

GENERAL STUDIES-1

INDIAN CULTURE

4TH INTERNATIONAL DHARMA-DHAMMA CONFERENCE

Venue: Rajgir in Nalanda district.

Significance

The event is being organised as part of the commemorative events to celebrate the Silver Jubilee year of ASEAN-India Dialogue Partnership.

Organizers: Nalanda University, in collaboration with the Centre for Study of Religion and Society, India Foundation, Ministry of External Affairs and the Vietnam Buddhist University, is organising the conference.

What is the conference about?

The central theme of the conference is the ideal state and just social order based on dharmic principles. Through this conference it is aimed to facilitate crosspollination of ideas and foster harmony at the global level.

In the present era of globalization it is all the more needed to integrate the world through the common bond of Dharma-Dhamma which provides strong thread of interconnectedness. Thus, the conference seeks to explore the shared values of the dharmic traditions, which may provide the guiding light to the troubled world today.

MADHUBANI PAINTINGS

Why in news?

The folk painting of Madhubani will soon be seen decorating the walls of various government buildings in Bihar, the eastern Indian state where the art hails from. The idea behind painting the town in Madhubani is to give visitors a firsthand experience of how the paintings are blended with the region's culture.

About Madhubani paintings:

Madhubani, which means 'forest of honey', is a style of folk painting old enough to find mention in some of the ancient Indian texts like the holy

30th Dec to 11th Jan

Ramayana. It is also known as Mithila, for its origin is said to be the Mithila region in Bihar.

- Traditionally, the Madhubani paintings are created using fingers and twigs, and items like matchsticks have come to be used in their creation in recent times.



- Their various styles include Bharni, Katchni, Tantrik, Godna, and Kohbar, which would historically be painted only by women from the upper strata in the caste system, who would make them on mud walls on special occasions.
- The norms have now changed and the paintings can be enjoyed by anyone and in various forms.
- Madhubani is now found on apparel, paper, canvas, and other products, which boast of designs inspired by Hindu deities such as Krishna, Rama, Lakshmi, Shiva, Durga, Saraswati, all of whom have been painted in Madhubani since ancient times.
- Other subjects of Madhubani paintings include peacocks, fish and human connection with nature.

Page | 2

MEDARAM'S JATARA

Why in news?

Central government is likely to declare Medaram's Sammakka-Sarakka/Saralamma Jatara a national festival this year. Once declared a national festival, Jatara can be considered for 'intangible cultural heritage of humanity' tag of United Nations Educational, Scientific and Cultural Organisation (UNESCO).

Medaram's Sammakka-Sarakka/Saralamma Jatara:

It is held by forest dwelling Koya tribe of Telangana and surrounding States, is the biggest Tribal festival in Asia which is attended by one crore people on an average.

Why is it held?

30th Dec to 11th Jan

The event is held bi-annually to honour the twin goddesses Sammakka and her daughter Sarakka. Several communities in Telangana society support Jatara as it is also a mythical narrative of two tribal women leaders who fought against the Kakatiya rulers who tried to annex their land and forests. According to the myth it was Sammakka's curse which caused gradual decline and death of Kakatiya rule.

Page | 3

Where is Medaram located?

Medaram is a remote place in the Eturnagaram Wildlife Sanctuary, a part of Dandakaranya, the largest surviving forest belt in the Deccan.

MANKIDIA

Why in news?

Mankidia, one of the 13 Particularly Vulnerable Tribal Groups (PVTG) in Odisha, have been denied habitat rights inside the Similipal Tiger Reserve (STR) under the historic Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, as

Why?

The State Forest Department has objected on grounds that tribals could be attacked by wild animals, especially tigers.

Definition of Habitat:

'Habitat' as defined under the FRA (Forest Rights Act) includes the area comprising the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other forest dwelling Scheduled Tribes.

Mankidia tribe:

Mankidia is a marginalised group that critically depends on making rope with siali fibre that's richly available in Similipal.

Similipal national park:

It is located in Mayurbhanj district in Odisha. It is part of the Similipal-Kuldiha-Hadgarh Elephant Reserve popularly known as Mayurbhanj

'Particularly Vulnerable Tribal Groups (PVTGs)'

PVTGs are more vulnerable among the tribal groups. In 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category. Today we have a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory(UT), in the country (2011 census).

Among the 75 listed PVTG's the highest number are found in Odisha (13), followed by Andhra Pradesh (12).

30th Dec to 11th Jan

Elephant Reserve, which includes three protected areas — Simlipal Tiger Reserve, Hadgarh Wildlife Sanctuary and Kuldiha Wildlife Sanctuary.

- Simlipal National Park derives its name from the abundance of semul (red silk cotton trees) that bloom here.

Page | 4



HISTORY

MAHARASHTRA ON THE BOIL

What happened?

On January 1, members of the Dalit community on their way to Bhima-Koregaon, a village near Pune, were attacked, allegedly by Hindutva forces. Following this, a State-wide bandh was called.

Importance of Koregaon-Bhima

The Koregaon Ranstambh (victory pillar) is a memorial for British East India Company soldiers killed in a battle on January 1, 1818, in which a small group of infantrymen — about 500 of them Mahars (a Scheduled Caste community) — held off a numerically superior force from the army of Peshwa Bajirao II.

30th Dec to 11th Jan

- The Mahars fought alongside the British, some accounts say, because the Peshwa had scorned their offer to join his army.
- After Dr. Ambedkar visited the site on January 1, 1927, it became a place of pilgrimage for Dalits, an assertion of pride.

Page | 5

SOCIAL ISSUES AND INDIAN SOCIETY

ARUNACHAL DECLARED OPEN DEFECATION-FREE STATE

Arunachal Pradesh has emerged as the second State in the Northeast, after Sikkim, to be declared Open Defecation Free, much before the national deadline of October 2, 2019.

About SBM:

Swachh Bharat Mission (SBM) aims to eliminate open defecation by 2019. The goal also includes conversion of insanitary toilets to pour flush toilets, eradicating of manual scavenging and Municipal Solid Waste Management (MSWM).

Significance of the mission:

Poor sanitation spreads infectious diseases that kill hundreds of thousands of children each year, and stunt the physical and cognitive development of those who survive. Announcing a goal of accelerating the reduction in open defecation was a great idea, articulating a worthy goal for serious public policy efforts.

NATIONAL REGISTER OF CITIZENS

Why in news?

The much-awaited first draft of the National Register of Citizens (NRC) was published with the names of 1.9 crore people out of the 3.29 crore total applicants in Assam recognising them as legal citizens of India. The NRC is being compiled following a Supreme Court directive to identify illegal immigrants in Assam.

Backgrounder:

Assam, which faced influx from Bangladesh since the early 20th century, is the only state having an NRC, first prepared in 1951. The Supreme Court is monitoring the entire process.

What's the issue?

The NRC was last updated in Assam way back in 1951. Since then, the process of identification of illegal immigrants in Assam has been debated and become a contentious issue in the State's politics.

An agitation demanding identification and deportation of illegal immigrants was launched by the All Assam Students' Union (AASU) in 1979. It culminated with the signing of the Assam Accord in 1985.

What is NRC?

The National Register of Citizens (NRC) contains names of Indian citizens. The NRC was prepared in 1951, after the Census of 1951. It was prepared by recording particulars of all the persons enumerated during that Census.

GEOGRAPHY

ZOJILA PASS TUNNEL

Why in news?

The Union Cabinet has approved the construction of Asia's longest bi-directional Zojila Pass tunnel.

What is it?

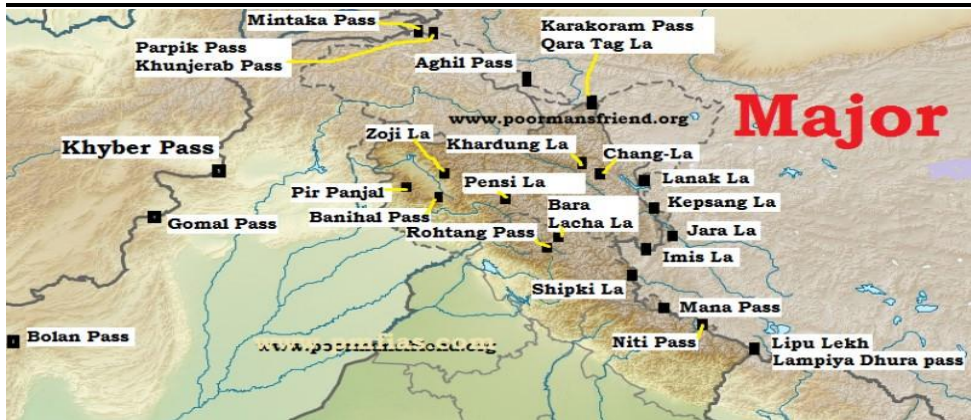
It is a 14.2-km long tunnel project in Jammu and Kashmir to provide all-weather connectivity between Srinagar, Kargil and Leh, which remains cut-off from the rest of India during winters due to heavy snowfall.

Implementation: Ministry of road transport and highways (MoRT&H) through the National Highways and Infrastructure Development Corporation Limited (NHIDCL).

Benefits

- The project would enhance the safety of travellers crossing Zojila Pass and reduce the travel time
- This pass is most strategic for the entire Kargil sector which has seen intrusion and war in the past.
- It will further increase the employment potential for the local labourers for the project activities.

30th Dec to 11th Jan



Page | 7

Location: Zojila pass is situated on Srinagar-Kargil-Leh National Highway which remains closed during winters (December to April) due to heavy snowfall and avalanches cutting off Leh-Ladakh region from Kashmir.

“BOMB CYCLONE”

It is a massive winter storm which is hammered the eastern coast of the US, bringing snow, ice, flooding, and strong winds.

The term is used by meteorologists to indicate a mid-latitude cyclone that intensifies rapidly.

How it works?

Deep drops in barometric pressure occur when a region of warm air meets one of cold air. The air starts to move and the rotation of the earth creates a cyclonic effect. The direction is counterclockwise in the Northern hemisphere leading to winds that come out of the northeast.

What's the difference between hurricanes, cyclones and typhoons?

Hurricanes, cyclones and typhoons are all tropical storms. They are all the same thing but are given different names depending on where they appear. When they reach populated areas they usually bring very strong wind and rain which can cause a lot of damage.

Hurricanes are tropical storms that form over the North Atlantic Ocean and Northeast Pacific. Cyclones are formed over the South Pacific and Indian Ocean. Typhoons are formed over the Northwest Pacific Ocean.

GENERAL STUDIES-2

POLITY

OCI AND PIO CARDS

Why in news?

The Govt has stopped the scheme of free conversion of PIO cards to OCI. However, the change of PIO cards to OCI cards would continue on payment of fees.

Who are NRIs, PIO and OCI?

Non-Resident Indians (NRI), Person of Indian Origin (PIO) and Overseas Citizen of India (OCI) are the three major categories in which the people from India go and live abroad can be categorised.

- While NRIs is essentially a term used for Indians that live in another country, PIOs and OCIs are people who want to stay connected and involved with India more closely.

Need for conversion:

Simultaneous existence of PIO and OCI cards led to confusion among People of Indian Origin residing abroad. Thus, merging PIO and OCI will lead to simplification of the rules under a single umbrella.

- It would facilitate visa-free travel to India, rights of residency and participation in business and educational activities in the country.
- This is aimed at simplifying the visa-free entry for people of Indian origin into India.
- The merger of the two cards could make PIO cardholders eligible for benefits already enjoyed by OCI cardholders.
- Merging of the two cards will also facilitate travel of Indians staying abroad and their participation in various activities in India.

Benefits of a PIO card:

A PIO card holder doesn't need a visa to visit India or to acquire employment or academic opportunities in India.

- The holder is also exempted from registering at the foreigner regional registration office (FRRO) during the duration of stay in India.
- The holder also enjoys parity with NRIs in concern to economic, financial and educational matters. These may include matters related to property transfer or acquisition, holding, disposal, investment, admission of children in educational institutions under general category quota for NRIs.
- Separate immigration counters are provided at all International airports in India for PIO card holders.

30th Dec to 11th Jan

- It does not provide voting rights to the holder. Prior permission is needed to undertake mountaineering expeditions or any such related research work in protected areas.

The benefits of OCI cards are substantial:

- OCI is essentially a lifetime visa status offered by India to an Indian person who has given up his citizenship. OCI cards give lifetime multiple entry visa to India.
- If one remains an OCI for 5 years, he/she can attain Indian citizenship and then live in India for a period of one year including short breaks.
- Special immigration counters are provided at all international airports in India for OCI card holders.
- An OCI cards holder can open special bank accounts in India just like NRIs and make investments. OCI holders can also buy non-farm property and exercise ownership rights.
- An OCI card allows to apply for a driver's license, PAN card or open a bank account in India. They get same economic, financial and educational benefits like NRIs and can also adopt children.
- An OCI card holder cannot vote, hold a government job or purchase agricultural or farm land. The person can also not run for public office or travel to restricted areas without permission.

Page | 9

GOVERNANCE ISSUES AND POLICIES

CENTRAL WATER COMMISSION

Why in news?

Central Water Commission has received Central Board of Irrigation and Power (CBIP) Special Recognition Award 2018 for Excellence in Health & Safety of Large Dams.

The Central Water Commission (CWC) has promoted the health and safety of large dams in India through the World Bank aided Dam Rehabilitation and Improvement Project (DRIP).

What is DRIP?

The Ministry of Water Resources (MoWR), Government of India, with assistance from the World Bank, is implementing the DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP), which would be a six-year project.

30th Dec to 11th Jan

Goals: The project originally envisaged the rehabilitation and improvement of about 223 dams within four states namely, Kerala, Madhya Pradesh, Odisha, and Tamil Nadu and later Karnataka, Uttarakhand (UNVNL) and Jharkhand (DVC) joined DRIP and total number of dams covered under DRIP increased to 250.

The project will also promote new technologies and improve Institutional capacities for dam safety evaluation and implementation at the Central and State levels and in some identified premier academic and research institutes of the country.

CWC

Central Water Commission is a premier Technical Organization of India in the field of Water Resources and is presently functioning as an attached office of the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India.

- The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Water Power Development.

It also undertakes the investigations, construction and execution of any such schemes as required.

Page | 10

ELECTORAL BONDS

Why in news?

In an attempt to ensure more transparent financing of political parties participating in elections, the government has announced the introduction of new electoral bonds that donors can buy from the State Bank of India (SBI).

The political parties who get these bonds can in turn encash them only through a designated bank account. The bonds will be available at specified SBI branches for 10 days each in the months of January, April, July and October.

What are electoral bonds?

Electoral bonds will allow donors to pay political parties using banks as an intermediary. Although called a bond, the banking instrument resembling promissory notes will not carry any interest.

- The electoral bond, which will be a bearer instrument, will not carry the name of the payee and can be bought for any value, in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh or Rs 1 crore
- Electoral bonds, can be given to a registered political party which has secured at least 1 per cent vote in the last Lok Sabha or state assembly elections.
- That party will have to give one bank account to the Election Commission and it will have to be encashed within 15 days.

NAGALAND DECLARED AS 'DISTURBED AREA'

What is the issue?

The entire Nagaland has been declared as “disturbed area” for six more months, under the controversial AFSPA. The decision to continue based on the incidents of killings, loot and extortion going in various parts of the state.

Backgrounder

The AFSPA has been in force in Nagaland for several decades. It has not been withdrawn even after a framework agreement was signed in August 2015 between the Naga insurgent group NSCN-IM and the government.

What is AFSPA?

AFSPA, enacted in 1958, gives powers to the army and state and central police forces to shoot to kill, search houses and destroy any property that is “likely” to be used by insurgents in areas declared as “disturbed” by the home ministry.

- The Act provides army personnel with safeguards against malicious, vindictive and frivolous prosecution.
- Security forces can “arrest without warrant” a person, who has committed or even “about to commit a cognizable offence” even on “reasonable suspicion”.
- The state or central government considers those areas as ‘disturbed’ “by reason of differences or disputes between members of different religious, racial, language or regional groups or castes or communities.
- Section (3) of the Afspa empowers the governor of the state or Union territory to issue an official notification in The Gazette of India, following which the Centre has the authority to send in armed forces for civilian aid.

30th Dec to 11th Jan

- Once declared 'disturbed', the region has to maintain status quo for a minimum of three months

MEMBERS OF PARLIAMENT LOCAL AREA DEVELOPMENT SCHEME

Why in news?

The Cabinet Committee on Economic Affairs has given its approval to continuation of Members of Parliament Local Area Development Scheme (MPLADS) till the term of the 14th Finance Commission i.e. 31.03.2020.

What is MPLAD scheme?

It was launched in 1993, to provide a mechanism for the Members of Parliament to recommend works of developmental nature for creation of durable community assets and for provision of basic facilities including community infrastructure, based on locally felt needs.

Preference under the scheme is given to works relating to national priorities, such as provision of drinking water, public health, education, sanitation, roads, etc.

Funds: Funds are released in the form of grants in-aid directly to the district authorities. The funds released under the scheme are non-lapsable. The liability of funds not released in a particular year is carried forward to the subsequent years, subject to eligibility.

Execution of works: The MPs have a recommendatory role under the scheme. They recommend their choice of works to the concerned district authorities who implement these works by following the established procedures of the concerned state government.

The district authority is empowered to examine the eligibility of works sanction funds and select the implementing agencies, prioritise works, supervise overall execution, and monitor the scheme at the ground level.

Recommendation of works: The Lok Sabha Members can recommend works in their respective constituencies. The elected members of the Rajya Sabha can recommend works anywhere in the state from which they are elected. Nominated members of the Lok Sabha and Rajya Sabha may select works for implementation anywhere in the country.

Page | 12

CANCELLING LARGER TOBACCO HEALTH WARNINGS?

Why in news?

The Supreme Court has put on hold Karnataka High Court's order that quashed central government rules mandating larger health warnings on tobacco packages.

The court's decision comes as a relief for health advocates and central health ministry who say bigger health warnings deter tobacco consumption. More than 900,000 people die each year in India due to tobacco-related illnesses, the government estimates.

Backgrounder:

The Central government had, in 2014, amended the Cigarette and other Tobacco Products (Packaging and Labelling) Rules prescribing that 85% space on both sides of the tobacco packaging would be covered with the statutory warnings telling consumers that cigarette smoking and tobacco chewing were harmful to health. The rules were framed for the same in 2014.

Reasons cited by Karnataka High Court

- The Ministry of Health and Family Welfare unilaterally framed the Rules without concurrence of the other departments concerned, and this was a violation of the Article 77 (Conduct of Business of Government of India) and the Transaction of Business (ToB) rules framed under it as the subject of tobacco control and legislation was not attached to one department or Ministry.
- Also, the rules were notified even before the Parliamentary Committee on sub-ordinate legislations was examining them.
- Ministry of Commerce had also opposed 85% area for pictorial warning on the ground that it would not result in any benefit and wanted to restrict the pictorial warnings to 40% or 50%.
- And the Labour Ministry too had opposed pictorial warning for the reason that it would harm the beedi industry, on which several poor families are depending upon for their livelihood.
- The rules are also contrary to Article 19(1)(g) [right to practise any profession, or to carry on any occupation, trade or business] as they are "unreasonable" restrictions imposed "without application of mind or any basis."

E-SANSAD AND E-VIDHAN

Purpose: To make Parliament and State Legislatures digitized and make their functioning paperless.

What are they?

e-Sansad and e-Vidhan are mission mode projects of Government of India under Digital India, to make the functioning of Parliament and State Legislatures paperless.

Implementation: MoPA

Details:

These projects would make the functioning of Parliament and State Legislatures participative, responsive, transparent, productive and more accountable to the public and make the entire Legislative process more efficient.

NATIONAL KNOWLEDGE NETWORK (NKN)

Why in news?

India has kicked off the process of appointing a telecom company that will connect and extend its state-of-the art National Knowledge Network (NKN) to research and education networks in six South Asian Association of Regional Cooperation member states — Afghanistan, Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka. Pakistan is the only Saarc nation that has been left out of this initiative.

What is NKN?

NKN is a multi-gigabit pan-India network which facilitates the development of India's communications infrastructure, stimulates research and creates next generation applications and services.

Aim: NKN aims to connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country to address such paradigm shift.

Details

It enables collaboration among researchers from different educational networks. It also enables sharing of scientific databases and remote access to advanced research facilities. The leading mission oriented agencies in the fields of nuclear, space and defence research are also part of NKN.

ISSUES RELATED TO NATIONAL MEDICAL COMMISSION BILL, 2017

The [National Medical Commission Bill, 2017](#) was introduced in Lok Sabha recently.

When the Bill came to light, it generated a one-day strike by Doctors, health activists, former policy makers, academicians and so on, making the government to [refer it to the Standing Committee](#) for further deliberation.

The idea

The vision was to replace the MCI with an overarching National Commission for Human Resources for Health with four verticals looking after the four different aspects of regulation – undergraduate, postgraduate education, accreditation and licensing and ethical practice.

It was to provide platforms for cross consultation and coordination between the disciplines and medical and non-medical personnel.

Reason for introducing National Medical Commission Bill, 2017

First proposed in 2016, the Bill aims to overhaul the corrupt and inefficient Medical Council of India, which regulates medical education and practice.

The Bill seeks to repeal the Indian Medical Council Act, 1956. The MCI was established under the 1956 Act, to establish uniform standards of higher education qualifications in medicine and regulating its practice.

The Bill provides for a medical education system which ensures:

1. availability of adequate and high quality medical professionals,
2. adoption of the latest medical research by medical professionals,
3. periodic assessment of medical institutions, and
4. An effective grievance redressal mechanism.

Key issues

1. **Separation of regulatory powers:** The MCI has been criticised for its slow and unwieldy functioning owing to the concentration and centralisation of all regulatory functions- education as well as medical practice- in one single body. There have been recommendations that all professional councils like the MCI, should be divested of their academic functions, which should be subsumed under an apex body for higher education to be called the National Commission for Higher Education and Research.

2. **Conflict of interest:** With most members of the MCI being elected, there has been a conflict of interest where the regulated elect the regulators, preventing the entry of skilled professionals for the job. The Niti Aayog Committee recommended a set up under which regulators are appointed through an independent selection process instead.
3. **Fee Regulation:** The NITI Aayog Committee recommended that MCI, should not engage in fee regulation of private colleges. Such regulation of fee by regulatory authorities may encourage an underground economy.

4. Professional conduct

The present focus of the MCI is only on licensing of medical colleges. The Committee recommended that the areas of medical education and medical practice should be separated in terms of enforcement of the appropriate ethics for each of these stages.

Provisions under National Medical Commission, 2017 Bill

The 2017 Bill sets up the National Medical Commission (NMC) as an umbrella regulatory body with certain other bodies under it.

- The NMC will subsume the MCI and will regulate the medical education and practice in India.
- Under the Bill, states will establish their respective State Medical Councils within three years. These Councils will have a role similar to the NMC, at the state level.
- The NMC will lay down policies for regulating medical institutions and medical professionals,
- assessing the requirements of human resources and infrastructure in healthcare,
- ensuring compliance by the State Medical Councils with the regulations made under the Bill, and
- Framing guidelines for determination of fee for up to 40% of the seats in the private medical institutions and deemed universities which are governed by the Bill.

About conduct of medical entrance examinations

There will be a uniform National Eligibility-cum-Entrance Test (NEET) for admission to under-graduate medical education in all medical institutions governed by the Bill. The NMC will specify the manner of conducting common counselling for admission in all such medical institutions.

Further, there will be a National Licentiate Examination for the students graduating from medical institutions to obtain the license for practice. This Examination will also serve as the basis for admission into post-graduate courses at medical institutions.

Criticism

1. **Over centralization:** The over centralisation of the NMC and the near control over it by the central government in terms of appointments
2. **Conducting uniform NEET** is a laudable idea as it will enable standardising the competence levels of the “Indian Doctor”. There is apprehension that in the absence of standardisation of the quality of instruction in the country, it may widen disparities and become inequitable
3. **The issue of fees:** The Bill permits 60% of seats to be open for managements with unfettered freedom to charge any quantum of fees in order to recoup the investment. This logic is highly debatable.
4. **Issue of corruption:** This is sought to be accomplished through an independent Medical Advisory Council. But all members of the NMC are a member of the Council, undermining the latter’s independence.
5. **Bridge course:** Perhaps the most controversial provision of all is for a bridge course allowing alternative-medicine practitioners to prescribe modern drugs. One motivation could be to plug the shortfall of rural doctors by creating a new cadre of practitioners.

Keeping in view the current realities prevailing in the country, the Act has introduced a system under which the Commission and the heads of the councils of Ayush can design bridge courses legalising Ayush practitioners to prescribe allopathy medicines. Such **cross paths then endangers** the credibility of all the systems of medicine.

In conclusion

The shortfall of MBBS doctors is partly due to the fact that many of them seek a post-graduate degree to improve career prospects. India has no choice but to innovate with health-care delivery models to tackle the challenges it faces. The trick is to base these innovations on evidence.

A way to bolster healthcare delivery is a three-year diploma for rural medical-care providers, along the lines of the Licentiate Medical Practitioners who practised in India before 1946. Chhattisgarh tried this experiment in 2001 to tackle the paucity of doctors it faced as it was formed.

GOVT. LAND HOARDING

Why in news?

It has come to light that, as per the details from the Government Land Information System (GLIS), the government owns more land than it admits, large swathes of which are unused or underutilised.

Government Land Information System (GLIS)

In 2012, a committee headed by former finance secretary Vijay Kelkar had recommended monetising the government's unutilised and under-utilised land to finance infrastructure projects in urban areas.

- It is a first-of-its-kind centralised database created by the ministry of electronics and information and monitored by the Prime Minister's Office (PMO).
- The GLIS portal records total area, geo-positioning maps, and details such as ownership rights.
- According to the portal, the railways is the biggest landowner among Union ministries. The defence ministry, which owns a large share of the government's land holding, has given only partial details citing security concerns.

Page | 18

The problem of unused land

What is worse is that a large proportion of government land lies unused.

1. Generates artificial scarcity of Land
2. Inadequate ownership records

The need of the hour

1. Increase Floor Space Index

While stock of land is fixed, its supply as an input in production is not — it crucially depends on land use patterns. A useful measure of this is the floor space index (FSI), which is the total floor area built per square metre of land.

The demand for land increases with both population density and economic growth. Therefore, to maintain efficiency, the FSI should also increase. By this token, the FSI should be the highest in major city centres, where the demand for space is highest, and it should taper off gradually towards the periphery.

2. Increase investment per square metre

The investment per square metre gradient of Indian cities is very low and haphazard.

3. Furnish details about usage of acquired land

People have the right to know the size and use of land holding by government agencies which have been acquired by way of compensation

4. Comprehensive inventory of land resources

A comprehensive inventory of land resources and usage patterns for all government branches is the need of the hour. It should include information on the location of each property, its dimensions, the legal title, current and planned use, and any applicable land use restrictions.

5. Use of surplus land

Surplus land should be utilised to meet the ever-growing demands for services, such as water and waste disposal, as well for government-sponsored housing and transportation projects.

Monetising land for infrastructure is not only a noble goal but also necessary to optimise the use of resources for development. Land intended for future use can be rented out till such time it is needed, through a transparent auctioning process. This will not only buoy the public exchequer but prevent plots of land lying waste for years.

2-TIER SECURITY TO SHIELD AADHAAR DATA

In the wake of reports of an alleged breach of the Aadhaar database, the Unique Identification Authority of India (UIDAI) has rolled out a new two-tier security process that will come into effect from June 1.

The new security process:

The UIDAI has introduced the concept of a virtual ID which an Aadhaar holder can use in lieu of his/her Aadhaar number at the time of authentication, besides sharing of 'limited KYC' with certain agencies.

What is VID?

A Virtual ID (VID) will be a temporary 16-digit random number mapped with the Aadhaar number. There can only be one active and valid VID for an Aadhaar number at any given time and it will not be possible to derive the Aadhaar number from VID.

- The VID authentication will be similar to using Aadhaar numbers.
- However, since a VID is temporary, agencies will not be able to use it for de-duplication.
- Only the Aadhaar holder will be able to generate a VID and no other entity, including authentication user agencies (AUAs), can do it on their behalf.

Limited KYC: To address the issue of storage of Aadhaar number within various databases, the UIDAI has brought in the concept of limited KYC. It

30th Dec to 11th Jan

has categorised its AUAs into Global AUAs and Local AUAs wherein the latter will get access to only need based or limited KYC details.

AUAs, which by law are required to use Aadhaar number in their KYCs, will be categorised as Global AUAs and have access to Full e-KYC and the ability to store Aadhaar numbers within their system.

UID Token: Once storage of Aadhaar number is restricted and since VID is temporary, agencies need a mechanism to uniquely identify their customers within their system. For this, a 72 character alphanumeric 'UID Token' will be generated for "system use". UID token allows an agency to ensure uniqueness of its beneficiaries, customers etc. without having to store Aadhaar number in their databases.

Page | 20

WELFARE, SCHEMES AND DEVELOPMENTAL GROUPS

H5 AVIAN INFLUENZA

Why in news?

An outbreak of H5 Avian Influenza has been reported from Dasarahalli village from Bengaluru Urban District in Karnataka. On the directions of the Centre, the Karnataka Government has notified the outbreak and initiated the control and containment operations.

Avian influenza or Bird flu:

Avian influenza, commonly called bird flu, is an infectious viral disease of birds with a tendency of causing large-scale outbreaks of serious disease. Although most influenza viruses do not infect humans, A(H5N1) and A(H7N9) have caused serious infections in people.

Symptoms: Fever, cough, sore throat, muscle, body aches, nausea can lead to severe breathing problems, pneumonia, and acute respiratory distress syndrome.

Treatment: Human infections with bird flu viruses usually can be treated with the same prescription drugs that are used to treat human seasonal flu viruses.

Risk factors involved: According to WHO, a few A(H5N1) human cases have been linked to consumption of dishes made of raw, contaminated poultry blood. However, slaughter, handling carcasses of the infected

30th Dec to 11th Jan

poultry, and preparing poultry for daily consumption in households are likely to be risk factors.

'NARI'

What is it?

It is an online portal which will provide information to women on issues affecting their lives.

Developed by: Ministry of Women and Child Development

Aim: The portal aims to provide women citizens with easy access to information on government schemes and initiatives for women.

Details

The portal contains information about schemes being run by both Central as well as the States Governments.

- It provides links to the Ministries, Departments and autonomous bodies offering these schemes as well as easy access to online applications and grievance redressal.

SWINE FLU

Why in news?

The Rajasthan government has sounded an alert in the State after hundreds of people were diagnosed positive for the swine flu virus.

What is Swine Flu?

Swine Influenza (swine flu) is a respiratory disease of pigs caused by type A influenza viruses that causes regular outbreaks in pigs. H1N1 is a flu virus.

Transmission from Pigs to Humans: The H1N1 virus is currently a seasonal flu virus found in humans. Although it circulates in pigs, one cannot get it by eating properly handled and cooked pork or pork products.

Spread: Swine flu is contagious, and it spreads in the same way as the seasonal flu. When people who have it cough or sneeze, they spray tiny drops of the virus into the air. If a person comes in contact with these

30th Dec to 11th Jan

drops or touch a surface that an infected person has recently touched, the person can catch H1N1 swine flu.

Pregnant women who contract the H1N1 infection are at a greater risk of developing complications because of hormonal changes, physical changes and changes to their immune system to accommodate the growing foetus.

Page | 22

INTEGRATED DISEASE SURVEILLANCE PROGRAMME (IDSP)

Why in news?

Recent data put out by the Union Health Ministry's Integrated Disease Surveillance Programme (IDSP) has indicated that food poisoning is one of the commonest outbreaks reported in 2017. This is apart from acute diarrhoeal disease (ADD).

The IDSP has interpreted that the incidence of ADD and food poisoning is high in places where food is cooked in bulk, such as canteens, hostels and wedding venues.

About IDSP

The Integrated Disease Surveillance Program (IDSP) is a disease surveillance scheme under the Ministry of Health and Family Affairs in India, assisted by the World Bank.

Aim: The scheme aims to strengthen disease surveillance for infectious diseases to detect and respond to outbreaks quickly. The Project was undertaken to meet the World Health Organization Guidelines for South East Asian countries on disease surveillance to track the outbreak of diseases and its potential trans boundary threats.

TYPBAR TCV

It is a Typhoid conjugate vaccine developed by Bharat Biotech Ltd (BBL).

Why in news?

The World Health Organisation (WHO) has pre-qualified its typhoid conjugate vaccine. The pre-qualification by WHO allows for the sale of the vaccines to UN agencies such as UNICEF and GAVI.

Efficacy

30th Dec to 11th Jan

The new vaccine was found to have given a longer immunity from typhoid than older vaccines and it required fewer doses for childhood immunisation.

Typhbar TCV is reportedly the world's first typhoid vaccine clinically proven for use on recipients who can be as young as six months. A single dose offers 87% protective efficacy against typhoid.

Typhoid:

Typhoid fever is caused by food and water contaminated by Salmonella Typhi (S. Typhi) bacteria.

- The symptoms of the disease include fever, headache, nausea, loss of appetite, constipation and sometimes diarrhoea.

E-SAMVAD

Launched by: Ministry of Women & Child Development.

What is it?

It is an online platform for NGOs and Civil Societies to interact with the Ministry of Women & Child Development.

Details

- Through e-Samvad portal, NGOs and civil society can provide their feedback, suggestions, put up grievances, share best practices etc.
- Senior Officers within MWCD will be able to view the inputs/suggestions received for their concerned subject areas and appropriately respond to NGOs.
- This will help in formulation of effective policies and measures for welfare of women and children.

BHARATNET

Why in news?

Government has achieved a significant milestone under the BharatNet by completing Phase-1 of the project by connecting over one lakh Gram Panchayats (GP) across the country with high speed optical fibre network as per the declared deadline of 31 Dec 2017.

BharatNet project:

Bharat Net sought to connect all of India's households, particularly in rural areas, through broadband, forming the backbone of the government's ambitious Digital India programme. It proposes broadband connectivity to households under village panchayats and even to government institutions at district level. The project is being funded through the Universal Service Obligation Fund (USOF).

Universal Service Obligation Fund:

USOF, established in 2002, provides effective subsidies to ensure telegraph services are provided to everyone across India, especially in the rural and remote areas. It is headed by the USOF Administrator who reports to the Secretary, Department of Telecommunications (DoT).

- Funds come from the Universal Service Levy (USL) of 5% charged from all the telecom operators, which are then deposited into the Consolidated Fund of India, and require prior parliamentary approval to be dispatched.
- The USOF works through a bidding process, where funds are given to the enterprise quoting the lowest bid.
- However, the funds for NOFN were made an exception to this process since BBNL was the sole party involved in the implementation having being specifically created for it.

INDIA AND ITS INTERNATIONAL RELATIONS

HURTING H-1B VISA

Why in news?

The US government is considering a proposal that could potentially lead to large-scale deportation of foreigners on H-1B visas for high-specialty workers waiting for their Green Card — mostly Indians — and drastically alter the way high-tech companies operate in the United States.

Backgrounder:

The United States grants 85,000 non-immigrant H-1B visa every year — 65,000 to foreigners hired abroad and 20,000 to foreigners enrolled in advanced degree courses in US schools and colleges. An estimated 70% of these visas go to Indians — hired mostly by leading American companies.

What's the proposal?

The proposal intends to end the provision of granting extensions to H-1B visa holders whose applications for permanent residency (Green Card) had been accepted. The administration also plans to redefine high-speciality professionals for the purpose of H-1B visas.

Impact on Indians

An estimated 500,000 to 750,000 Indian H-1B visa holders could be sent home if the administration decides to go ahead with the proposal which is

30th Dec to 11th Jan

aligned with “Buy American, Hire American” vision to boost manufacturing and protect local jobs for Americans.

What is H-1B Visa?

The H-1B visa is a non-immigrant visa that allows US companies to employ foreign workers in specialty occupations that require theoretical or technical expertise. An H-1B visa is granted for three years, with the provision of three more with one extension after which visa holders return to their countries. If approved for Green Card, they wait in the US using extensions.

Criticisms:

The aim of the H1B visa programme was to supplement the US workforce with high-skilled workers to do jobs that Americans are not skilled to do, not to replace the US workers. But over time, there have been many grumblings that many companies use the H1B visa to replace American workers with foreign ones, as the latter can be hired at lower salaries without compromising on the skill sets. In some cases, American employees have alleged that they were made to train H1B holders to do their own jobs, and then fired.

Page | 25

CHANCES OF WAR

With respect to India-China relations, the contours of the ‘new Cold War’ in Asia and Beijing’s vision for the Indian Ocean is well known. It speaks about the challenge to India from China in South Asia. However, according to experts, there will not be another India-China war, even as India firms its counter-alliance in the Indo-Pacific.

The cold war context

What we’re seeing today is a new Cold War in Asia, an informal alliance between India and Japan [versus China]. The United States is a bit unpredictable of late, but it had under previous president embarked on a pivot to Asia, with the rise of China as the main concern.

30th Dec to 11th Jan

The Chinese are now in the Indian Ocean. China didn't even have a proper navy until recently. It is now working on One Belt One Road.

Also in the Indian Ocean is the U.S.'s most important base, Diego Garcia. And the French control 2.5 million acres of land in the Indian Ocean. This is why these alliances are growing.

The recent case of Doklam

Bhutan is China's only neighbour that doesn't have diplomatic ties with it. Relations are maintained through these boundary talks, which have been going on for more than two decades. Bhutan has been under Indian influence, but it is now asserting itself as a sovereign power. (In recent UNGA resolution on Jerusalem issue India voted in favour of it but Bhutan abstained from voting.)

China's intention may not have been to engage India in the issue. But, maybe the plan was to get Indian troops out of Haa (Bhutan's Haa Valley) and get Bhutan more directly involved in this conflict, which would embarrass many Bhutanese.

The statements from Bhutan at the time, which were very cautious, and many Bhutanese think that India overreacted and wanted to show its control over Bhutan.

China is sending acrobats, circus performers, football teams, tourists, scholarships for students to Bhutan. Clearly China wants to extend its influence to all its neighbours, and that includes Bhutan.

Why there wouldn't be a war?

Trade between India and China is important for both the nations and its growing continuously. Any impact to the trade would adversely affect both the nations. So there is unlikely to have a war between India and China today.

Role of Russia and US

Role of the Soviet Union and the U.S. was a key to the outcome in 1962. In a war-like situation between India and China today, what position would the U.S. and Russia take?

Sino-India relations: Going forward

The Indian Ocean is going to become the biggest challenge in the near future. It will be hard to believe both nations will fight another war in the Himalayas.

- China has in the past suggested a swap between Arunachal/South Tibet and Aksai Chin. On paper that sounds reasonable, but we don't know how serious the Chinese are.
- Also, if China were to accept the Line of Actual Control (LAC) as the border, it could control any dissidence within.
- In India, which is a democracy, the government couldn't just go ahead with that solution. Because it would be a political suicide.

But in the larger picture, China seems not to care if the boundary remains unresolved. They are not looking for a solution; they are looking for a strategic advantage. The tension is building up in the Indian Ocean. The joint naval exercises with Australia, US, Japan and other countries are important in this context.

Quad: A military alliance of sorts

India, Australia, Japan and the US are engaged in an informal strategic dialogue. It has to do with the rise of China and with economic power there comes political power and then military power, which is needed to protect one's interests.

- The Maldives has recently concluded a free trade agreement with China, and is growing much closer to Beijing in all respects. The question is, how can India counter China's obvious advantage in terms of money power.
- So far, India has been an observer about Chinese moves in the Indian neighbourhood. The same thing is happening in the Seychelles, which has very less population.
- India's eastern border with Myanmar is also so much more important. But India spends an inordinate time on its western border (with Pakistan). Myanmar is China's corridor to the Indian Ocean.

The CPEC angle

The success of CPEC depends on the stability of the country Pakistan and China will have to deal more and more with its internal dynamics.

- In addition to it, the CPEC connects to Xinjiang, away from China's economic centres, unlike, say, Myanmar that connects to China's eastern economic zones and ports.
- Over the past year, given the problems in Rakhine state, China is even looking for a third route into the Indian Ocean to bypass the choke-point at the Strait of Malacca. Here China is pushing the idea of the Kra Canal (from Gulf of Thailand to the Andaman Sea).

China's control in Myanmar is inevitable

India has three main problems on its boundary with Myanmar compared to China.

- Infrastructure: On Myanmar's northern border, China has super-highways, an airport not far from the border. Kunming has been upgraded to a huge international airport. On the Indian side, infrastructure is still a major problem. It's better than 10 years ago perhaps, but not comparable to what already exists on the Chinese side.
- Red-tape and bureaucracy: There are still many trade restrictions on the Indian side and several checkpoints. An integrated checkpoint, which is being planned by India, will help.
- Underground rebel groups operating on the Indian side, which can carry out attacks and extort money all along the border.

India has to resolve these problems as People of Myanmar would like to do much more trade with India, because the dependence on China is so massive, it is worrying for everyone, including their military.

OUT AT SEA

In its National Security Strategy (NSS), the U.S. has called China a "challenger" and "rival" while welcoming India's emergence as a "leading global power and stronger strategic and defence partner", and declared that it seeks to increase 'Quadrilateral' cooperation with Japan, Australia, and India.

The NSS also states that the U.S. would support India's growing relationships throughout the region. While the broader emphasis on improving the partnership is welcome, policymakers in New Delhi should be cautious and cognizant on its national interests.

US's national security strategy: Key points

Geopolitically, the NSS places the greatest emphasis for American interests on the Indo-Pacific region. The document explicitly includes India in its definition of the Indo-Pacific, which stretches "from the west coast of India to the western shores of the United States, [and is] the most populous and economically dynamic part of the world."

1. Combating China

The strategy deems China, like Russia, to be a “revisionist” power, determined to reshape the world according to its own ideals. The strategy calls for stronger traditional alliances and new partnerships in Asia amid a “geopolitical competition between free and repressive visions of world order.”

2. Countering Russia

It says Russia uses “subversive measures” to weaken America’s credibility and European governments.

3. Budding India Alliance

The strategy promotes a deeper partnership with India. Pakistan, on the other hand, must crack down on “transnational terrorists” operating from its soil, it says.

- But the document offers Pakistan the carrot of greater trade and investment ties if it helps on counterterrorism. The regional approach could be part of the broader effort to counter China, which is investing billions in Pakistan.

4. Fighting Global Threats

North Korea and Iran are singled out as the leading threats to US security, followed by “radical Islamic terrorist” organizations like the Islamic State group and al-Qaida. The strategy emphasizes cyber threats and says the administration will assess such risks to security, energy, banking and transportation.

Why should India be cautious?

1. India should be wary of any attempts at being pitted as a front in the U.S.’s efforts to check China’s rise.
2. While the notion of the Indo-Pacific sounds grandiose and enticing, India must not forget that its primary area of concern is the Indian Ocean Region (IOR).

Rules-based order in Foreign affairs

As its stature in global politics increases, it is in the nations as well as global interest that India remains a balancing power.

- For instance, India’s vote in the UN General Assembly over Jerusalem should be seen in line with a “rules-based world order.”
- At the same time, there is no question that India should hedge against the rapid expansion of Chinese presence in the IOR.

30th Dec to 11th Jan

- For India, geographically the area of concern, and so the area of focus, should mainly on IOR, stretching from the Gulf of Aden to the Strait of Malacca.

While reiterating its commitment to upholding the established laws of the global commons, New Delhi should not go adrift in the larger Indo-Pacific.

What should India do?

As more powers make inroads into this strategically crucial space, India must consolidate its position and not expect others to do its job, for it would only mean ceding space in the long run.

There are two ways of doing this — beefing up Indian capacity and securing interests and then expanding partnerships to fill voids.

- India should undertake capacity building in its own backyard be it South Asia or the IOR to secure its position as a leading global power.
- It is imperative for policy-makers in New Delhi to conduct a reality check on relations with our neighbours.
- Over the last couple of months, there have been hectic parleys with various nations in various formats — quadrilateral, trilateral, etc. But it cannot be at the expense of the neighbours.
- More clarity is required on the recently resurrected Quad. Because except India for the other three the primary focuses is the Pacific Ocean especially the South China Sea.

Recent India's Key initiatives

- India and Singapore concluded an overarching bilateral agreement for naval cooperation. Besides being only India's second bilateral logistics arrangement, it gives it access to the Changi naval base at the mouth of the Strait of Malacca.
- With Singapore's assistance, India is also working out modalities for joint multilateral exercises with the Association of Southeast Asian Nations (ASEAN).
- India is also negotiating similar logistics agreements with several other countries.
- Another initiative which fits the bill is the Goa Maritime Conclave hosted by the Indian navy where Navy Chiefs and maritime heads of 10 Indian Ocean littoral states brainstormed on ways to improve cooperation in the region. It is an India-led initiative where the navy has offered to share information of maritime movement in real-time.

In conclusion

Page | 30

30th Dec to 11th Jan

These developments show the way forward for India to engage with like-minded countries in the region without getting entangled in groupings which are seen as being targeted or military in nature. This is the template for India to take forward to build its primacy in the IOR before venturing into adjacent waters.

By continuing to secure the support of the United States for economic growth and its security position in Asia, India first and foremost should pursue its own national interests and should maintain its strategic autonomy.

Page | 31

INTERNATIONAL AFFAIRS

ASEAN INDIA PRAVASI BHARATIYA DIVAS

Venue: Singapore.

Aim of the event: To highlight the “ancient human, maritime, cultural, commercial and religious links between India and Southeast Asia” and to promote greater economic, cultural and diplomatic cooperation between the two regions.

Theme: “Ancient Route, New Journey: Diaspora in the Dynamic Asean-India Partnership.”

Significance

The event coincides with the 25th anniversary of India-Asean dialogue partnership, which will be marked by a summit on Jan. 25 in New Delhi. Asean leaders have been invited by India to be chief guests at the Republic Day parade in New Delhi on Jan. 26.

30th Dec to 11th Jan

Pravasi Bharatiya Divas:

Pravasi Bharatiya Divas (PBD) is celebrated every year on January 9 to mark the contribution of overseas Indian community in the development of India. January 9 was chosen as the day to celebrate this occasion since it was on this day in 1915 that Mahatma Gandhi, the greatest Pravasi, returned to India from South Africa, led India's freedom struggle and changed the lives of Indians forever.

These conventions provide a platform to the overseas Indian community to engage with the government and Indian communities in India for mutually beneficial activities. These conventions are also very useful in networking among the overseas Indian community residing in various parts of the world and enable them to share their experiences in various fields.

Page | 32

FIRST COUNTRY TO LEGALISE EQUAL PAY

A new law making it illegal to pay men more than women has taken effect in Iceland. The legislation makes Iceland the first country in the world to legalise equal pay between men and women.

Details

- Under the new rules, companies and government agencies will have to obtain government certification of their equal-pay policies. Those that fail to prove pay parity will face fines.

The WEF Global Gender Gap Report uses markers such as economic opportunity, political empowerment, and health and survival to gauge the state of gender equality in a country.

- According to the latest WEF report, the top five best performers in the global gender gap are Iceland, Norway, Finland, Rwanda and Sweden.
- Yemen, on the other hand, is currently the lowest-ranked of the 144 countries measured in the report.
- India is ranked 108.

PAKISTAN IN SPECIAL WATCH LIST

What is it?

The US has placed Pakistan on a 'Special Watch List' for "severe violations" of religious freedom, making it the only country to be put under the newly-formed list.

30th Dec to 11th Jan

The Special Watch List is for countries that engage in or tolerate severe violations of religious freedom but may not rise to the level of the 'Countries of Particular Concern' (CPC).

The Special Watch List designation is being seen as a step below designating it as Country of Particular Concern, which would have automatically kicked in economic and political sanctions.

Why was Pakistan placed in this list?

As per the US, Pakistan was placed in this list because the country continues to harass its religious minorities, has state-sanctioned discrimination against groups such as the Ahmadis, and tolerates extra-judicial violence in the guise of opposing blasphemy.

What is CPC?

A country is labeled as a CPC after it engages in "systemic, ongoing, [and] egregious" violations of religious liberty. This declaration is in accordance with the International Religious Freedom Act of 1998.

The list includes Burma, China, Eritrea, Iran, North Korea, Sudan, Saudi Arabia, Tajikistan, Turkmenistan, and Uzbekistan.

SOLAR BATTLE AT WTO

Why in news?

India has hit back at Washington's latest legal assault on its solar power policies at the World Trade Organization, rejecting a US legal claim and exploring possible new protection of India's own solar industry.

The issue

The United States had triggered a new round of litigation at the WTO, arguing that India had failed to abide by a ruling that it had illegally discriminated against foreign suppliers of solar cells and modules. However, India said it had changed its rules to conform with the ruling and that a US claim for punitive trade sanctions was groundless.

Backgrounder:

In 2014, the US dragged India to WTO on the country's solar mission. The US alleged that India's programme appears to

National Solar Mission:

National Solar Mission, launched in 2010, aims to establish India as a global leader in solar energy by creating the policy conditions for its diffusion across the country as quickly as possible. The Mission has set the ambitious target of deploying 20,000 MW of grid connected solar power by 2022 and aims at reducing the cost of solar power generation in the country.

30th Dec to 11th Jan

discriminate against the US solar equipment by requiring solar energy producers to use locally manufactured cells and by offering subsidies to those developers who use domestic equipment. It also alleged that forced localisation requirements restricted US exports to Indian markets.

India had lost this case as the WTO ruled that India's domestic content requirements under its solar power programme were inconsistent with the international norms.

Page | 34

HINDI AS AN OFFICIAL LANGUAGE AT THE UN

Why in news?

India is pushing forward its proposal to include Hindi as one of the official languages of the United Nations.

Details

The procedure for getting any language recognized as one of the Official Languages of the UN involves obtaining approval of the General Assembly.

- Recognizing any language as the official language of the UN entails a substantial increase in the expenditure of the UN necessitating an enhanced contribution by every member country, which is why most of the members remain reluctant to support such a proposal.

Need for recognition:

According to the estimates around 340 million to 500 million speak Hindi language. Outside India too, a significant number people speak Hindi.

Official languages of the UN:

There are six official languages of the UN. These are Arabic, Chinese, English, French, Russian and Spanish. These languages are used at meetings of various UN organs, particularly the General Assembly, the Economic and Social Council, and the Security Council.

GENERAL STUDIES-3

INDIAN ECONOMY

FDI POLICY FURTHER LIBERALIZED

The Union Cabinet has given its approval to a number of amendments in the FDI Policy. These are intended to liberalize and simplify the FDI policy so as to provide ease of doing business in the country. In turn, it will lead to larger FDI inflows contributing to growth of investment, income and employment.

Changes include:

- 100% FDI under automatic route for Single Brand Retail Trading.
- 100% FDI under automatic route in Construction Development.
- Foreign airlines allowed to invest up to 49% under approval route in Air India.
- FIIs/FPIs allowed to invest in Power Exchanges through primary market.

Backgrounder:

Foreign Direct Investment (FDI) is a major driver of economic growth and a source of non-debt finance for the economic development of the country. Government has put in place an investor friendly policy on FDI, under which FDI up to 100%, is permitted on the automatic route in most sectors/ activities.

In the recent past, the Government has brought FDI policy reforms in a number of sectors viz. Defence, Construction Development, Insurance, Pension, Other Financial Services, Asset reconstruction Companies, Broadcasting, Civil Aviation, Pharmaceuticals, Trading etc. Measures undertaken by the Government have resulted in increased FDI inflows in to the country.

ETHEREUM

Why in news?

Ethereum has hit \$1,000 for the first time, while investors eye at alternative currencies such as ripple, ethereum and litecoin besides bitcoin.

Earlier Ethereum was the second-most valued currency after bitcoin, but now ripple has outpaced it lately. Bitcoin, still rules the world of digital currencies.

What is Ethereum?

It, like most cryptocurrencies, shares the same basic traits as bitcoin. It has underlying blockchain technology with a tethered token, which in this case is known as “Ether.” Ether is the token investors are purchasing.

How is it different from other cryptocurrencies?

Unlike most blockchains, Ethereum’s has an added component that’s particularly attractive to enterprise clients: smart contracts. These protocols help to verify, facilitate, or enforce the negotiation of a contract in an efficient and secure manner.

CRYPTOCURRENCIES ARE A PONZI SCHEME

Why in news?

The spurt in the prices of Bitcoin and other cryptocurrencies seems to have rung an alarm bell, with the Finance Ministry expressing concern and likening them to Ponzi schemes.

Concerns:

Virtual currency (VC) transactions are encrypted and are likely being used for terror-funding, smuggling, drug trafficking and money laundering.

30th Dec to 11th Jan

- Besides, VCs are not reliable as they are stored in digital/electronic format, making them vulnerable to hacking and malware attack.
- The government of India is yet to introduce regulations covering the digital currency market, but it has created an interdisciplinary committee to research and to develop a regulatory framework for the sector.
- Despite its latest warning, the govt. has not banned virtual currency trading

Page | 37

What are Ponzi Schemes?

A Ponzi can be any scheme in which the returns to promised to older investors are paid from the money collected from new investors, and not actual profits from the investments. Ponzi schemes were named after Charles Ponzi, a clerk in Boston who, almost a century ago, duped thousands of investors into speculating on phenomenal returns from the humble postage stamp.

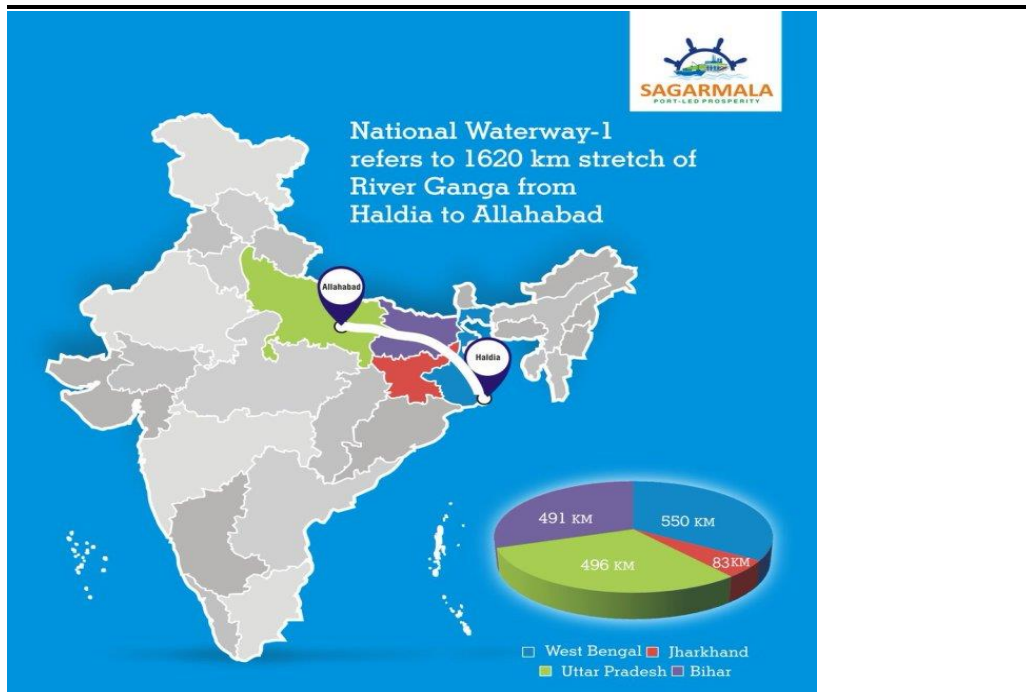
INDUSTRY, INFRASTRUCTURE AND INVESTMENT

NATIONAL WATERWAY-1

Why in news?

The Cabinet Committee on Economic Affairs has given its approval for implementation of the Jal Marg Vikas Project (JMVP) for capacity augmentation of navigation on National Waterway-1 (NW-1) with the technical assistance and investment support of the World Bank. The Project is expected to be completed by March, 2023.

30th Dec to 11th Jan



Page | 38

What is Jal Marg Vikas Project?

The Jal Marg Vikas Project seeks to facilitate plying of vessels with capacity of 1,500-2,000 tonnes in the Haldia- Varanasi stretch of the River Ganga.

- The major works being taken up under JMVP are development of fairway, Multi-Modal Terminals, strengthening of river navigation system, conservancy works, modern River Information System (RIS), Digital Global Positioning System (DGPS), night navigation facilities, modern methods of channel marking etc.

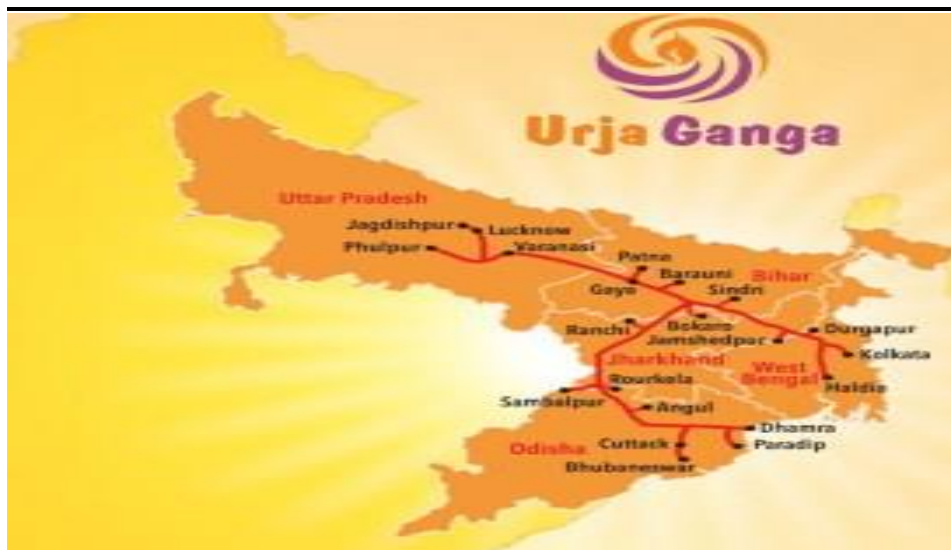
States covered: Uttar Pradesh, Bihar, Jharkhand, West Bengal.

Benefits

Alternative mode of transport that will be environment friendly and cost effective. The project will contribute in bringing down the logistics cost in the country. Mammoth Infrastructure development like multi-modal and inter-modal terminals, Roll on – Roll off (Ro-Ro) facilities, ferry services, navigation aids. Socio-economic impetus; huge employment generation.

PRADHAN MANTRI URJA GANGA

30th Dec to 11th Jan



Page | 39

Why in news?

State-run gas utility GAIL India has placed orders for new pipelines of the ambitious Pradhan Mantri Urja Ganga natural gas pipeline project that will take the fuel to eastern India.

About the project:

The gas pipeline project aims to provide piped cooking gas to residents of Varanasi and later to millions of people in states like Bihar, Jharkhand, West Bengal and Odisha.

- The households and vehicles will get PNG and CNG gas respectively.
- The project is said to be a major step towards collective growth and development of the Eastern region of India.

UJH PROJECT

Why in news?

In a bid to fast track utilization of India's rights under Indus Waters Treaty, the Detailed Project Report of Ujh Project was recently submitted by Central Water Commission to the Jammu & Kashmir government. The DPR will help India to utilize a part of the flow that presently goes across border unutilized.

What is it?

The project, which is to come up in Kathua district, will store water from Ujh (a tributary of Ravi) for irrigation and production of power.

Indus water treaty:

Signed in 1960 by Indian and Pakistan governments, the treaty allocates 80% of water from the six-river Indus water system to Pakistan. Under the treaty, control over six north Indian rivers were divided between the two countries. India got control over the rivers Beas, Ravi and Sutlej whereas Pakistan got control over Indus, Chenab and Jhelum.

- This is a unique treaty involving a third party. It was brokered by the World Bank.
- A Permanent Indus Commission was set up as a bilateral commission to implement and manage the Treaty. The Commission solves disputes arising over water sharing.
- The Treaty also provides arbitration mechanism to solve disputes amicably.

SCIENCE AND TECHNOLOGY

GOLD AND ICON

What are they?

U.S. space agency National Aeronautics and Space Administration (NASA) is all set to launch two missions to explore a little-understood area 60 miles (96 KM) above Earth's surface. The missions are named GOLD and ICON.

What do they do?

GOLD and ICON will team up to explore the ionosphere, a boundary area between Earth and the space where particles have been cooked into a sea of electrically-charged electrons and ions by the Sun's radiation.

These layers of near-Earth space are increasingly becoming a part of human domain as it is home to radio signals used to guide airplanes, ships and Global Positioning System satellites.

Objectives

Among others, the missions' goals is to measure how upper atmosphere changes in response to hurricanes and geomagnetic storms.

- GOLD will also explore how the upper atmosphere reacts to geomagnetic storms, which are temporary disturbances of Earth's magnetic field set off by solar activity.
- To find evidences for a theoretical model about El Nino's repercussions on the ionosphere.

- The combination of satellites will build up a full-disk view of the ionosphere and the upper atmosphere beneath it every half hour.

GENOMICS REVOLUTION

Page | 41

Within every cell is the human genome, made of 3 billion bases of DNA that carries the instructions for life. In 2001, after a decade of work involving scientists from over 16 countries, the sequence of the first human genome was completed.

Over the past decade, advances in DNA sequencing technologies have made it possible to sequence a human genome for much lesser cost in a week's time. A number of groups, using DNA sequencing, have begun to catalogue variations in human populations. This has enabled us to understand human migration and population history.

What are the uses of genome sequencing?

Genomics is an interdisciplinary field of science focusing on the structure, function, evolution, mapping, and editing of genomes. A genome is an organism's complete set of DNA, including all of its genes. Genomics also involves the sequencing and analysis of genomes through uses of high throughput DNA sequencing.

Advances in genomics have triggered a revolution in discovery-based research and systems biology to facilitate understanding of even the most complex biological systems such as the brain.

- Cancer is caused by deleterious mutations that accumulate in the genome. Inherited genetic disorders arise due to mutations in DNA that are passed on at birth. Increased risk for developing breast cancer is linked to variations in genes such as BRCA1 in the genome. Sequencing an individual's genome or the tumour genome and comparing it to a reference human genome has helped identify the differences that contribute to the disease. In many cases, it has the potential to help with treatment decisions.
- In pregnant mothers, the blood also contains DNA from the fetus. Scientists have developed methods that can sequence the cell-free DNA in mother's blood to monitor the genetic health of a developing baby.
- The genomics revolution has enabled sequencing a large number of organisms including bacteria, plants and animals.

30th Dec to 11th Jan

- Sequencing of plants including cereals like rice and wheat has set the stage for rapid crop improvement.
- Understanding genomes of livestock such as cattle and goats has created a rich resource of genetic variations that can be used to produce animals with superior traits.

Page | 42

Perhaps this will also make interventional treatments feasible, in the not too distant future, thanks to the revolutionary advances brought about by the discovery of new gene-editing techniques, such as CRISPR/CAS9 (application of a precise genome editing/engineering technology). The editing combined with sequencing will enable rapid crop and livestock improvements that have the potential to end hunger and improve the standard of living across the world.

Examples of genome projects

1. Human Genome Project (HGP): An international scientific research project. It remains the world's largest collaborative biological project.
2. Write: It is an extension of Genome Projects (aimed at reading genomes since 1984), now to include development of technologies for synthesis and testing of many genomes of microbes, plants and animals
3. 100K Genome Project: It aims to sequence the genomes of 100,000 infectious microorganisms to create a database of bacterial genome sequences for use in public health, outbreak detection, and bacterial pathogen detection.
4. 1000 Genomes Project: Set out to map the genetic variations in human across the world

Implications for India

To gain fully from the genomics revolution, India needs to collect information about the genetics of its population and train manpower capable of interpreting it. This kind of longitudinal study is what would allow actual physical manifestations relevant to health, e.g. specific illnesses, to be related to features in the genome.

The genetic implication of this is that there are likely to be many recessive diseases stemming from single genes specific to individual groups that can be identified.

HUMAN BODY IN SPACE

Why in news?

30th Dec to 11th Jan

Recently, Japanese astronaut Norishige Kanai announced that he had stretched by 2cm on board ISS. Significant height changes are actually normal for astronauts spending time in space.

Why do they stretch?

The effect happens as the astronauts' spines stretch out, because of the reduced gravity on board the floating lab. Because the vertebrae aren't being pushed together as much as they are on Earth, they are able to float apart and lead to the strange stretching phenomenon. They shrink back down to their usual size once back on Earth and affected by its gravity.

Health issues for astronauts

- Loss of bone density of up to 1% a month. This could lead to osteoporosis-related fractures and long-term health problems.
- Body fluids shift upwards, which may cause swelling, high-blood pressure and vision and organ problems. Nutrition and exercise become very important, and special measures like medications and body cuffs aim to reduce the risk of long-term medical problems associated with muscle and bone wastage.
- Living in isolation and confinement can cause behavioural and psychological issues. Without a natural body clock, depression and sleep disorders can develop. The space station uses LED technology to imitate light on Earth to improve body rhythms.
- A closed environment also means microbes in the body can transfer more easily. The environment can weaken the immune system, so urine, saliva and blood samples are carefully monitored to make sure dormant viruses have not been reactivated.
- Radiation exposure is far higher in space than it is on Earth. Without the shielding of Earth, you could be more at risk of cancer and damage to the nervous system. Space radiation can also cause sickness and fatigue. The ISS sits just within the protective field on Earth to reduce risks, but missions further afield will need to overcome this.

'SPEED BREEDING' TECHNIQUE

What is it?

Australian scientists have developed the world's first 'speed breeding' technique that can boost the production of the crop by up to three times.

DS Faraday:

30th Dec to 11th Jan

The scientists have used the technique to develop the new 'DS Faraday' wheat variety due for release to industry this year. DS Faraday is a high protein, milling wheat with tolerance to pre-harvest sprouting.

Significance

In specially modified glasshouses, scientists could grow six generations of wheat, chickpea and barley plants in a single year – as opposed to two or three generations in a regular glasshouse, or a single generation in the field.

- The quality and yield of the plants grown under controlled climate and extended daylight conditions was as good, or sometimes better than those grown in regular glasshouses.

Speed breeding technique:

This technique uses fully controlled growth environments and can also be scaled up to work in a standard glass house. It uses LED lights optimised to aid photosynthesis in intensive regimes of up to 22 hours per day. LED lights significantly reduce the cost compared to sodium vapour lamps

CHANG'E 4 PROJECT

What is it?

China announced its plans to launch a lunar probe in 2018 to achieve the world's first soft landing on the far side of the moon to showcase its ambitious space programme.

Details: It is the fourth mission in the country's lunar mission series which is being named after the Chinese moon goddess.

- According to experts, landing on the far side of the moon is undoubtedly one of the most challenging missions ever launched by any of the world's superpowers.
- The far side of the moon known as 'South Pole-Aitken Basin' still remains a mystery among space scientists and by sending a probe there, China will outdo the historical achievements of the US and USSR.
- Communication difficulties will be the main problem faced by the Chinese team

INDIA'S FASTEST SUPERCOMPUTER

What is it?

30th Dec to 11th Jan

It is an array of computers that can deliver a peak power of 6.8 petaflops. One petaflop is a million billion floating point operations per second and is a reflection of the computing capacity of a system.

Where in India?

At two government institutes: 4.0 petaflops HPC facility at IITM, Pune; and 2.8 petaflops facility at the National Centre for Medium Range Weather Forecast.

Significance

With this, India will now occupy the fourth position, next only to United Kingdom, Japan and USA in terms of dedicated capacity for HPC resources for weather and climate proposes. The UK leads with a capacity of 20.4 Petaflop, followed by Japan with 20 Petaflop and USA with 10.7 Petaflop.

Applications

The Pratyush HPC will improve weather forecasts and extended range forecasts. It will also predict cyclones and tsunami accurately, with more lead time. It will also help those dependent on agriculture, hydrology and power sectors.

PARKER PROBE

Developed by: NASA

What is Parker solar probe?

Parker Solar Probe is scheduled for launch in 2018 to explore the Sun's outer atmosphere.

- NASA's historic Parker Solar Probe mission will ultimately provide humanity with the closest-ever observations of a star.
- Parker Solar Probe will use Venus' gravity during seven flybys over nearly seven years to gradually bring its orbit closer to the sun.

Goals:

The primary science goals for the mission are to trace how energy and heat move through the solar corona and to explore what accelerates the solar wind as well as solar energetic particles.

Importance of studying Sun and Solar winds

- By studying sun, we learn more about stars throughout the universe.
- The more we know about the sun, the more we can understand how life on Earth developed.

- It is the source of the solar wind; a flow of ionized gases from the sun that streams past Earth.
- Disturbances in the solar wind shake Earth's magnetic field and pump energy into the radiation belts, part of a set of changes in near-Earth space known as space weather.
- Space weather can change the orbits of satellites, shorten their lifetimes, or interfere with onboard electronics. The more we learn about what causes space weather – and how to predict it – the more we can protect the satellites we depend on.

RETROTRANSPOSONS

They are the recently identified special genes which could help Symbiodinium adapt more rapidly to heat stress.

What is Symbiodinium?

Symbiodinium is a unicellular algae that provides its coral host with photosynthetic products in return for nutrients and shelter.

Coral bleach: High sea temperatures can cause the breakdown of the symbiotic relationship between the algae and corals and lead to the widespread expulsion of Symbiodinium from host tissues, an event known as coral bleaching. If bleached corals do not recover, they starve to death, leaving only their white, calcium-carbonate exoskeleton.

Bleaching occurs when abnormal environmental conditions, such as warmer sea temperatures, cause corals to expel tiny photosynthetic algae, draining them of their colour. Corals can recover if the water temperature drops and the algae are able to recolonise them.

NASA'S FLYING TELESCOPE

Why in news?

NASA's flying observatory Sofia is preparing for its 2018 campaign, which will include, among others, observations of celestial magnetic fields, star-forming regions, comets and Saturn's giant moon Titan. This will be the fourth year of full operations for Sofia (Stratospheric Observatory for Infrared Astronomy).

Significance

- Scientists believe that the observatory's investigations will help them understand how magnetic fields affect the rate at which interstellar clouds condense to form new stars.
- These observations could also help them learn whether the luminosity of these active black holes is driven by star formation or accretion of material onto the central black hole.
- Sofia will also conduct observations to better understand how methane levels change with seasons on Mars.

What is it?

Sofia is a Boeing 747SP jetliner modified to carry a 100-inch diameter telescope. It is a joint project of NASA and the German Aerospace Centre, DLR. SOFIA is designed to observe the infrared universe.

SOFIA studies many different kinds of astronomical objects and phenomena:

- Star birth and death.
- Formation of new solar systems.
- Identification of complex molecules in space.
- Planets, comets and asteroids in our solar system.
- Nebulae and dust in galaxies (or, Ecosystems of galaxies).
- Black holes at the center of galaxies.

Why a flying telescope?

Water vapor blocks infrared light energy and 99% of the world's water vapor exists below 39,000 feet. So, the higher altitude you fly, the drier it gets and the more optimal it is for infrared observation

ENVIRONMENT

FLAMINGO FESTIVAL

Where?

The three-day annual Flamingo Festival is being held at Pulicat lake.

Details of the festival

- Flamingo Festival is held every year to promote tourism in Pulicat and Nellapattu.
- Migratory birds from Siberia have been visiting this place for breeding and the colourful birds are a treat to the eye of bird watchers.
- Usually around 80 different avian species migrate to Pulicat for breeding.

30th Dec to 11th Jan

- Once the breeding season concludes, they fly away to their native land with their offspring in tow.
- The conducive atmosphere for this seasonal avian guests is being conserved at Nelapattu bird sanctuary.

Nelapattu Bird Sanctuary:

It is considered one of the biggest habitat for some hundreds of pelicans and other birds. Located about 20 km north of the Pulicat Lake on the Andhra Pradesh-Tamil Nadu border

Pulicat lake:

It is the second largest brackish water lake or lagoon in India, after Chilika Lake. It straddles the border of Andhra Pradesh and Tamil Nadu states with over 96% of it in Andhra Pradesh.

- The lake encompasses the Pulicat Lake Bird Sanctuary. The barrier island of Sriharikota separates the lake from the Bay of Bengal and is home to the Satish Dhawan Space Centre.
- Two rivers which feed the lagoon are the Arani river at the southern tip and the Kalangi River from the northwest.
- The Buckingham Canal, a navigation channel, is part of the lagoon on its western side.

OZONE HOLE

Why in news? The hole in ozone layer has shrunk thanks to the ban of CFCs, NASA has confirmed, after finding that chlorine levels are rapidly declining in the Earth's stratosphere.

The long-term satellite observations by Nasa have shown a 20% decrease in levels of chlorine in the Earth's atmosphere since 2005, proving for the first time that the worldwide action under Montreal Protocol is having a dramatic impact on the planet.

What is ozone hole?

The ozone hole is a region of depleted layers of ozone above the Antarctic region, whose creation is linked to increased cases of skin cancer.

Factors responsible

Depletion of ozone is due to many factors, the most dominant of which is the release of chlorine from CFCs (Chlorofluorocarbons) which destroys the ozone. CFCs are released by products such as hairsprays, old refrigerators etc.

How CFCs destroy the ozone?

Once in the atmosphere, CFCs drift slowly upward to the stratosphere, where they are broken up by ultraviolet radiation, releasing the chlorine that catalytically destroys ozone. The process is as follows:

- UV radiation breaks off a chlorine atom from a CFC molecule.
- The chlorine atom attacks an ozone molecule (O₃), breaking it apart and destroying the ozone.
- The result is an ordinary oxygen molecule (O₂) and a chlorine monoxide molecule (ClO).
- The chlorine monoxide molecule (ClO) is attacked by a free oxygen atom releasing the chlorine atom and forming an ordinary oxygen molecule (O₂).
- The chlorine atom is now free to attack and destroy another ozone molecule (O₃). One chlorine atom can repeat this destructive cycle thousands of times.

Applications of CFCs:

CFCs are not flammable; therefore they were used as propellants that would push other molecules out of the aerosol sprays. For the same reason CFCs were used to form foamed plastics. Also low flammability enabled people to use these molecules to dry clean hot electronic components of devices such as air conditioning.

BIO-TOILET PROJECT

Why in news?

The Comptroller and Auditor General's (CAG) report on bio-toilets has found a lot of defects in 25,000 toilets installed in Railways. Also, it says that truckloads of cow dung is to be purchased in 2018 to "recharge" — add bacteria to activate degradation — leaky, malfunctioning 'bio-toilets'.

What are Bio- toilets?

The bio-toilets are fitted underneath the lavatories. These toilets incorporate microbes with an anaerobic digestion process to digest human waste.

- A colony of anaerobic bacteria acts upon the collected waste and converts the waste into water and biogases (mainly methane and carbon dioxide).

- While the gases escape into the atmosphere, the wastewater is discharged after disinfection onto the track, thus putting an end to the crisis of railway tracks strewn with excreta.
- Each bio-toilet requires 60 litres — or three large bucketfuls — of inoculum, a mix of cow dung and water. This inoculum begins the process of breaking down human excreta. Anaerobic bacteria are abundantly available in cow dung.

GI RECOGNITION FOR NILAMBUR TEAK

Where is it found?

Kerala and is also known as Malabar teak

Details

GI tag denotes quality and origin of the products and helps keep unscrupulous commercial operators at bay.

- The golden brown teak is known for its log dimensions, desired wood figure and wide reputation in the world of trade.
- Its durability is attributed to the synergistic effect of total extensive components and the resistance to fungal decay to naphthoquinone and derivatives it contains.
- It has hydrophobicity, anti-oxidant properties and oily nature

MEWA SINGH'S NIGHT FROG

Why in news?

Scientists have discovered a new frog species from Kozhikode's Malabar Wildlife Sanctuary.

Details

The frog species, named Mewa Singh's Night frog, belongs to a genus endemic to the Western Ghats. The frog has been named after wildlife scientist Mewa Singh, in honour of his contributions to behavioural ecology and primate studies.

- It belongs to genus *Nyctibatrachus* (commonly known as night frogs) endemic only to Western Ghats mountain range.

TIGERS AND ROADS

30th Dec to 11th Jan

Why in news?

A Tiger from Bor Tiger Reserve fell prey to the highway NH-6 (Nagpur-Amravati Highway stretch) that cuts the vital corridor between Bor and Melghat Tiger Reserves in Maharashtra. It is a reminder that building unsuitable roads through wildlife habitats has a terrible cost.

Opposition

It has highlighted the inevitable trade-offs in conservation and development. Conservation groups and National Highways Authority of India (NHAI) have been at logger-heads. Conservationists insist upon mitigation measures such as underpasses on those sections of NH-6 that cut an important wildlife corridor.

The Environmental Impact of Roads

The large network of roads has dramatically altered the landscape and can impact wildlife in a number of deleterious ways.

1. Mortality & Population Declines
2. Habitat Fragmentation & Alteration
3. Pollution
4. Increase in illegal activities

Human wildlife Conflict in India

Human wildlife Conflict is one of the major threat to Indian wildlife, human activities such as deforestation, Habitat loss, Lack of prey and illegal roads cut through forest are threaten the safety and survival of wildlife in India.

Many wild animals have been killed due to road accidents and speeding vehicles passes through the wildlife protected area. Big animals like sloth bears, striped hyena, blue bull and small creatures such as snakes, monitor lizards and Jackal are getting endangered due to roadkill.

Other than roadkill, wild animals have to also deal with speeding trains, human wild animal interaction and brutal and insensitive animal torture by the villagers. Few of the worst incidents in India are six elephants run over by speeding train in Odisha, speeding train kills six elephants in West Bengal.

Mitigation

A number of mitigation strategies have been developed to decrease the harmful impacts of roads on wildlife.

Page | 51

- In cases where patterns of mortality are predictable during certain times of the year, road closures or speed limit reductions during these times may decrease mortality rates.
- Decreasing traffic volume is not likely to be effective when animals avoid the physical surface of the road. In such cases, constructing alternative ways like combination of realignment and creation of long underpasses of crossing the road can be more successful.
- A more robust approach would be to realign the roads away from all such landscapes.
- Users can be asked to pay a small price for the protection of vital environmental features, and more areas for nature tourism can also raise revenues.

COMPENSATORY AFFORESTATION FUND (CAF) ACT, 2016

Why in news?

More than a year after Parliament passed the Compensatory Afforestation Fund Act 2016 (CAF), the Ministry of Environment Forest and Climate Change (MoEF&CC) is yet to roll out the mandatory rules to implement it, even after extension.

The Compensatory Afforestation Fund Act, 2016

Act provides for the establishment of funds under the public accounts of India and the public accounts of each State which will be used for compensatory afforestation. It extends to the whole of India except the State of Jammu and Kashmir.

Levies are imposed on development projects that seek land inside a Reserved Forest or a Protected Area (PA) in a sanctuary or a national park. These collected levies are accrued in the CAMPA Funds which are to be utilised to plant trees elsewhere in order to compensate the loss of forest due to development projects.

- It seeks to establish the National Compensatory Afforestation Fund under the Public Account of India, and a State Compensatory Afforestation Fund under the Public Account of each state.
- The payments into the funds include compensatory afforestation, NPV, and any project specific payments. The National Fund will get 10% of funds collected and the remaining 90% will go to respective State Fund.

- The collected funds will be utilised for afforestation, regeneration of forest ecosystem, wild life protection and infrastructure development.
- The act also seeks to establish National and State Compensatory Afforestation Fund Management and Planning Authorities to manage the funds.
- NPV quantifies the services provided by the forest. It includes goods and services (tourism and timber); regulating services (climate change); and none-material benefits (recreation).
- It seeks to provide safety, security and transparency in utilization of CAMPA funds which are currently kept in Nationalized Banks and managed by an ad-hoc body. These funds would be brought under the focus of Parliament and State Legislatures by transferring them to non-lapsable interest bearing funds.

What is happening in the absence of rules?

In the absence of the rules, forest departments in at least 15 states are undertaking afforestation as per the state CAF guidelines released by MoEF&CC in 2009, which are silent on the fundamental question of what kind of land—forest or revenue—can be used for carrying out the drives.

As a result they are using the funds under CAF to take charge of forestlands that are being considered for community ownership and management, under the Forest Rights Act, 2006 (FRA). Then they are using the land for plantations. The exploitation by the state forest departments could have been avoided if the ministry had released the rules in time.

Why is a new scientific national plan to expand good green cover essential?

Putting in place a scientific national plan to expand good green cover is essential, since the sequestration of carbon through sustainably managed forests is a key component of the commitment made under the Paris Agreement.

In conclusion

The Supreme Court has directed that, besides artificial regeneration (Plantations), the Fund shall also be utilised for undertaking assisted natural regeneration, protection of forests, infrastructure development, wildlife protection and other related activities and an independent system of concurrent monitoring and evaluation should be evolved and

implemented through the Compensatory Afforestation Fund to ensure effective and proper utilisation of funds.

CHINA'S FIRST SOLAR HIGHWAY

China has constructed the first solar highway, in which solar panels are placed underneath transparent concrete.

Location: A stretch along the Jinan City Expressway

Structure

It's divided into three layers. The see-through concrete shields an array of solar panels of two sizes. Beneath the solar panels is a layer that will keep them isolated from the damp ground.

- The expressway can handle 10 times more pressure than the normal asphalt variety

Not the world's first road, but a highway, yes

In late 2016, a village in France opened what it claimed was the world's first solar-panel road. In 2014, the Netherlands built a bike path embedded with solar panels.

BIO-CNG

Why in news?

To promote the use of clean fuel, the oil ministry, by roping in state-run oil and gas retailers, plans to set up bio-CNG (compressed natural gas) plants and allied infrastructure. The government's plan is to make India a gas-based economy.

What is Bio- CNG?

Bio-CNG is a purified form of biogas with over 95% pure methane gas. It is similar to natural gas in its composition (97% methane) and energy potential. While natural gas is a fossil fuel, bio-CNG is a renewable form of energy produced from agricultural and food waste. Bio-CNG is being looked at as an environment-friendly alternative to diesel.

The process

30th Dec to 11th Jan

The process of generating CNG from agricultural waste involves treating the waste matter with a special bacterial solution, and then the gas which is generated is cleaned and compressed so that it can be used in vehicles.

Benefits of Bio- CNG:

The cost of production of 1kg of bio-CNG could be Rs15-20, cheaper than CNG, petrol and diesel. Besides, it will help in reducing the country's import of diesel up to 50%. It is also pollution free.

Basically, a largescale importer

India currently imports one-third of its energy requirement. The world's third-largest crude oil importer is targeting halving its energy import bill by 2030. The government aims to increase the contribution of gas in India's energy mix to 15% from the current 6.5%.

Page | 55