

Abhimanu

Weekly current affairs Series

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Abhimanu's IAS Study Group
Chandigarh

NATIONAL ECONOMIC AFFAIRS

SFOORTI Application

- In a move that would help plan the traffic flows and optimize freight operations, Ministry of Railways has launched Smart Freight Operation Optimisation & Real Time Information (SFOORTI) App for Freight Managers.
- The app provides features for monitoring and managing freight business using Geographic Information System (GIS) Views and Dashboard.
- SFOORTI Application will help track movement of freight trains on Geographic Information System (GIS).
- Both passenger and freight trains can be tracked over Zones/Divisions/ Sections in single GIS View. Freight business can also be monitored along with Comparative Analysis of Zonal/Divisional Traffic.
- The app will help in analysis of new traffic captured and traffic lost and provides a Bird's eye view of all Freight Assets in a single window.
- SFOORTI provides end to end Rake movement on Geospatial view and would also help evaluate daily performance of expected traffic at Interchange points.
- Freight Operation Information System Map View—A Geographic Information System (GIS) based monitoring and management tool has been designed and developed in CRIS which provides layered views of freight trains on Indian Railways network which can help plan the traffic flows and optimize freight operations.
- The FOIS Map View has been designed to cater to Divisional, Zonal and Board levels of management for improved freight operations.

Salient features of SFOORTI Application are as below:

- With this application, movement of freight trains on Geographic Information System (GIS) view can be tracked.
- Both passenger and freight trains can be tracked over Zones/Divisions/ Sections in single GIS View.
- Freight business can be monitored.
- Comparative Analysis of Zonal/Divisional Traffic.
- Analysis of new traffic captured and traffic lost.
- This app provides a Bird's eye view of all Freight Assets in a single window.
- Provides end to end Rake movement on Geospatial view
- Expected Traffic at Interchange points to evaluate daily performance can be viewed.
- Performance of each zone and divisions with respect to loading and utilization of freight assets can be viewed.
- Sectional performance monitoring for sections, divisions and zones shall help in traffic routing.
- Freight terminal and sidings can be better monitored to ensure better turnaround of rakes.

FDI amendments cleared by Union Cabinet

- The Union Cabinet has approved a number of amendments in the Foreign Direct Investment (FDI) policy, in a move to liberalise and simplify it.

- These amendments will help improve ease of doing business in the country and in turn, facilitate larger FDI inflows contributing to the growth of investment, income and employment.

Full list of amendments in the FDI policy:

- **100 per cent FDI under automatic route for Single Brand Retail Trading (SBRT):** Government approval is no longer required for FDI in SBRT. The policy had previously allowed only 49 per cent FDI under automatic route, while FDI between 49-100 per cent mandated government approval.
- **100 per cent FDI under automatic route in Construction Development:** Real-estate broking service does not fall under the ambit of real estate business and is now eligible for 100 per cent FDI under automatic route.
- **Foreign airlines allowed to invest up to 49 per cent under approval route in Air India:** Foreign airlines were previously allowed to invest capital under Government approval route in Indian airline companies, excluding Air India. Now, foreign companies can invest up to 49 per cent under approval route in Air India as long as it does not exceed 49 per cent directly or indirectly. Also, substantial ownership and effective control of the company will remain vested in India national.
- **FIIIs/FPIs allowed to invest in Power Exchanges through primary market:** Previously, the policy allowed 49 per cent FDI under automatic route in Power Exchanges. FIIIs/FPIs are now allowed to invest in Power Exchanges through the primary market as well.
- **Definition of 'medical devices' amended in the FDI Policy:** The definition of 'medical devices' has been amended in the FDI policy on pharmaceuticals.

World Economic Forum manufacturing index

- The World Economic Forum (WEF) has released its Global Manufacturing Index. This is WEF's first 'Readiness for the future of production report'.
- The report has been developed in collaboration with A T Kearney and calls for new and innovative approaches to public-private collaboration are needed to accelerate transformation.

Important highlights of the index:

- The report, which analyses development of modern industrial strategies across the world, has categorised the 100 countries into four different groups – Leading countries (strong current base of production and high level of readiness for the future), High Potential countries (limited current base, high potential for future), Legacy countries (strong current base, at risk for the future, and Nascent countries (limited current base, low level of readiness for the future).
- India has been categorised as a "legacy" country, along with Russia, Hungary, Mexico, Philippines, Thailand and Turkey among others. China is said to be a "leading" country, while South Africa and Brazil have been included in "nascent" countries.
- Japan was ranked first on the structure of production, and the United States on the drivers of production.
- Japan has topped the list. Japan is followed by South Korea, Germany, Switzerland, China, Czech Republic, the US, Sweden, Austria and Ireland in the top 10.
- Among BRICS nations, Russia is ranked 35th, Brazil 41st and South Africa at 45th place.

India and report:

- This report ranked India 30th on a global manufacturing index, which measures which countries are best placed to benefit from the changing nature of production due to improvements in technology.
- India is the fifth largest manufacturer in the world, with a total manufacturing value of \$420 billion (Rs 26 lakh crore) in 2016.
- India's manufacturing sector had grown by an average of 7% per year over the last three decades, and accounted for 16%-20% of the country's Gross Domestic Product.
- "Home to the second-largest population in the world and one of the fastest growing economies, the demand for Indian manufactured products is rising. India has room for improvement across the drivers of production, except for demand environment where it ranks in the top five.
- India needed to continue raising the capabilities of its young and fast-growing labour force. It called for upgrading education curricula, revamping vocational training programmes and improving digital skills. The

report also recommended expansion of India's energy sources and reduction of carbon emissions as its manufacturing sector continues to grow.

NATIONAL POLITY

Mankidia Tribe

- 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.
- The State Forest Department has objected on grounds that tribals could be attacked by wild animals, especially tigers
- Habitat rights would also create barriers for free movement of tigers and other animals
- Mankidia, a marginalised group that critically depends on making rope with siali fibre that's richly available in Similipal, would now be deprived of the non-timber forest produce.
- "'Habitat' as defined under Section 2(h) of 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.

About PVTGs:

- PVTGs are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.
- In this context, in 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory (UT), in the country (2011 census).
- The state governments or UT governments submit proposals to the Union Ministry of Tribal Welfare for identification of PVTGs.
- The Central Ministry then examines the proposals in consultation with the Niti Aayog. After ensuring the criteria is fulfilled, the
- Central Ministry selects those groups as PVTGs. -Particularly Vulnerable Tribal Groups in the state of Odisha, are (13); Birhor, Bondo, Didayi, Dongria-Khond, Juangs, Kharias, Kutia Kondh, Lanjia Sauras, Lodhas, Mankidias, Paudi Bhuyans, Soura and Chuktia Bhunjia.

Model code of Conduct

- The Election Commission (EC) has set up a 14-member committee to suggest changes to Section 126 of the Representation of the People (RP) Act, which prohibits poll campaign in the last 48 hours leading to voting, in the wake of media expansion.
- The committee, chaired by Deputy Election Commissioner Umesh Sinha, will submit its report within three months.

Terms of reference:

- Apart from suggesting modifications to the election law, the committee will also study the impact of new media and social media during the “silence period” and its implication in view of Section 126 and suggest changes to the model code of conduct (MCC) accordingly.
- It has also been tasked to examine the difficulties faced in regulating media platforms during the prohibitory 48 hours in a multi-phase election.

About Model Code of Conduct(MCC):

What is the Model Code of Conduct and who does it apply to?

- The MCC is a set of guidelines issued by the Election Commission to regulate political parties and candidates prior to elections, to ensure free and fair elections. This is in keeping with Article 324 of the Constitution, which gives the Election Commission the power to supervise elections to the Parliament and state legislatures.

Key provisions of the Model Code of Conduct?

- **General Conduct:** Criticism of political parties must be limited to their policies and programmes, past record and work. Activities such as: (a) using caste and communal feelings to secure votes, (b) criticising candidates on the basis of unverified reports, (c) bribing or intimidation of voters, and (d) organising demonstrations or picketing outside houses of persons to protest against their opinions, are prohibited.
- **Meetings:** Parties must inform the local police authorities of the venue and time of any meeting in time to enable the police to make adequate security arrangements.
- **Processions:** If two or more candidates plan processions along the same route, organisers must establish contact in advance to ensure that the processions do not clash. Carrying and burning effigies representing members of other political parties is not allowed.
- **Polling day:** All authorised party workers at polling booths should be given identity badges. These should not contain the party name, symbol or name of the candidate.
- **Polling booths:** Only voters, and those with a valid pass from the Election Commission, will be allowed to enter polling booths.
- **Observers:** The Election Commission will appoint observers to whom any candidates may report problems regarding the conduct of the election.
- **Party in power:** The MCC incorporated certain restrictions in 1979, regulating the conduct of the party in power. Ministers must not combine official visits with election work or use official machinery for the same. The party must avoid advertising at the cost of the public exchequer or using official mass media for publicity on achievements to improve chances of victory in the elections. Ministers and other authorities must not announce any financial grants, or promise any construction of roads, provision of drinking water, etc. Other parties must be allowed to use public spaces and rest houses and these must not be monopolised by the party in power.
- **Election manifestos:** Added in 2013, these guidelines prohibit parties from making promises that exert an undue influence on voters, and suggest that manifestos also indicate the means to achieve promises.

Sikkim Forest Tree (Amity & Reverence) Rules 2017

- Recently the Government of Sikkim came up with a unique way of preserving trees by encouraging people to forge a relationship of brotherhood or sisterhood with trees through a practice locally known as Mith/Mit or Mitini.
- For this Sikkim government has released a notification titled “Forest Tree (Amity & Reverence) Rules 2017”.

Highlights of Sikkim Forest Tree (Amity & Reverence) Rules 2017:

- A person can adopt a tree “as if it was his or her own child in which case the tree shall be called an adopted tree.”
- A way to forge a relationship with a tree is by “preserving a tree in remembrance of a departed relative in which case the tree shall be called a smriti tree.”

- In case an individual wants to forge a relationship with a tree which does not stand on his or her land but another's, the person concerned shall execute an agreement with the owner and compensate him or her in terms of the market value of the timber or the wood contained in the tree.
- And if the person desires to enter into a relationship with a tree located on public land then permission from the said department or agency needs to be taken.
- For every clause, the Sikkim Forest Department has issued specific forms which a person will have to fill up and submit to the forest authorities.
- After verification, the Assistant Conservator of Forests will register the tree in the name of the person concerned.
- This notification is in consonance with the age-old tradition of promoting amity between man and nature, particularly trees.
- As per the Forest Survey of India, 2015 the forest cover of Sikkim is 47.80 % of the State's total geographical area. Over the past few years the State government has also started an initiative of identifying heritage trees where 21 trees of 25-ft. girth and above and 32 trees of 20-25 ft. girth have been demarcated as heritage trees.
- The Sikkim Forest Tree (Amity & Reverence) Rules also prohibit felling or damage to any tree registered as Mith/Mit or Mitini, adopted or smriti and points out that any such violation shall be treated as a forest offence.

North Koel Reservoir Project

- Memorandum of Understanding has been signed between Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, State of Bihar and State of Jharkhand for completion of balance works of North Koel reservoir project at an estimated cost of Rs. 1622.27 crore.
- A supplementary Memorandum of Agreement has also been signed between Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, National Water Development Agency, NABARD with State Governments of Bihar and Jharkhand for funding of the state share under Long Term Irrigation Fund (LTIF) for North Koel reservoir project.

About the North Koel Reservoir Project:

- The project is situated on North Koel river which is a tributary of Sone river finally joining the river Ganga.
- The North Koel Reservoir is located in the most backward tribal areas in Palamau and Garhwa districts of Jharkhand State.
- The construction was originally started in the year 1972 and continued till 1993 when it was stopped by the Forest Department, Govt. of Bihar. Since then, the work on dam is at a standstill.
- The major components of project are: 67.86 m high and 343.33 m long concrete dam called Mandal dam originally intended to store 1160 million cubic metre (MCM) water; 819.6 m long barrage at Mohammadganj, 96 km downstream of the dam; and two canals originating from left and right banks of Mohammadganj Barrage with distributaries system for irrigation.
- With the new lowered elevation level (EL) of 341 metre, the Mandal dam will now have storage of 190 MCM.
- The project aims to provide irrigation to 111,521 hectares of land annually in the most backward and drought prone areas of Palamu & Garhwa districts in Jharkhand and Aurangabad & Gaya districts in Bihar.
- The total cost of the project as assessed on date is Rs 2391.36 crore. An expenditure amounting to Rs. 769.09 crore has been incurred on the project till date.

All India Whips' Conference

- The 18th All India Whips' Conference was recently inaugurated at Udaipur, Rajasthan. The conference is hosting around 90 Delegates belonging to 19 States and Centre.
- The purpose of this conference is to strengthen the parliamentary democracy, its institutions and ultimately serve the people at large.
- The conference provides a platform to Whips of various political parties – ruling as well as opposition at the Centre as well as the States to exchange their views and experiences and discuss the challenges facing them in discharge of their Parliamentary duties and evolve norms for efficient working of parliamentary machinery.

About Whip:

- A whip is the instruction issued by political parties to vote according to the party line in a legislature. Violation of the party whip could lead to expulsion under the Anti Defection Act.
- Sometimes political parties decide on a particular course of action, but may not issue a whip to enforce it.
- But usually, in case of an important vote, a whip is issued.

A whip is of three kinds:

- A one-line whip is non-binding, and merely serves to inform the members of the vote.
- A two-line whip seeks attendance in the legislature during the vote.
- A three-line whip is a clear-cut directive, to be present in the legislature during the vote and cast vote according to the party line. Violation of the whip could lead to the member's expulsion from the House.

Analysis:

- In the parliamentary form of Government, Whips of various political parties are the vital links of the internal organization of parties, inside the legislatures.
- The efficient and smooth functioning of Parliament and State Legislatures depends, to a considerable extent, upon the office of the Whip. The Whips can be rightly said to be the managers of the parties within the legislatures.
- Both the ruling as well as opposition parties appoint their whips and certain duties are common to the whips of all parties.
- But Government Chief Whip has some very important duties. The most important duty is mapping out the time of the session, coordinating, monitoring and management of the business of the Government.
- Another important function of the Government Chief Whip is to constantly feel the pulse of the House and to render an account of the same to the Leader of the House/Government.
- The Government whips also act as an important communication link between the leader of the House and the Members of the ruling party and also keep in close touch with the whips of the other parties on matters concerning the business of the House as also on many other matters relating to the House as a whole.
- Whips of the opposition parties have an equally important role. They supply their members with all important information and ensure the presence and participation of members of the respective parties in the House specially during important discussions and voting.
- They play an equally important role in maintaining the standard of debates at a high level in the Parliament/Legislatures.
- They also interact with the presiding officers and the secretariat of the concerned House on behalf of their parties and members to ensure efficient coordination vis a vis the complex requirements of parliamentary procedures, practices and conventions.

Supreme Court sets aside order cancelling larger tobacco health warnings

- 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 foregrounded the health of citizens over the concerns of the tobacco industry.

- 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 Cigarette and other Tobacco Products (Packaging and Labelling) Amendments Rules, 2014 were framed under the Cigarette and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003.

Analysis:

- Health of a citizen has primacy and he or she should be aware of that which can affect or deteriorate the condition of health.
- The court's decision comes as a relief for health advocates and federal 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.
- India's tobacco packaging rules are among the world's most stringent. A government survey last year found that 62 percent of cigarette smokers thought of quitting because of such warning labels on the packets.
- The court's decision is a blow to cigarette makers such as India's ITC Ltd and Philip Morris International Inc's Indian partner, Godfrey Phillips India Ltd, whose representatives call the rules extreme. In protest at the health warning measures, the industry briefly shut its factories across the country in 2016 and filed dozens of legal cases.

BharatNet

- 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 network built under Phase 1 envisages delivery of high-speed broadband services in over 2.5 lakh villages benefitting more than 200 million rural Indians.

About BharatNet project:

- The BharatNet project, earlier known as National Optical Fibre Network (NOFN), was initiated in 2011 and has already missed several deadlines. The project was to be funded by Universal Service Obligation Fund with the aim of providing broadband connectivity to over 2 lakh gram panchayats (GPs).
- It aimed to leverage the existing fibre optical network of Central utilities — BSNL, RailTel and Power Grid — and laying incremental fibre wherever necessary to bridge the connectivity gap between panchayats and blocks.
- Bharat Broadband Network Ltd (BBNL), a special purpose vehicle was created under the Companies Act of 1956 for execution of the NOFN project.
- Once implemented, the project is intended to enable the Centre to provide e-services and e-applications nationally and a minimum of 100 Mbps bandwidth is to be made available at each GP with non-discriminatory access to the network for all categories of service providers.
- The project, having missed several deadlines, is unlikely to be completed by its deadline of December 2016.
- While in 2014-15, plans were afoot to execute work for 1 lakh GPs (Gram Panchayats), which was later scaled down to 50,000 GPs, data up to March 2015 showed that only about 20,000 GPs had been covered under the NOFN — just about 40 per cent of the planned target. As on December 6, 2015, optical fibre cable (OFC) laying in 32,272 GPs had been completed and 76,624 kilometer fibre laid, according to latest government data.

Pratyush

- India has unveiled Pratyush, 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 reflects the computing capacity of a system.
- The machines will be installed 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.
- 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.
- India had till now occupied the eighth position with a capacity of 1 Petaflop. With the new system, it has now jumped over Korea (4.8 Petaflop), France (4.4 Petaflop) and China (2.6 Petaflop).

Application:

- This would help the country with better forecasts in terms of monsoon, extreme events, tsunamis, cyclones, earthquakes, air quality, lightning, fishing, hot and cold waves, flood and drought among others.
- This will also be used in coordination with the Indian Meteorological Department (IMD) and other weather monitoring institutes, to evolve better weather monitoring practices and an improved weather forecasting system.

Virtual Identity of Aadhaar

- The Unique Identification Authority of India (UIDAI), has announced a new method of identification called Virtual Identity — or VID.
- New VID system will hide the Aadhaar number from the authenticating agency, while still confirming the identity of the user.

What is VID?

- VID will be a 16-digit number, which will be temporary in nature. So, unlike the 12-digit Aadhaar number that is permanent, the VID will have a certain period of validity, at the end of which it will expire, and the user will have to generate a new one.
- A VID will automatically expire when a user generates a new one, as there can only be one valid VID number against a particular Aadhaar number at any given point in time.
- VID “is only mapped with the Aadhaar number”. So, while the VID will help confirm your identity to the AUA (for example, a bank), it will not necessarily share your Aadhaar number and other data with the AUA. But more on this in the answer to a later question.

How will the public generate the VID?

- No documents or proof will be needed to generate a VID. But an Aadhaar number will be essential.
- Users will be able to generate the VID from the Aadhaar resident portal, Aadhaar Enrolment Centres, and the mAadhaar app on Android.
- Once the new system comes into effect, all agencies will have to provide this as an option, instead of just relying on the Aadhaar number. However, UIDAI has not so far listed the detailed steps to generate the VID, and how users can complete the process to mask their Aadhaar number from the agencies that demand it.

Monuments Bill, 2017

- The Ancient Monuments and Archaeological Sites and Remains (Amendment) Bill, 2017 was passed by Lok Sabha. This bill amends the Ancient Monuments and Archaeological Sites and Remains Act, 1958.

The Ancient Monuments and Archaeological Sites and Remains (Amendment) Bill, 2017:

- **Construction in ‘prohibited areas’:** The Act defines a ‘prohibited area’ as an area of 100 meters around a protected monument or area. The central government can extend the prohibited area beyond 100 meters.

The Act does not permit construction in such prohibited areas, except under certain conditions. The Act also prohibits construction in 'prohibited areas' even if it is for public purposes.

- The Bill amends this provision to permit construction of public works in 'prohibited areas' for public purposes.
- **Definition of 'public works':** The Bill introduces a definition for 'public works', which includes the construction of any infrastructure that is financed and carried out by the central government for public purposes. This infrastructure must be necessary for public safety and security and must be based on a specific instance of danger to public safety. Also, there should be no reasonable alternative to carrying out construction in the prohibited area.
- Procedure for seeking permission for public works: As per the Bill, the relevant central government department, that seeks to carry out construction for public purposes in a prohibited area, should make an application to the competent authority.
- If there is any question related to whether a construction project qualifies as 'public works', it will be referred to the National Monuments Authority. This Authority, will make its recommendations, with written reasons, to the central government. The decision of the central government will be final.
- If the decision of the central government differs from that of the Authority, it should record its reasons in writing.
- This decision should be communicated by the competent authority, to the applicant, within 10 days of receiving it.
- Impact assessment of proposed public works: The Bill empowers the National Monuments Authority to consider an impact assessment of the proposed public works in a prohibited area, including its (i) archaeological impact; (ii) visual impact; and (iii) heritage impact.
- The Authority will make a recommendation, for construction of public works to the central government, only if it is satisfied that there is no reasonable possibility of moving the construction outside the prohibited area.

Analysis:

- Historians and archaeologists have expressed concern over amendments proposed to the Ancient Monuments and Archaeological Sites and Remains Act (1958). If the related Bill is passed in the Upper House, it could have disastrous consequences for historical monuments, they fear.
- The Act, which originally instituted conservation measures and banned construction activities near protected monuments, is now sought to be amended so that public works could be allowed within the 100 m prohibited zone.
- A historical monument has to be conserved by leaving enough space around it; otherwise the monument itself may decay once you allow buildings to come up next to it. If you want people to appreciate the monument you should allow visitors to associate it with its neighbourhood by leaving space around the structure.
- The pressures of urban development have meant that more and more historical monuments are coming under threat due to development activities around them.
- Rapid urbanisation also threatened many sites of historical importance, for example megalithic sites (Iron Age burials) en route Chengalpattu from Chennai.
- Even a Neolithic site near the Murugan temple in a hillock in Kundrathur is now missing due to urban settlements springing up there.

In 2013, after a CAG report raised an alarm that 92 historical monuments had gone "missing" due to development activities around them, the ASI started a ground survey to verify them, and found that 21 had indeed become untraceable.

INTERNATIONAL AFFAIRS

India rejects US solar claim at WTO

- India has rejected the claim of US on its solar power policies at the World Trade Organization.
- According to India it had changed its rules to conform with the ruling and US claim for punitive trade sanctions was groundless.

Background:

- Renewable energy has become an area of severe trade friction as major economies compete to dominate a sector that is expected to thrive as reliance on coal and oil dwindles.
- India unveiled its national solar programme in 2011, seeking to ease chronic energy shortages in Asia's third-largest economy without creating pollution.
- But the United States complained to the WTO in 2013, saying US solar exports to India had fallen by 90 percent. The WTO judges agreed that India had broken the trade rules by requiring solar power developers to use Indian-made cells and modules.
- In a separate move that could protect its solar industry from global competitors, not only US rivals, India told the that it was considering the case for imposing temporary emergency tariffs on solar cells, modules and panels, after a petition from the domestic industry.
- Safeguard tariffs are permitted by the WTO if there is evidence of serious harm, or threat of serious harm, to a country's production from a sudden, unforeseen surge in imports.

About the National Solar Mission:

- The National Solar Mission was launched on the 11th January 2010.
- The Mission has set the ambitious target of deploying 20,000 MW of grid connected solar power by 2022 is aimed at reducing the cost of solar power generation in the country through (i) long term policy; (ii) large scale deployment goals; (iii) aggressive R&D; and (iv) domestic production of critical raw materials, components and products, as a result to achieve grid tariff parity by 2022.
- Mission will create an enabling policy framework to achieve this objective and make India a global leader in solar energy.
- Further, Government has revised the target of Grid Connected Solar Power Projects from 20,000 MW by the year 2021-22 to 100,000 MW by the year 2021-22 under the National Solar Mission and it was approved by Cabinet on 17th June 2015.

SCIENCE AND TECHNOLOGY

ISRO Launches Its 100th Satellite

- Space agency ISRO has successfully launched a rocket carrying India's 100th satellite along with 30 others, four months after failed launch.

About PSLV C40:

- The 30 other satellites include two other satellites from India and 28 satellites from six countries -- Canada, Finland, France, Korea, the United Kingdom and the United States.
- This mission was a unique one, since the satellites were launched in two orbits. Thirty of the satellites were launched in an orbit 550 km about, and one 359-km above the Earth.

- This was done through what scientists call the "multiple burn technology" under which the rocket's engine is switched off and then switched on to control its height.
- The whole process of placing the satellites in two orbits will take 2 hours 21 minutes -- the longest so far. The 28-hour countdown for the launch of the PSLV started at 5.29 am on Thursday.
- The 710-kg earth observation satellite the PSLV is carrying the third in the Cartosat 2 series. The last satellite of the series had been launched successfully in June 2016.
- ISRO had brushed off speculations of sabotage after the last satellite launch failure. Scientists said a tiny but vital equipment of the rocket had failed, due to which its protective heat shield could not be separated.
- The heat shield of a satellite is meant to protect it from the heat generated by the friction against atmosphere during take-off. The launch became necessary after three atomic clocks of one satellite started malfunctioning. Atomic clocks provide navigational data, and they are crucial for a Global positioning system.
- NAVIC, a system of seven satellites, powers India's powerful homegrown Global Positioning System.

SPARCS

- It is a small telescope into the Earth's orbit that will monitor the flares and sunspots of small stars to assess how habitable the environment is for planets orbiting them. The spacecraft is known as the Star-Planet Activity Research CubeSat, or SPARCS.

About SPARCS:

- The spacecraft, known as the Star-Planet Activity Research CubeSat, or SPARCS, is a new NASA-funded space telescope and will be launched in 2021.
- The mission, including spacecraft design, integration and resulting science, is led by Arizona State University's School of Earth and Space Exploration (SESE).
- The stars that SPARCS will focus on are small, dim, and cool by comparison to the Sun. Having less than half the Sun's size and temperature, they shine with barely one per cent its brightness.
- Astronomers have discovered that essentially every M dwarf star has at least one planet orbiting it, and about one system in four has a rocky planet located in the star's habitable zone.
- This is the potentially life-friendly region where temperatures are neither too hot nor too cold for life as we know it, and liquid water could exist on the planet's surface.
- Since M dwarfs are so plentiful, astronomers estimate that our galaxy alone contains roughly 40 billion rocky planets in habitable zones around their stars. This means that most of the habitable-zone planets in our galaxy orbit M dwarfs.
- In fact, the nearest one, dubbed Proxima b, lies just 4.2 light-years away, which is on our doorstep in astronomical terms. So as astronomers begin to explore the environment of exoplanets that dwell in other stars' habitable zones, M dwarf stars figure large in the search, researchers said.
- The heart of the SPARCS spacecraft will be a telescope with a diameter of nine centimetres plus a camera with two ultraviolet-sensitive detectors to be developed by NASA's Jet Propulsion Laboratory.
- Both the telescope and camera will be optimised for observations using ultraviolet light, which strongly affects the planet's atmosphere and its potential to harbour life on the surface.

Seasonal affective disorder (SAD)

- According to a recent study, in India, more than 10 million people suffer from a self-diagnosable ailment called Seasonal affective disorder (SAD). Its milder version usually resolves itself within months.

What is Seasonal affective disorder (SAD)?

- SAD is not a separate entity of depression but should be seen as a sub-type. This is prevalent in people who are already under the spectrum of depression. Though more prevalent in countries where there are larger spans of winter, we are coming across several cases in North India too.

- Symptoms include fatigue, depression, a feeling of hopelessness and social withdrawal. Women are overwhelmingly more susceptible to SAD than men. Statistics released by the Indian Medical Association (IMA) show that SAD occurs four times more often in women than in men. The age of onset is estimated to be between 18 and 30 years but can affect anyone irrespective of age.
- The human body, its metabolism, and hormones react to changing seasons. This further leads to changes in mood and behaviour. Just as certain people become irritable and aggressive in summer, others feel low and lethargic during the monsoon and winter.”
- The dip in mood apart, they also perceive and have an increased need for sleep and food, particularly carbohydrates, which can eventually lead to weight gain. Women are much more likely than men to experience seasonal variations in depressive symptoms, with these symptoms peaking during the winter months.
- SAD generally starts in late fall and early winter and goes away during spring and summer. Depressive episodes linked to summer can occur, but are much rarer than winter episodes.

Prevention and treatment

- A few ways in which people can prevent winter depression include ensuring a healthy and balanced diet.
- Staying well hydrated is key during the winter months since it gives you more energy, mental clarity and an enhanced digestive function.
- Getting enough sunlight and engaging in regular outdoor physical exercise are also important.
- People have the tendency to isolate themselves from everyone during the winter months. It is extremely important to maintain one’s activity level to avoid depression.
- Treatment for SAD involves enough light exposure, artificial light exposure, sun therapy and drugs, if needed. Artificial light exposure is effective but may take four to six weeks to see a response, although some patients improve within days. Therapy is continued until sufficient and daily natural sunlight exposure is available.

India misses Kala Azar elimination deadline

- India has missed the 2017 deadline that Finance Minister Arun Jaitley had announced for elimination of Kala Azar (black fever) in his Budget speech last year.
- In fact, endemic blocks have increased from 61 to 68 in 17 districts of Bihar and Jharkhand.
- Elimination is defined as reducing the annual incidence of Kala Azar (KA) to less than 1 case per 10,000 people at the sub-district level.
- Further, a little-known skin condition called Post Kala Azar Dermal Leishmaniasis (PKDL) — a red flag for transmission of KA — has been growing steadily over the past few years.
- KA is a slow progressing indigenous disease caused by a single-celled parasite of the Leishmania family.
- KA vector needs to be eliminated to eliminate Kala Azar. As the endemic blocks have majority of houses made from wood, it is very difficult to eliminate the vector as it dwells in the wooden structure and escapes various measures to kill it. Hence, to stop the infection transmission, pucca houses need to be built. Secondly even after treatment of Kala Azar patients, it is the PKDL cases which become a source for future KA cases

About Kala Azar:

- Visceral leishmaniasis (VL), also known as kala-azar, black fever, and Dumdum fever, is the most severe form of leishmaniasis and, without proper diagnosis and treatment, is associated with high fatality.
- It is caused by protozoan parasites of the Leishmania genus. migrates to the internal organs such as the liver, spleen (hence “visceral”), and bone marrow
- Signs and symptoms include fever, weight loss, fatigue, anemia, and substantial swelling of the liver and spleen.

- World's largest solar thermal plant to be built in : **South Australia**
- In Global Manufacturing index 2017, rank of India is: **30**
- India recently unveiled its fastest supercomputer which is : **Pratyush**.
- Defence Innovation Centre to be set up at : **Coimbatore**
- 70th Army Day is observed on: **15 January 2018**
- New MD & CEO of NPCI: **Dilip Asbe**