 million tonnes of paddy straw, 10 lakh tonnes of crude protein (CP), 3 lakh tonnes of digestible crude protein (DCP), 8 million tonnes of gross digestible nutrients (GDP). Total Digestible Nutrients (TDN) and Phosphorus.
- Therefore, this move of the government is expected to help in controlling stubble combustion and protect the environment during the Kharif season of 2021.

Challenges:

Paddy straw cannot be fed to animals by bringing them directly from the fields.

- Because, due to the high amount of silica and 'lignin' in it, its digestive properties are reduced.
- Due to the high content of 'selenium' in paddy straw, its use as fodder for livestock is limited as compared to wheat straw.
- Oxalate (2-2.5%) is also found in rice, due to which calcium deficiency occurs.

Ways to deal with these challenges:

- If given in moderate amounts (up to 5 kg per animal per day) of paddy straw, selenium does not pose any threat to the animal's health.
- To reduce the effect of oxalate, one should always feed mineral mixture along with straw.
- Other methods include urea treatment of paddy straw and urea plus molasses treatment.

Input Tax Credit (ITC) According to the information given by the GST Network, 'Input Tax Credit' (ITC) of Rs 14,000 crore of 66,000 businesses registered under 'Goods and Service Tax' has been withheld for the time being.

background: In December 2019, a new Rule 86A was included in the 'GST Rules' by the Central Government, under which the tax-official would be allowed to fraudulently avail the 'Input Tax Credit' (ITC) if it is found that a taxpayer has If so, these officers can block the 'ITC' present in the electronic credit ledger of the taxpayer.

What is 'Input Tax Credit' (ITC)?



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It is a 'tax' paid by a business on the 'purchase' of goods, and can be used to reduce the 'tax liability' on the sale of goods.

In simple words, input credit means the amount paid at the time of paying tax on output less tax paid on inputs.

Exception: A business cannot avail input tax credit under the 'Composition Scheme'. The 'Input Tax Credit' (ITC) cannot be used for personal use or for exempted goods.

Concerns over its misuse: There may be potential for misuse of the provision by unscrupulous businesses by creating fake invoices just to claim tax credits.

Up to 80% of the total GST liability is being settled by ITC and only 20% is being deposited as cash.

Under the present regime, there is no provision available for simultaneous reconciliation of taxes and ITC claims already paid by the input suppliers.

At present, there is a wide gap between ITC claim and reconciliation with the taxes paid by the suppliers. Hence, the chances of claiming ITC on the basis of fake challan are high.

International Girl Child Day Every year 11 October is celebrated as 'International Day of the Girl Child'.

This occasion shows the importance of adolescent girls and tries to mark their strength and potential by providing opportunities to them.

On 19 December 2011, the United Nations General Assembly adopted a resolution declaring 11 October as International Day of the Girl Child.

Theme of 'International Day of the Girl Child' - 2021: 'Digital Generation, Our Generation' (DIGITAL GENERATION. OUR GENERATION).

Beijing Declaration: Firstly, the rights of the girl child were marked in the 'Beijing Declaration' and the matter was raised for it.

In the 1995 'Global Conference on Women' held in Beijing, the participating countries unanimously adopted the 'Beijing Declaration' and the Action Platform. For this, it is considered to be the most progressive framework ever to advance the rights of not only women but also girls.
Amrit 2.0

Recently, the Union Cabinet has approved the continuation of 'Atal Mission for Renewal and Urban Transformation' (AMRUT 2.0) till the year 2025-26.

The decision is a step towards 'Self-reliant India', and aims to make cities 'water safe' and 'self-reliant' through a 'circular economy of water'.

background: Atal Mission for Rejuvenation and Urban Transformation (AMRUT), the country's first focused National Water Mission was launched in June 2015 in 500 cities by providing 'Nal Connection' and 'Sewer Connection' to citizens. It was started to bring ease.

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Under this mission, 1.1 crore household tap connections and 85 lakh sewer/septage connections have been given so far.

About 'Amrit 2.0': Under AMRUT 0 (AMRUT 2.0), universal coverage of water supply has been targeted by providing household tap connections in all 4,378 statutory cities.

Another objective is to provide 100% coverage of domestic sewerage/septage management in 500 AMRUT cities.

The mission aims to provide 2.68 crore tap connections and 2.64 crore sewer/septage connections.

Adopt the principles of circular economy (Creating wealth from waste using 3R's)

To promote conservation and renewal of surface and groundwater bodies.

Data based 'Water Management' Administration

Technology Sub-Mission to leverage the latest global technologies and skills.

Organizing 'Drinking Water Survey' to promote competition among cities.

PM Gatishakti – National Master Plan

Recently, PM GatiShakti - National Master Plan has been launched for 'Infrastructure Development' in the country.

The objective of this 'master plan' is to promote 'multimodal connectivity' and reduce the logistics cost.

About PM Gatishakti: PM GatiShakti, a digital platform, will bring together 16 Ministries, including the Ministry of Railways and Roadways, for integrated planning and coordinated implementation of infrastructure connectivity projects.

Its objective is to ensure holistic planning and execution of infrastructure projects.

Services Provided: Geospatial data will be available in more than 200 layers on this portal, which will include existing infrastructure like roads, highways, railways and toll plazas as well as geographical information about forests, rivers and district boundaries, which will help in planning and help in obtaining approval.

The 'PM Gatishakti' portal will have a facility for various government departments to track the progress of various projects, especially projects with multi-sectoral and multi-sectoral impact, in real time and at a centralized location.

Importance: The objective of PM Gatishakti is 'one centralized portal for all departments to keep a close eye on each other's projects and exchange critical data for comprehensive planning and execution of projects through each department's activities. Make sure to stay informed.

Through this, various departments will be able to prioritize their projects through interaction with different sectors.

Multi-modal connectivity will provide integrated and seamless connectivity for the movement of people, goods and services from one mode of transport to another. The move

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will facilitate last mile connectivity to the infrastructure and also reduce the travel time.

Need: Over the past several decades, countless problems have come in the way of building infrastructure in India. There was a severe lack of coordination between the various departments.

For example, once a road was built, other agencies would re-dug the constructed road for activities such as laying underground cables, gas pipelines, etc. This has severely affected the road infrastructure and movement of the country.

Moreover, the logistics cost in India is around 13-14% of the GDP while in developed economies it is around 7-8% of the GDP. The high cost of logistics affects the 'cost structures' within the economy, and makes it more expensive for exporters to ship goods to buyers.

global hunger index Recently, the 'Global Hunger Index' 2021 has been released.

India's performance: India has slipped seven places to 101st in the list of 116 countries. According to the report, the level of hunger in India is in the 'severe' category.

Among South Asian countries, India ranks fourth.

Only 15 other countries in the index rank lower than India.

Bangladesh (76), Nepal (76) and Pakistan (92), performed much better than India in the index.

In the index for the year 2020, India was ranked 94th out of a list of 107 countries.

During the recent two decades, India's score on the index has declined by 10 points.

Globally, India has been the worst performer in the criteria 'Child Wasting' or 'Low weight for height'. India has performed worse than Djibouti and Somalia in this category.

What is the Global Hunger Index (GHI)?

The 'Global Hunger Index' or 'Global Hunger Index' (GHI) is a peer-reviewed publication jointly released annually by Welt Hunger Hilfe and Concern Worldwide. goes.

The first GHI report was published in 2006.

The index is "an instrument designed to comprehensively measure and track hunger at the global, regional and national levels".

How are countries ranked in the GHI?

The GHI score is based on a formula that incorporates three dimensions of hunger— inadequate caloric intake, child malnutrition, and child mortality.

Four indicators are considered to calculate the 'score' of all countries 'on a 100 point scale' to determine the GHI ranking:

UNDERNOURISHMENT: The portion of an undernourished population that shows inadequate caloric intake.

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CHILD WASTING: Children under the age of five, whose weight is low in proportion to their height, is characterized by acute malnutrition.

CHILD STUNTING: Children below five years of age are those whose height is less in proportion to age. This indicates chronic malnutrition.

CHILD MORTALITY: Mortality rate of children under five years of age.

The 'GHI Score' of a country is calculated through a three-step process based on each of the indicators and their aggregated results. The index ranks countries on a scale of 0 to 100, with '0' representing the best performing (hunger-free) and '100' being the worst performer.

Reasons for India's worse position in the index:

Conflicts, climate change and the novel coronavirus pandemic (COVID-19) pandemic have worsened the food security situation around the world, including in India.

Reasons why India rejected the Global Hunger Index ranking for the year 2021:

India has expressed strong protest against the publishers of the annual Global Hunger Index report, questioning the "methodology" and "sources of data" after the index showed a fall in the country's ranking. India's ranking was 94 in the index of the year 2020, which has come down to 101 in the index of the year 2021.

India's ranking in the Global Hunger Report 2021 has been reduced on the basis of estimates released by the Food and Agriculture Organization (FAO).

Terming the 'Food and Agriculture Organization' methodology as "unscientific", India has said, "Scientific measurement of undernutrition requires the measurement of 'weight' and 'height', Whereas the methodology of 'Global Hunger Index 2021' is based on 'Gallup Poll' of the general public conducted by telephone, i.e. 'Voting to determine opinion'.

Further, India stated that "the report completely disregards the massive efforts made by the government to ensure the food security of the entire population during the COVID-era, even though verifiable data is available".

Anticipatory bail Recently, the Supreme Court has said that in the matter of granting 'anticipatory bail', factors like 'severity of the offence' and 'role of the accused in the offence' are not adequately considered by the trial court. The order of 'anticipatory bail' can be set aside by a superior court, if there is sufficient material to suggest.

Concept of 'anticipatory bail': During the amendment to the Code of Criminal Procedure (CrPC) in the year 1973, the provision of 'anticipatory bail' under section 438 was introduced.

Unlike ordinary bail given to a person after he is arrested, in anticipatory bail, the person is directed to be released on bail before the arrest.

Time limit: The Supreme Court in Sushila Agarwal vs National Capital Territory of Delhi (2020) case, in an important pronouncement, said that no time limit can be prescribed while

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granting anticipatory bail and it can continue till the end of the hearing of the case. Is.

Importance: In a free and democratic country, section 438 of the Code of Criminal Procedure was enacted because of the parliamentary acceptance of the important basis of individual liberty.

Parliament's aim was to promote the importance of individual liberty, and at the same time, it wanted to give priority to a fundamental principle of criminal jurisprudence, which states that 'until a person is proved guilty, Till he is presumed innocent.

Recent observations made by the Supreme Court on the subject:

The High Court and the Supreme Court have been empowered to grant 'anticipatory bail' to an accused in view of the value given to the 'right to liberty' guaranteed under Article 21 of the Constitution.

The acceptance or rejection of an application under the Code of Criminal Procedure (CrPC) has a direct bearing on the right to life and liberty of a person. Therefore, there is a need to read this provision liberally and consider its beneficial nature. For the courts, these restrictions must be viewed keeping in mind the clear purpose of the statute made by the legislature.

For this purpose, in exercise of the powers conferred under Article 142 of the Constitution, the court can pass such orders.

The need for such safeguards: An accused, apart from being just an accused, can also be the main caretaker or sole breadwinner of his family. Her arrest could leave her loved ones facing starvation and neglect.

In the 1980 Gurbaksh Singh Sibbiya vs State of Punjab case, a five-judge bench of the Supreme Court led by the then Chief Justice Y V Chandrachud ruled that Article 438(1) was interpreted as Article 21 (life and personal) of the Constitution. protection of liberty).

Kunming Declaration on Biodiversity Conservation

The Kunming Declaration has been adopted by more than 100 countries at the ongoing 15th meeting of the Conference of the Parties (COP) to the United Nations Convention on Biological Diversity (UNCBD) in China.

Theme of COP-15: "Ecological Civilization: Building a Shared Future for All Life on Earth".

Kunming Declaration: It calls on all parties to mainstream biodiversity conservation in decision-making and to recognize the importance of conservation in protecting human health.

It is not a binding international agreement.

The nations have committed themselves to cooperate in the development, adoption and implementation of an effective implementation plan following the 2020 Cartagena Protocol on Biosafety by adopting the 'Kunming Declaration'.

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In accordance with this declaration, the signatory states shall ensure that post-pandemic recovery policies, programs and plans contribute to the conservation and sustainable use of biodiversity, promoting sustainable and inclusive growth.

The declaration expects signatory nations to synchronize biodiversity plans with the United Nations' three-decade program on 'sustainable development', 'restore ecosystems', and 'ocean sciences for sustainable development'.

Biodiversity Convention, 1992: The Convention on Biological Diversity (CBD) came into force on 29 December 1993. It has 3 main objectives:

conservation of biodiversity

Sustainable use of biodiversity components

Fair and equitable sharing of benefits derived from the use of genetic resources

The Convention on Biological Diversity (CBD) was opened for signature on 5 June during the 'United Nations Conference on Environment and Development' (Earth Summit) held in Rio de Janeiro in the year 1992.

This convention is a legally binding framework treaty, and has been ratified by 180 countries.

The Secretariat of the Convention on Biodiversity (CBD) is located in Montreal, Canada and functions under the United Nations Environment Programme.

Under this convention, matters relating to conservation of biodiversity, sustainable use of biological resources and equitable sharing of

benefits arising from their sustainable use are dealt with.

This convention took effect in the year 1993, and addresses a number of biodiversity issues such as habitat protection, intellectual property rights, biosecurity and the rights of indigenous peoples.

30x30 Protection Target: The concept of '30 by 30' target has been introduced in the 'Kunming Declaration'. This goal was introduced at COP15 and proposes to retain 30% of the protected portion of the Earth's land and oceans in its original form by 2030.

In addition, the 'declaration' also discussed the goal of halving the use of chemicals in agriculture and curbing the generation of plastic waste.

**Buddhist pilgrimage city – Kushinagar-
Historical Significance of Kushinagar:**

Kushinagar is considered to be the most important of all Buddhist pilgrimage sites, at this place Mahatma Buddha built a temple in 483 BC. He had attained Mahaparinirvana (ultimate salvation).

The present Kushinagar is identified as 'Kushinara', the capital of the ancient Malla republic. In the 6th-4th centuries BC, the Malla Republic was one of the then 16 Mahajanapadas.

Maurya, Sunga, Kushan, Gupta, Harshavardhana and Pala rulers also ruled this region.

The first excavations were carried out in 'Kushinagar' by 'Alexander Cunningham' and

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'ACL Carlleyle', in which they unearthed a 'Main Stupa' and a 6 meter tall statue of Buddha lying down in the year 1876.

Kushinagar is one of the few places in India where Buddha is depicted as lying down.

Although Buddhism originated in India and seven of the eight major Buddhist pilgrimage sites are in India, our country does not receive even one percent of the total Buddhist pilgrims in the world.

The government is aware that the main reason for the low number of tourists is lack of infrastructure, and due to this, India lags behind Southeast Asian countries like Indonesia and Thailand in the field of tourism.

It is expected that such 'world class facilities' will be successful in attracting Buddhist tourists to India, and will also increase revenue and employment generation.

Therefore, this latest step of the government will go a long way in promoting important Buddhist pilgrimage sites in the country.

About 'Buddhist Circuit': The 'Buddhist Circuit' / 'Buddhist Circuit' project was announced by the Central Government in the year 2016. Since then, under various schemes, an amount of Rs 343 crore has been sanctioned for this project.

The 'Buddhist Circuit' is a path connecting important places related to the life of Buddha. In the map of the ministry, the Buddhist circuit includes Bodh Gaya, Vaishali and Rajgir in Bihar, Kushinagar, Sarnath and Shravasti in Uttar Pradesh and Lumbini in Nepal.

Name change to 'Mount Harriet'

Recently, the name of the historical tourist place 'Mount Harriet' in 'Andaman and Nicobar Islands' has been changed to 'Mount Manipur' by the Central Government.

What is the relation between 'Manipur' and 'Mount Harriet'?

In the Anglo-Manipur War of 1891, many people of Manipur including Maharaja Kulchandra Dhwaja Singh fought with the British. After this war, all of them were sent to Cellular Jail (Kalapani) in Andaman and Nicobar as punishment.

But, by that time the construction of this prison was not completed, due to which the prisoners were kept on 'Mount Harriet'. 'Mount Harriet' is a hill located in Fergunj tehsil of South Andaman district.

Anglo-Manipur War of 1891- Reasons:

The 'Anglo-Manipur War' is considered a special era in the history of Manipur. This war continued for more than a month between the 'Manipur State' and the British in the year 1891.

The war started with a coup in the palace of Manipur and took advantage of which the British attacked. In 1891, due to the internal factionalism that had been going on in the palace for years, there was a war.

And in this, the British government took advantage of the "internal strife" between the princes of the royal family.

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In the first phase of the war, the British had to surrender, but in the second phase, the British made Manipur their new princely state by attacking the Kangla Fort of Imphal from three sides.

Significance of this war: Many described the fight as "a blow to British prestige". The British won the battle, but five of their important officers were killed.

In India, this war is considered to be a part of general revolts against British rule, soon after the Revolt of 1857.

After this war, Manipur officially became a princely state under the indirect rule of the British Crown.

About Mount Harriet: Mount Harriet is the third highest peak in the Andaman and Nicobar Islands. It was the summer capital of the Chief Commissioner during the British Raj.

It is believed to be named after British artist and photographer, Harriet Christina Tytler, wife of Robert Christopher Tytler, a soldier who served in the British Indian Army.

bovine mastitis Bovine Mastitis is a common infectious disease in milch animals. This leads to deterioration in the quality of milk, thereby affecting agricultural productivity and affecting income-generating activities.

It is a dangerous 'mammary gland infection', which is most common in milch cattle worldwide.

Mastitis is caused by viruses, mycoplasmas, fungi, and bacteria.

Tonella disease in animals is caused by infection with a variety of bacteria, viruses, molds and yeasts. Apart from this, due to injury and seasonal adversities, it also becomes snail.

International Securities Identification Number

The International Securities Identification Number (ISIN) is a 12-digit alphanumeric code that uniquely identifies a security.

These numbers are allotted by the respective National Numbering Agency (NNA) of a country.

'ISIN' is used for many purposes including clearing and settlement. These numbers ensure a consistent format for consistently tracking the holdings of institutional investors in markets around the world.

The 'ISIN Code' is the only common security identification number that is universally recognized.