

Abhimanu

Weekly current affairs Series

Week: I, Dec 2016

Abhimanu's IAS Study Group

Chandigarh

NATIONAL ECONOMIC AFFAIRS

India crossed the \$300 billion foreign direct investment (FDI) milestone

- India has crossed the \$300 billion foreign direct investment (FDI) milestone between April 2000 and September 2016, firmly establishing its credentials as a safe investment destination in the world.
- 33% of the FDI came through the Mauritius route, apparently because the investors wanted to take advantage of India's double taxation avoidance treaty with the island nation.
- India received \$101.76 billion from Mauritius between April 2000 and September 2016. The cumulative FDI inflows during the period amounted to \$310.26 billion.
- The other big investors have been from Singapore, the US, UK and the Netherlands.
- India's services sector topped the table, receiving 18 per cent of the cumulative equity FDI inflows followed by construction development, computer software & hardware, telecommunication and automobile.
- India crossed the \$300 billion mark at a time when the global economic slowdown has had a dampening impact on FDI flows which are expected to fall this year.
- According to the World Investment Report 2016, global FDI flows rose by 38 per cent to \$1.76 trillion, the highest level since the global economic and financial crisis began in 2008.

Analysis:

- Liberalisation of the FDI policy framework, major national development programmes such as Make in India, Digital India and Skill India, besides increasing competitiveness, have made India the preferred choice for investors globally.
- FDI flows have increased significantly and consistently in the last two years and the country would continue to remain as one of the most attractive destinations in the foreseeable future
- Global investor sentiment is positive about India being a safe investment haven, despite the global economic climate remaining uncertain.
- According to United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2016, India acquired 10th slot in the top 10 countries attracting highest FDI inflows globally in 2015. The report also mentioned that among the investment promotion agencies, India has moved up by one rank to become the sixth most preferred investment destination.
- India will require around US\$ 1 trillion in the 12th Five-Year Plan (2012–17), to fund infrastructure growth covering sectors such as highways, ports and airways. This would require support from FDI flows. India's growth rate, along with competitive location in terms of wages and policies like Stand Up India, is expected to boost FDI in the coming future.
- However, The FDI flows in 2016 are expected to decline by 10-15%, reflecting fragility of global economy, persistent weakness of aggregate demand, effective policy measures to curb tax inversion deals. Besides, elevated geopolitical risks and regional tensions may further amplify the expected downturn of FDI flows.

Eco-Sensitive Zone

- The Government has issued the final Notification for an Eco-Sensitive Zone area of 59.46 sq kms of which 19.25 sq km is forest land and 40.21 sq km is non-forest land in Sanjay Gandhi National Park in Mumbai suburb.

About Sanjay Gandhi National Park

- Sanjay Gandhi National Park is spread over three districts – Palgar, Thane and Mumbai Suburb and falls within the Tehsils of Kurla, Borivalli and Thane.
- The National Park is home to a number of endangered species of flora and fauna and harbours approximately 800 species of flowering plants, 45 species of mammals, 43 species of reptiles, 38 species of snakes, 12 species of amphibians, 300 species of birds, 150 species of butterflies. Notable amongst them are large mammalian species such as leopard, wild boar, four-horned antelope, black-naped hare, wild cat, jackal and porcupine and many bird species such as Lesser grebe, Purple Heron, Smaller Egret, Lesser Whistling Teal, Pariah Kite. Many reptiles, including snakes as Indian Cobra and Viper are also found in the National Park.

About ESZ:

- Eco-sensitive zones (ESZs) around Protected Areas are created to prevent ecological damage caused due to developmental activities around National Parks and Wildlife Sanctuaries.
- These areas act as a “shock absorbers” to the protected areas by regulating and managing the activities around such areas.
- Activities, including commercial mining, setting of saw mills and industries causing pollution, commercial use of firewood and major hydro-power projects, are prohibited in such areas.
- It also prohibits tourism activities like flying over protected areas in an aircraft or hot air balloon, and discharge of effluents and solid waste in natural water bodies or terrestrial areas.
- Felling of trees, drastic change in agriculture systems and commercial use of natural water resources, including groundwater harvesting and setting up of hotels and resorts, are the activities regulated in the areas.
- Activities permitted in the areas include ongoing agriculture and horticulture practices by local communities, rainwater harvesting, organic farming, adoption of green technology and use of renewable energy sources.
- The Eco-Sensitive Zone has a minimum extent of 100 metres and maximum extent of up to 4 km from the Park boundary

Fifth Bi-monthly Monetary Policy Statement, 2016-17

- The Reserve Bank of India, in its fifth bi monthly monetary policy statement, kept repo rate unchanged at 6.25 per cent.
- Reverse repo rate under the LAF also remains unchanged at 5.75 per cent along with the marginal standing facility (MSF) rate and the Bank Rate at 6.75 per cent.
- Central bank has decided to withdraw the incremental Cash Reserve Ratio (CRR) from December 10.
- In its policy review, the RBI also lowered GDP growth estimate to 7.1 per cent in 2016-17 from an earlier projection of 7.6 per cent.

Analysis:

- Global growth picked up modestly in the second half of 2016, after weakening in the first half. Activity in advanced economies improved hesitantly, led by a rebound in the US. In the emerging market economies, growth has moderated, but policy stimulus in China and some easing of stress in the larger commodity exporters shored up momentum. World trade is beginning to emerge out of a trough that bottomed out in July-August and shows signs of stabilising.
- International financial markets were strongly impacted by the result of the US presidential election and incoming data that raised the probability of the Federal Reserve tightening monetary policy.
- On the domestic front, the growth of real gross value added (GVA) in Q2 of 2016-17 turned out to be lower than projected on account of a deeper than expected slowdown in industrial activity. Manufacturing

slowed down both sequentially and on an annual basis, with weak demand conditions and the firming up of input costs dragging down the profitability of corporations. Gross fixed capital formation contracted for the third consecutive quarter. Although government final consumption expenditure slowed sequentially, it supported private final consumption expenditure, the mainstay of aggregate demand. The contribution of net exports to aggregate demand remained positive, but on account of a sharper contraction in imports relative to exports.

- Industrial activity remains very weak. Among the core industries in the index of industrial production (IIP), the output of coal contracted in October due to subdued demand, while the production of crude oil and natural gas shrank under the binding constraint of structural impediments.
- The production of cement, fertilisers and electricity continued to decelerate, reflecting the sluggishness in underlying economic activity. On the other hand, steel output has recorded sustained expansion following the application of countervailing duties.
- Services sector, the outlook is mixed with construction, trade, transport, hotels and communication impacted by temporary SBN effects, while public administration, defence and other services would continue to be buoyed by the 7th Central Pay Commission (CPC) award and one rank one pension (OROP).

A Step toward Cashless economy

- In a bid to make Indian economy cashless, Indian government has planned a series of steps to increase the awareness of people in this regard . These include incentives for digital payments, day to day financial transactions like buying or selling goods/services, transferring money etc.

These incentives/measures are following:

- The Central Government Petroleum PSUs shall give incentive by offering a discount at the rate of 0.75% of the sale price to consumers on purchase of petrol/diesel if payment is made through digital means. Nearly 4.5 crore customers buy petrol or diesel at such petrol pumps per day who can take benefit of this incentive scheme. It is estimated that petrol/diesel worth Rs.1800 crore is sold per day to the customers out of which nearly 20% was being paid through digital means. In the month of November 2016 it has increased to 40% and the cash transaction of Rs.360 crore per day have got shifted to cashless transaction methods. The incentive scheme has the potential of shifting at least 30% more customer to digital means which will further reduce the cash requirement of nearly Rs. 2 lakh crore per year at the petrol pumps.
- To expand digital payment infrastructure in rural areas, the Central Government through NABARD will extend financial support to eligible banks for deployment of 2 POS devices each in 1 Lakh villages with population of less than 10,000. These POS machines are intended to be deployed at primary cooperative societies/milk societies/agricultural input dealers to facilitate agri-related transactions through digital means. This will benefit farmers of one lakh village covering a total population of nearly 75 crore who will have facility to transact cashlessly in their villages for their agri needs.
- The Central Government through NABARD will also support Rural Regional Banks and Cooperative Banks to issue "Rupay Kisan Cards" to 4.32 crore Kisan Credit Card holders to enable them to make digital transactions at POS machines/Micro ATMs/ATMs.
- Railway through its sub urban railway network shall provide incentive by way of discount upto 0.5% to customers for monthly or seasonal tickets from January 1, 2017, if payment is made through digital means. Nearly 80 lakh passengers use seasonal or monthly ticket on suburban railways, largely in cash, spending worth nearly Rs.2,000 crore per year. As more and more passengers will shift to digital means the cash requirement may get reduced by Rs.1,000 crore per year in near future.
- All railway passengers buying online ticket shall be given free accidental insurance cover of upto Rs. 10 lakh. Nearly 14 lakh railway passengers are buying tickets everyday out of which 58% tickets are bought online through digital means. It is expected that another 20% passengers may shift to digital payment methods of buying railway tickets. Hence nearly 11 lakh passengers per day will be covered under the accidental insurance scheme.

- For paid services e.g. catering, accommodation, retiring rooms etc. being offered by railways through its affiliated entities/corporations to the passengers, it will provide a discount of 5% for payment of these services through digital means.
- All the passengers travelling on railways availing these services may avail the benefit.
- Public sector insurance companies will provide incentive, by way of discount or credit, upto 10% of the premium in general insurance policies and 8% in new life policies of Life Insurance Corporation sold through the customer portals, in case payment is made through digital means.
- The Central Government Departments and Central Public Sector Undertakings will ensure that transactions fee/MDR charges associated with payment through digital means shall not be passed on to the consumers and all such expenses shall be borne by them. State Governments are being advised that the State Governments and its organizations should also consider to absorb the transaction fee/MDR charges related to digital payment to them and consumer should not be asked to bear it.
- Public sector banks are advised that merchant should not be required to pay more than Rs. 100 per month as monthly rental for PoS terminals/Micro ATMs/mobile POS from the merchants to bring small merchant on board the digital payment eco system.
- Nearly 6.5 lakh machines by Public Sector Banks have been issued to merchants who will be benefitted by the lower rentals and promote digital transactions. With lower rentals, more merchants will install such machines and promote digital transactions.
- No service tax will be charged on digital transaction charges/MDR for transactions upto Rs.2000 per transaction.
- For the payment of toll at Toll Plazas on National Highways using RFID card/Fast Tags, a discount of 10% will be available to users in the year 2016-17.

Ratan Watal committee

- Ratan watal committee has submitted its report on the digital payments infrastructure to the government.
- This committee has representatives from the Reserve Bank of India (RBI), Unique Identification Authority of India (UIDAI), the tax department and various industry bodies in the payments space.

Terms of Reference for this committee:

- To study and recommend need for charges, if any, in the regulatory mechanism and any legislation, relevant for the purpose of promotion of payments by digital modes.
- To study and recommend ways for leveraging Unique Identification Number or any other proof of identity for authentication of card/digital transactions and setting up of a Centralised KYC Registry;
- To study introduction of single window system of Payment Gateway to accept all types of Cards/ Digital Payments of Government receipts;
- To study feasibility and framing rules for creating a payments history of all Digital Payments and create necessary linkage between payments transaction history and credit information;
- To study and recommend various measures to incentivize transactions through cards and digital means.
- To study global best practices in payments including initiatives taken by various Governments/ Government Agencies
- To identify market failure (s), if any, along with suitable interventions that may be implemented to promote payment by card/digital means
- To identify regulatory bottlenecks, if any, and suggest changes to promote payment by card/ digital means
- To study and make recommendations on any other matter related to promotion of payments through Cards and Digital Means

Recommendations of the report:

- In its Report, the Committee has recommended the medium term strategy for accelerating growth of Digital Payments in India with a regulatory regime which is conducive to bridging the Digital divide by promoting competition, open access & interoperability in payments.

- The Report recommends inclusion of financially and socially excluded groups and assimilation of emerging technologies in the market, while safeguarding security of Digital Transactions and providing level playing to all stakeholders and new players who will enter this new transaction space.
- It has suggested inter-operability of the payments system between banks and non-banks, up-gradation of the digital payment infrastructure and institutions and a framework to reward innovations and for leading efforts in enabling digital payments.

Government decides to print plastic currency note

- The government has decided to print banknotes based on a plastic or polymer substrate in order to make counterfeiting them more difficult.

History of plastic notes:

- The first polymer notes introduced in the world was in Australia in 1996. The then Government of Australia stated the rise in black money in the country and currency bills losing life quickly. The government then proposed costlier polymer notes with better features and long life, making Australia more business friendly.
- The Reserve Bank for long has been planning to launch plastic currency note after field trials.
- In February 2014, the government had informed Parliament that one billion plastic notes of Rs 10 denomination would be introduced in a field trial in five cities selected for their geographical and climatic diversity. The selected cities were Kochi, Mysore, Jaipur, Shimla and Bhubaneswar.

Analysis:

- Plastic notes have an average life span of about five years and are difficult to imitate. Also, currency notes made of plastic are cleaner than paper ones.
- Plastic notes will last much longer than classic paper notes (thus reducing the cost of replacement by a significant amount).
- Other than that, they won't get easily damaged by dirt and excessive handling in rough conditions.
- Another quite major feature would be that security features on these notes will be easy to verify as well as quite difficult to counterfeit.
- While on the other hand, there is higher production cost, Difficulty to fold, Hard to count as they are slippery and huge cost to recalibrate ATMs as existing machines are not compatible.

NATIONAL POLITY

Cabinet approves India's position at Kigali conference

- The Union Cabinet has given its approval to the negotiating position adopted by the Government of India at the recent Meeting of Parties (MoP) to the Montreal Protocol of the Vienna Convention for Protection of Ozone Layer that took place in October, 2016, in Kigali, Rwanda.
- The Cabinet has also approved the proposal of the Ministry of Environment, Forest and Climate Change to argue for adoption of an appropriate baseline years from out of 3 options within a range of 2024 to 2030 with freeze in a subsequent year.

- The flexibility of using any of the options within this range with a combination of the features of the proposed options in consultation with the Government has also been approved.

About Kigali agreement:

- It's been agreed that HFC manufacture and use will peak in three phases: Much of the industrialised first world will do so by 2018, China, Brazil and Africa by 2024; and India, Pakistan and many others by 2028.
- And over the years, its production and use will be made to decline to 15-20% of an agreed peak, with a different timeframe for each of these three country groupings.
- India will have to reduce its use to one-seventh its 2025 levels by 2047. They will be replaced by other refrigerants that are less harmful climatically.
- The announcement came at Kigali where 197 countries that are party to the Montreal Protocol were trying to negotiate a deal to substantially reduce the use of HFCs by 2030.
- The Kigali Amendment to the Montreal Protocol is legally binding.
- By the late 2040s, all countries are expected to consume no more than 15-20% of their respective baselines. Overall, the agreement is expected to reduce HFC use by 85% by 2045.
- As per the agreement, China, which is the largest producer of HFCs in the world, will reduce HFC use by 80% by 2045 over the 2020-22 baseline. India will reduce the use of HFCs by 85% over the 2024-26 baseline.
- The countries negotiating at Kigali also agreed to provide adequate financing for HFCs reduction—which runs in billions of dollars globally. The exact amount of additional funding will be agreed at the next meeting of the Parties in Montreal, in 2017.
- The amendment will enter into force on 1 January, 2019, provided that at least 20 instruments of ratification, acceptance or approval of the Amendment have been deposited by states or regional economic integration organisations that are parties to the Montreal Protocol on substances that deplete the Ozone Layer.

Delhi HC quashes government ban on fixed dose combination drugs

- Delhi high court has quashed the ban on Fixed dose combination (FDCs).
- The ban was imposed based on the recommendations of Kokate committee. It was imposed over fears that these drugs cause anti-microbial resistance and might even cause organ-failure because of high toxicity. It also aimed at curbing the misuse of medicines. However, the pharmaceutical companies contend that no prior enquiry was made from them or show cause notice issued prior to ban notification by the Central Government. They also held that these drugs in the same combination are being marketed in other countries.
- With this, the banned drugs – including D'Cold, Benadryl and Phensedyl that are widely used to treat headaches and colds – will continue be available freely in the market.
- The court observed that the decision was taken by the Centre without following procedure prescribed in the Drugs and Cosmetics Act. It noted that the government had not consulted the Drugs Technical Advisory Board or the Drugs Consultative Committee but had acted on the advice of a 'technical committee', which, they said, violated the provisions of the Drugs and Cosmetics Act.

Combination medicines (or fixed-dose combination [FDC] medicines) are:

- medicines containing two or more active components in fixed proportions in a single dosage form
- Several medications in fixed combination to be taken together, presented in composite packaging (co-pack).

Analysis:

- India is one of the world's largest markets for fixed dose combination drugs that make up almost half the market share but medical experts say most of them are irrational, that is they haven't been approved by the national regulator. Many of them slip through India's labyrinthine regulation process with agencies at the central and state level, which often don't coordinate.
- The development of fixed-dose combinations (FDCs) is becoming increasingly important from a public health perspective. Such combinations of drugs are being used in the treatment of a wide range of conditions and are particularly useful in the management of HIV/AIDS, malaria and tuberculosis, which are considered to be the foremost infectious disease threats in the world today.

- FDCs have advantages when there is an identifiable patient population for whom treatment with a particular combination of actives in a fixed ratio of doses has been shown to be safe and effective and when all of the actives contribute to the overall therapeutic effect. In addition there can be real clinical benefits in the form of increased efficacy and/or a reduced incidence of adverse effects, but such claims should be supported by evidence.
- Additional advantages of FDCs are potentially lower costs of manufacturing compared to the costs of producing separate products administered concurrently, simpler logistics of distribution, improved patient adherence and reduced development of resistance in the case of antimicrobials.

Amritsar Declaration

- The 6th Ministerial Conference on Heart of Asia-Istanbul process of Afghanistan adopted the Amritsar declaration to focus on concerned countries to address terrorism and enhance regional economic cooperation.
- The major issues of discussion were countering of terrorism to stabilise Afghanistan and providing connectivity to Afghanistan to strengthen economic activities and help the development process.

Highlights of the declaration:

- The declaration reaffirms the commitment to the United Nations Charter and its enshrined principles of sovereignty, independence, territorial integrity, sovereign equality of nations and non-intervention in the internal affairs of other states as well as universally recognized principles and norms of international law.
- This declaration also reaffirms commitment to the Universal Declaration of Human Rights and reiterates the importance of increased political dialogue and consultations between countries of the Heart of Asia region for a stable, peaceful and prosperous region.
- Always remain committed to resolving our differences peacefully, and refraining from threat or use of force against the political independence, territorial integrity, or sovereignty of any state.
- Always work towards regional consensus on non-interference in the internal affairs of other countries, which is critically important for good neighbourliness between countries of the region, and for peaceful co-existence as independent and sovereign nations, and re-affirm our commitment to these principles.
- Stress the need for advancing regional cooperation as an effective means to address common challenges and to promote security, stability and socio-economic development in the Heart of Asia region.
- To reaffirm appreciation and express strong and unequivocal support for the ongoing constructive efforts of the Government of Afghanistan towards regional engagement and its commitment to
- There is a concern regarding the gravity of the security situation in Afghanistan in particular and the region and the high level of violence caused by the Taliban, terrorist groups including ISIL / DAISH and its affiliates, the Haqqani Network, Al Qaida, Islamic Movement of Uzbekistan, East Turkistan Islamic Movement, Lashkar-e-Taiba, Jaish-e-Mohammad, TTP, Jamaat-ul-Ahrar, Jundullah and other foreign terrorist fighters.
- The declaration recognises terrorism as the biggest threat to peace and security. And demands immediate end to all forms of terrorism and all support financial and safe havens providing sanctuary to it.
- The declaration states the urgency to respond to the nexus between drug menace and its financial support for terrorist entities in Afghanistan.
- It also calls for early finalisation of the draft comprehensive convention on international terrorism. It also looks at the early meeting of experts to discuss a draft regional counter terrorism framework strategy, recently prepared by Afghanistan for its early finalisation.
- The declaration states the welcoming of the agreements between the international community and Afghanistan for continued financial support to the Afghanistan National Defence and Security Forces (ANDSF) until 2020.
- The declaration welcomes the MOU on Jointly Building the Silk Road Economic Belt and the 21st Century Maritime Silk Road between China and Afghanistan.

- The declaration also expressed serious concern about opium, the base material for production of heroin in Afghanistan, a large chunk of which eventually finds its way into India through Indo-Pak international border in Punjab.

About Heart of Asia:

- The Heart of Asia-Istanbul Process (HoA) was founded on November 2nd, 2011 in Istanbul, Turkey. The Heart of Asia provides a platform for sincere and results-oriented regional cooperation by placing Afghanistan at its center, in recognition of the fact that a secure and stable Afghanistan is vital to the prosperity of the Heart of Asia region.
- This platform was established to address the shared challenges and interests of Afghanistan and its neighbors and regional partners. The Heart of Asia is comprised of 14 participating countries, 17 supporting countries, and 12 supporting regional and international organizations.
- The Heart of Asia-Istanbul Process has three main pillars, which work together to build regional consensus on how we can achieve our shared goals. They include: a) Political Consultations; b) Confidence Building Measures (CBMs); c) Cooperation with Regional Organizations

Winter Fog Experiment (WIFEX 2016-17)

- To better understand the science of fog formation over New Delhi, the Ministry of Earth Sciences inaugurated the Winter Fog Campaign at the New Delhi Airport.
- Ministry of Earth Sciences (MoES) has taken up a multi-institutional initiative during winter 2016-17 to conduct an intensive ground-based measurement campaign in Delhi to understand different physical and chemical features of fog and factors responsible for its genesis, intensity and duration.
- The goal of the Winter Fog Experiment (WIFEX) is to develop methods for forecasting winter fog on various temporal and spatial scales, and help reduce its adverse impact on aviation, transportation and economy, and loss of human life due to accidents.

Analysis:

- Fog is a visible mass consisting of cloud water droplets suspended in the air or near the Earth's surface.
- The presence of heavy and extended period fog in the northern regions of India is one of the major weather hazards, impacting aviation, road transportation, economy and public life in the world's most densely populated region.
- Maximum fog occurrence over the Northwest India is about 48 days (visibility < 1000m) per year, and occurs mostly during the December-February time period.
- All India annual morning poor visibility days (PVD <4 km) has increased from 6.7 to 27.3 % days. Recent studies on fog in India during the past 10-15 years have prompted significant socio-economic concern due to increase in frequency, persistence and intensity of fog occurrence over the northern parts of the country.
- Land use changes and increasing pollution in the region are responsible for growing Fog occurrence.
- The objectives of the Winter Fog Experiment (WIFEX) are to develop better now-casting (next 6 hours) and forecasting of winter fog on various time and spatial scales, and help reduce its adverse impact on aviation, transportation and economy, and loss of human life due to accidents

Environment Ministry postpones forest policy indefinitely

- The Environment Ministry has indefinitely postponed an ambitious plan to update India's forest policy. It has also decided to abstain from committing to a timeframe by which it would have a third of India's land under forest or tree cover, a key promise of the forest policy.
- This was the first time that the policy was being re-looked since 1988 as it wanted to update the several changes in the forest laws and provide a forward-looking policy that talked about increasing India's forest cover and tackling the effects of climate change.

- The organisation had submitted its report in June this year. However, the report was later rejected by the government.

Highlights of the draft report:

- This policy proposed to levy the green tax for facilitating ecologically responsible behaviour, supplementing financial resources essential to address forestry woes.
- This policy proposes to launch a new Community Forest Management Mission, bringing government, community and private land under the new proposed management system.
- Special communities at the gram sabha (village council) level be created to take over management of forests. The plans prepared by the gram sabhas for their forestlands would also have to be vetted by the forest department based on rules prepared for the same, such as wider management plans the forest department prepares
- NFP is an overarching policy for forest management to bring a minimum one-third of India's total geographical area under forest or tree cover
- The new policy will replace the existing one that has been guiding the government to manage forests since 1988.
- The budget of the forestry sector should be appropriately enhanced so that the objectives enshrined in this policy can be achieved. Environmental cess, green tax, carbon tax etc. may be levied on certain products and services for facilitating ecologically responsible behaviour, garnering citizen's contribution and supplementing financial resources.
- The policy will guide the forest management of the country for the next 25-30 years.
- Forest land diversion projects related to mining, quarrying, construction of dams, roads and other linear infrastructure needs to adopt special caution. Use of state-of-the-art technology which causes minimum pollution and damage should be promoted."
- The draft policy also called for developing "sound eco-tourism models" with the focus on conservation while supplementing the livelihood needs of local communities. "
- The policy envisages that a national implementation framework be put in place within six months of the notification, to deliver on the commitments. It also urged states to formulate their forest policies and prepare an implementation framework.
- The policy also emphasized on large-scale expansion of agro-forestry and farm forestry through incentives and operational support systems such as lowering input costs and enabling access to reasonably priced quality planting material.
- Other ecosystems such as alpine meadows, grasslands, deserts, marine and coastal areas should be protected and managed as well
- Policy also asks for management plans for community forests, parks, garden and woodlands to be brought to manage urban forest cover and to nurture and sustain urban health, clean air and related benefits.
- National forest ecosystems management information system should be developed and made operational using the latest information and communication technology to ensure regular flow of comprehensive and reliable information. This web-based system should be available for public use.

Steps taken by government to improve Gender gap in India

- As per the Global Gender Gap Report 2016 by World Economic Forum, India ranks at 87th in respect of Global Gender Gap Index (GGI) among 144 countries of the World.
- According to the Human Development Report 2015 brought out by UNDP, India ranked 130 on the Gender Inequality Index among 155 countries.
- As per the GGR, India has climbed 21 spots to rank 87th in 2016, which is an improvement from being ranked at 108th in 2015.

Analysis:

- Government of India has taken several measures, interventions and strengthened Institutional mechanism towards the empowerment of women and for elimination of gender gap and inequality.
- ICDS(Integrated child development services) is being implemented to address the nutritional needs of children and pregnant and lactating women, Matritva Sahyog Yojana for pregnant and lactating women to improve their health and nutrition status.
- Janani Suraksha Yojana (JSY), implemented with the objective of reducing Maternal and Infant Mortality.
- Sabla scheme aims at the empowerment of adolescent girls in the age group of 11-18 years, Sarva Siksha Abhiyan (SSA) and Rashtriya Madhyamik Siksha Abhiyan (RMSA) schemes are being implemented to universalize elementary and secondary education respectively, having a strong focus on improving enrolment and retention of girls.
- Support to Training & Employment programme for Women (STEP) scheme aims to ensure sustainable employment and income generation for marginalized and asset-less rural and urban women.
- The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) helps in economic and social empowerment of women.
- The Ministry of Women and Child Development is implementing the following schemes to reduce gender gap and promote gender sensitization; i)The Beti Bachao Beti Padhao has been launched to address the issue of declining Child Sex Ratio on a life cycle continuum basis. ii) One Stop Centres integrated with Women Helpline (181) have been established across the country to provide integrated support and assistance to women affected by violence, iii) Engagement of Mahila Police Volunteers has been initiated to act as a link between police and public.
- Several steps and initiatives have also been taken up in school education system such as National Curriculum Framework (NCF) 2005 and flagship programme like Sarva Shiksha Abhiyan (SSA) and the subsequent Right to Education Act (RTE). Kasturba Gandhi Balika Vidyalayas (KGBVs) have been opened in Educationally Backward Blocks (EBBs).
- Gender Sensitisation is also done through Rashtriya Madhyamik Shiksha Abhiyan (RMSA) which includes Gender sensitization Module- part of In-service training, Construction for toilet for girls, Construction of residential quarters for female teachers and Curriculum Reforms.

FSSAI decides to ban use of newspapers for packing food

- FSSAI decides to ban use of newspaper for packing food due to the food contamination from newspaper ink.
- FSSAI asked state authorities to create awareness among food business operators, especially unorganised ones, as well as consumers about harmful effects of using newspaper as food packaging material.
- FSSAI asked commissioners of food safety of all states and Union territories to take necessary steps to restrict the use of newspapers for packing, serving and storing of food items as the newspaper ink can contaminate food items leading to serious health concerns.
- According to estimates by the Union housing ministry, in 2014 there were 10 million street vendors, mostly in cities.
- The food safety regulator, however, is yet to declare imposition of penalty for non-compliance.
- This is the first time in recent years FSSAI is bringing a new rule relating to packaging of food items. So far, the regulator focused on setting standards for packaged food.
- The Indian government has been trying to ban use of plastic bags for storage and transport of goods. The government had in October 2012 issued a notification declaring a blanket ban on use of plastic bags. But it has not been implemented as manufacturers of plastic bags moved the Delhi High Court against the order almost immediately, and the court is yet to rule on the issue.

Analysis:

- Printing ink, usually used for printing newspapers, may contain bioactive materials, harmful colours, pigments, binders, additives, preservatives, chemical contaminants and even pathogenic microorganisms that may pose potential risk to human health

- Newspapers and even paper or cardboard boxes made of recycled paper may be contaminated with metallic contaminants, mineral oils and harmful chemicals like phthalates which can cause digestive problems and also lead to severe toxicity.
- Wrapping food in newspapers is an unhealthy practice and the consumption of such food is injurious to health, even if the food has been cooked hygienically. Indians are being slowly poisoned due to newspapers being widely used as food packaging material by small hotels, vendors and also in homes in lieu of absorbent paper.
- Older people, teenagers, children and people with compromised vital organs and immune systems are at a greater risk of acquiring cancer-related health complications, if they are exposed to food packed in such materials.

India Social Development Report (SDR)

- With the objective of bridging the gap between the mainstream social rights activists and disability rights groups, the Council for Social Development released its India Social Development Report 2016, with the theme 'Disability Rights Perspectives'.
- The report has focussed on the theme with the ultimate objective of persuading more and more people to dismantle boundaries between mainstream social rights activism and disability rights groups.

Highlights of the report:

- About 45% of all persons with disabilities (PWD) in India are illiterate. While 38% of all male PWDs were illiterate, the illiteracy rate was 55% for female PWDs.
- Each category of disability, a greater proportion of women in that category are illiterate than men, with 76% of women with multiple disabilities being illiterate.
- It estimated that of the 75 million children of primary school age who are out of school, "one-third is children with disabilities."
- The number of PWDs in India at 26.8 million, or 2.2% of the population, noting that this might be an underestimate. The World Bank had put the number at 4-8% of the population. Men formed 56% of the PWDs, and 70% of the disabled population was rural.
- Movement disability accounted for the largest number of PWDs, followed by hearing disability and visual impairment. The report noted that the high incidence of polio in India may be responsible for the high proportion of movement disability.
- While movement disability accounted for 20% of all disabled children, of the 2 million children in the age-group of 0 to 6 who were disabled, it was down to 9%. This difference could be due to the effectiveness of the polio immunisation program, the report said.
- 64% of the PWDs in India were non-workers. Of the rest, the majority were only able to find employment as casual labourer or agricultural labourer. Among the States, Tamil Nadu had the least terrible record in providing employment for the PWDs, with 59% of the PWDs being non-workers.
- At the national level, only 2% of the PWDs were enrolled in any vocational course, with the highest rate of enrolment being in Kerala, where 5% were enrolled in vocational courses.
- Lack of social services and transport were the top obstacles to the PWDs accessing health care facilities.

Analysis:

- Women with disabilities experience combined disadvantages associated with recognition of their sexuality, higher rates of violence, a lack of legal capacity, neglect and exploitation, which impacts their aspirations and their voice. The discrimination and disadvantage experienced by women with disabilities in India have largely gone unaddressed and unacknowledged by a 'gender-neutral' disability service, legislation and policy.
- There are about 200 laws pertaining to people with an unsound mind. The legal capacity of such persons was also greatly curbed. They are denied the right to vote and the right to work. So the report seeks both

justice and dignity for such women.

- Some NGOs have cultivated vested interests when it comes to educating children with disability and do not want them to get into the formal schooling system. In case of persons with disability, their attendance was more important than their enrolment in schools because they drop out due to various reasons. There are nearly 8 million children out of school and among PWDs, the percentage of out of school children is very high.

INTERNATIONAL AFFAIRS

India, Qatar inks five agreements

- India and Qatar have signed five agreements including in the field of visas, cyberspace and investments. These agreements were signed after bilateral talks held between Prime Minister Narendra Modi and his Qatari counterpart Sheikh Abdullah bin Nasser bin Khalifa Al Thani in New Delhi.

Signed Agreements are

- Protocol on Technical Cooperation in cyber space and combating cybercrime.
- Letter of Intent on an Agreement on grant of e-Visa for businessmen and tourists.
- MoU on greater collaboration and exchange in the field of national ports management.
- Agreement on exemption from visa requirement for holders of diplomatic, special and official passports.
- MoU between Qatar's Supreme Committee for Delivery and Legacy and Confederation of Indian Industry (CII).

Analysis:

- India sources nearly 80% of its global import of LNG from Qatar, and also imports ethylene, propylene, ammonia, urea and polyethylene from Qatar, the balance of trade continues to be heavily in Qatar's favour.
- However, in the last two years, there has been a substantial growth of India's exports, amounting to nearly \$1 billion out of two-way trade of nearly \$17 billion in 2013-14, registering an export growth of 45% over the export figure (\$687 million) in 2012-13.
- In 2014-15, India's exports exceeded \$1 billion (\$1056 million), though bilateral trade came down to \$15.7 billion due to decline in Qatar's exports to India from \$15.7 billion in 2013-14 to \$14.6 billion in 2014-15.
- Major items of Indian exports are machinery & equipment, transport equipment, articles of iron or steel, plastic & articles thereof, construction material, electrical and electronic items, textiles & garments, chemicals, precious stones, rubber, spices and cereals.
- India is the third largest export destination for Qatar (behind Japan and South Korea) and ranks at 10th position for Qatar's imports.
- Both countries are keen to expand collaborations to their mutual benefit in the fields of energy; business, finance and investments; infrastructure; education and research; sports; travel and tourism; and other areas. Besides official interactions, people-to-people contacts and initiatives by private sector are energising dialogue and cooperation in various sectors.

Colombia's Congress approves revised deal with FARC

- The Congress of Colombia approved the revised peace deal with the Revolutionary Armed Forces of Colombia (FARC) rebel group.

- The approval comes after Juan Manuel Santos, President of Colombia, and Rodrigo Londono, the leader of the FARC signed a revised peace agreement on 24 November 2016.
- The revised accord was Colombian Government's second attempt to end Latin America's longest-running conflict, which has killed around 220000 people.
- The previous deal, which was signed in September 2016, was rejected narrowly by the citizens of Colombia in a popular vote held in October 2016.

About Columbian Conflict:

- Colombia is in the midst of a half-century long conflict between the government and several guerrilla groups. The human impact of the conflict has been enormous, with at least 50,000 lives lost to date and one of the world's largest populations of internally displaced people, many of whom have disappeared.
- Despite being the oldest democracy in Latin America, Colombia has lacked national cohesion since its independence in 1810. As a result of the country's three Andean mountain ranges - which act as natural barriers to integration - and the division of society by class interests, Colombia has historically suffered from a weak state with large areas of territory in which the government is unable to exercise effective control.
- Current conflict with armed guerrilla groups dates from the mid-1960s, its origins go back to the period of 'La Violencia' (1948-1958). Following the assassination of the popular charismatic leader Jorge Eliécer Gaitán Ayala in 1948, an internecine conflict between the Liberals and the Conservatives took place. During this period, some peasants organised themselves into communities with the support of the Communist Party.
- 'La Violencia' came to an end through a constitutionally sanctioned power-sharing agreement between the Liberal and Conservative parties, known as the 'National Front'. The accord, however, eliminated political competition. Any political activity outside these two options was often repressed, and attacks on Communist enclaves led to the transformation of the peasant communities into mobile guerrilla groups, especially following the Cuban Revolution of 1959.
- By the late 1970s there were about a dozen guerrilla groups. The most significant leftist guerrilla groups are the Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias Colombianas, FARC) and the National Liberation Army (Ejército de Liberación Nacional, ELN).
- The activities of the guerrillas prompted the formation of right-wing paramilitary organisations, primarily the United Self-Defence Forces of Colombia (Autodefensas Unidas de Colombia, AUC), as a means of protecting landowners, drug lords and local businessmen from attacks and kidnappings by guerrilla forces. Whilst denied by the government, there are accusations of linkages between the paramilitaries and the state in waging war against the guerrillas. Since their inception, both guerrilla and paramilitary forces have become increasingly involved in criminal activity, including as kidnapping, extortion, bombings, murder, and hijacking, and have given a new dimension to the problem of narco-trafficking.
- The penetration of drug-trafficking in Colombian society has contributed to widespread corruption and the de-legitimisation of the political class.
- The first decade of the 21st century saw the power of the paramilitaries diminish following generous and controversial amnesty legislation which offered significantly reduced jail terms. By 2006, 31,671 professed AUC fighters had disbanded. However, reports of people being paid to falsely present themselves as AUC members suggests that this figure is likely to be unreliable. Importantly, most paramilitary blocs also held on to the majority of their weapons and their command structures remained largely intact. In recent years, some demobilised fighters have reconstituted themselves into smaller and more autonomous units, collectively known as the Black Eagles (Águilas Negras).
- During his eight years in power (2002-08), President Alvaro Uribe oversaw a massive military assault on the guerrillas that was supported with US funding. This took place through the continuation of the Plan Colombia, that was initiated by Uribe's predecessor, Andrés Pastrana Arango, and the implementation of the Plan Patriota. This tough strategy inflicted significant damage on the rebels, allowing the government to reassert control over large areas of the country, and resulted in a huge increase in Uribe's domestic approval rating.

- After President Uribe's bid to run for a third term was ruled unconstitutional, Colombia elected Juan Manuel Santos, a former Defence Minister under Uribe, as President in 2010. Santos' time in power has been marked by a long running peace process with the FARC, which looks to have had notable success so far.
- However, this peace process suffered a setback in October 2016, however, when Colombian voters narrowly rejected a landmark peace deal, which had been reached after four years of negotiations.

Mercosur suspends Venezuela

- Venezuela has been suspended from the Mercosur trade group over its failure to comply with its commitments when it joined the group in 2012.
- Previously the trade bloc had given Venezuela until December 1 to make the legislative changes necessary to come into compliance.
- Venezuela was supposed to have chaired MERCOSUR since September, but had been blocked from doing so by the same member governments that have been pushing for its suspension. MERCOSUR announced that the chair will now be occupied by the Argentina.

Analysis:

- MERCOSUR was founded in 1991 and includes five member countries: Argentina, Brazil, Paraguay, and Uruguay and, up to now, Venezuela. There are also associate members: Bolivia, Chile, Colombia and Peru.
- Since several of its members are the biggest economic players in South America, MERCOSUR is in fact a large scale affair: The combined gross domestic product of the MERCOSUR member states is over \$2.8 trillion.
- MERCOSUR has become part of the system of treaties and alliances that further integrate the Latin American area and make the countries less dependent on the United States than they have been in the past.
- It is for this reason that MERCOSUR countries, which were in the late 1990s and early 2000s governed by left-wing governments (namely Argentina, Brazil and Uruguay) pushed for the inclusion of Venezuela in the bloc. This was achieved, in spite of opposition from Paraguay's right wing government, in July of 2012.
- One of the arguments raised by the other states in support of Venezuelan inclusion in the bloc was the strength of the Venezuelan economy, rooted in the country's fabulous deposits of oil and natural gas.
- There is a change in balance of power within MERCOSUR. Right winger Mauricio Macri has won the election, Brazil experienced a coup, and Venezuela has been undergoing severe economic problems. All the newly formed governments are in sharp contrast to their predecessors, by big business interests aligned with transnational monopoly capital, and with United States' trade and financial interests.
- To deprive MERCOSUR of the weight of Venezuela, with one of the largest reserves of oil and natural gas in the world, is to weaken MERCOSUR and make it and each one of the countries that constitute it more vulnerable to speculative and commercial manipulations by the great powers of the world, especially the United States. MERCOSUR without Venezuela is weaker and not stronger.

MoU between India and Vietnam on Cooperation in IT

- The Union Cabinet has approved Memorandum of Understanding (MoU) between India and Vietnam on Cooperation in the field of Information Technology.
- The MoU aims to develop sustainable and a long-term cooperation between both countries on the basis of equality and mutual interest in the areas of IT.
- The MoU will be implemented by establishing a Joint Working Group on IT having representatives from both the countries.
- It will remain in force for a period of 5 years and will be renewable by mutual written consent between India and Vietnam.

- Its implementation will result in institutional and capacity-building in the field of IT and Human Resource Development, mutually benefiting IT sector of both countries.

Analysis:

- India-Vietnam relations have been exceptionally friendly and cordial since their foundations were laid by Prime Minister Nehru and President Ho Chi Minh more than 50 years ago.
- The traditionally close and cordial relations have their historical roots in the common struggle for liberation from foreign rule and the national struggle for independence.
- India's thrust under the 'Act East' policy combined with Vietnam's growing engagement within the region and with India has paid rich dividends. Vietnam is an important regional partner in South East Asia.
- India and Vietnam closely cooperate in various regional forums such as ASEAN, East Asia Summit, Mekong Ganga Cooperation, Asia Europe Meeting (ASEM) besides UN and WTO. Vietnam is also an important pillar amongst India's CLMV partners.
- India's relations with Vietnam are marked by growing economic and commercial engagement. India is among the top ten trading partners of Vietnam. Vietnam is ranked as the 28th trading partner of India.
- Bilateral trade between India and Vietnam has seen continuous growth over the past few years. According to Vietnam's official data, total trade volume touched US\$ 5.23 billion in 2013, an increase of 32.8 % over the last year. In 2014 the total trade turnover was USD 5.60 billion (India's export \$3.1 bln, import \$2.5 bln).
- Vietnam continues to be an attractive investment destination for Indian companies. India is ranked as the 27th largest investor in India with 111 projects and with the registered capital of \$530 million.

India, US finalise Major Defence Partner agreement

- India and USA finalized agreement as a major defence partner. This was announced in the India-US joint statement on Carter's visit to India.
- India's Major Defense Partner status has, however, been made a part of the India Amendment in the National Defense Authorization Act, 2017 (NDAA), approved by the US Congress to allocate funds annually to the US military. This Bill is expected to be passed shortly which will put a formal, official stamp on India's status.
- Under the India Amendment in the NDAA 2017, the US government will, consistent with its conventional arms transfer policy, inform the review of requests to export defence articles, defence services, or related technology to India under the Arms Export Control Act, and inform any regulatory and policy adjustments that may be appropriate.
- Besides recognising India's status as a Major Defense Partner, the India Amendment will designate an American official to ensure the success of the Framework for the United States-India Defense Relationship which was signed last year, to approve and facilitate the transfer of advanced technology, and to strengthen the effectiveness of the US-India Defense Trade and Technology Initiative and the durability of the India Rapid Reaction Cell in Pentagon.

Defence partner:

- It is a status unique to India and institutionalises the progress made to facilitate defence trade and technology-sharing with India to a level at par with that of the United States' closest allies and partners, and ensures enduring cooperation into the future.

Analysis:

- A closer U.S.-India relationship is beneficial for the world, as both political systems are based on democratic representation and animated by liberty, equality, and freedom of expression.
- Currently there are new security challenges, like defending the freedom of Sea Lanes of Communications (SLOCs), especially given China's growing assertiveness with regard to its maritime space, have provided the much needed urgency for both the United States and India to deepen their security relationship.

- While Washington is visibly concerned about growing Chinese assertiveness in the South China Sea, India is equally anxious with Chinese territorial aggression in its land borders. China claims about 120,000 square kilometers of claimed Indian territory as its own.
- Issue of terrorism is a common concern shared by the United States and India. Both countries have been affected deeply by terrorist attacks.
- India's defense budget for the year 2015-2016 was \$40 billion, ranking it amongst the top militaries in the world. Significantly, the U.S-India military relationship is on the upswing.
- In 2015, the Department of Defense (DoD) established the India Rapid Reaction Cell (IRRC) geared toward removing obstacles for technology sharing with India. Military exercises between the United States and India have increased exponentially over the last few years, aimed at creating interoperability between the two militaries, especially in the advent of responding to conflicts in the Asia-Pacific, piracy, and humanitarian disaster relief.

Global Terrorism Index, 2016

- According to global terrorism index, world's most developed countries have suffered a dramatic increase in deaths as a result of terrorism in the last year.
- Global terrorism index is released by the Institute for Economics & Peace, a Sydney-based think-tank.

Main highlights:

- The five countries that accounted for 72 per cent of all deaths from terrorism in 2015 are Iraq, Afghanistan, Nigeria, Pakistan and Syria.
- Tourism's contribution to GDP is twice as large in countries with no terrorist attacks.
- The total economic impact of violence reached \$13.6 trillion in 2015, or 13.3 per cent of global GDP.
- The economic resources devoted to peacekeeping and peace building represent two per cent of the economic impact of armed conflict and terrorism.
- ISIL-affiliated groups undertook attacks in 28 countries in 2015, up from 13 countries in 2014.
- A 32 per cent reduction in terror deaths in Iraq and Nigeria led to a global decline in deaths by 41 per cent in 2015. Both countries accounted for 53 per cent of all terrorism-related deaths across the world in 2014.
- Economic loss from terrorism \$635 billion over 16 years
- The global economic impact of terrorism has been \$635 billion over 16 years, from 2000 to 2015. That is an amount equivalent to the annual gross domestic product (GDP) of Egypt and Malaysia.
- Since 2014, the loss has declined from a 16-year high of \$106 billion to the second-highest level of \$90 billion, at constant 2015 prices.
- The economic impact of terrorism, as a proportion of a country's GDP, is highest in Iraq at 17.3 per cent, followed by Afghanistan (16.8 per cent) and Syria (8.3 per cent).
- Violent conflict, as a whole, caused \$13.6 trillion loss to the global economy in 2015 (in purchasing parity terms), or 13.3 of global GDP.
- The Organisation for Economic Co-operation and Development (OECD) countries - the world's most developed - witnessed a 650 per cent increase in terrorism deaths, from 77 in 2014 to 577 in 2015, the worst year for the 35-nation bloc since the 2001 September 11 attacks.
- Turkey, a part of OECD, witnessed 337 deaths in 2015, the highest among OECD countries. Terrorist violence in Turkey rose from attacks by the separatist Kurdistan Worker's Party (PKK) and ISIS in 2015.
- The report notes that for 14 years until the start of 2015, France had averaged one terrorism-related death per annum. In 2015, France recorded 161 deaths, making it the second biggest victim of terrorism in the developed world. This includes the November 2015 Paris attacks that killed 136 and the Charlie Hebdo attack in January.
- Over half of all attacks in the OECD countries were by or inspired by ISIS, a trend which has continued in 2016 with attacks in Brussels, Istanbul, Nice and Orlando, which have killed 211 people.

- Iraq was the worst hit by terror in 2015 with 6,960 dead and 11,900 injured in 2,415 incidents. Afghanistan and Nigeria were ranked second and third with 5,312 and 4,940 deaths, respectively.
- ISIS overtook its African affiliate Boko Haram as the world's deadliest terrorist group in 2015, with attacks causing 6,141 deaths. ISIS expanded the number of countries where it conducted attacks from six in 2014 to 11 in 2015.

India and index:

- India ranked 7th in the list of countries most impacted by terrorism in 2015.
- India recorded 289 terrorism-related deaths in 2015, a 45 per cent decline over 2014. However, the number of Indian Army and paramilitary soldiers killed this year is at an eight-year high.
- As many as 797 terrorist attacks were recorded in India in 2015, up 4 per cent since 2014.
- While the 2015 attacks were the highest since 2000, 80 per cent were non-lethal. Overall, 49 different terrorist groups were engaged in attacks but 31 of these failed to kill anyone. This suggests that groups are seeking to remind governments of their presence without provoking significant military reactions.
- India experienced 7 per cent of all terrorist attacks around the world, the fourth highest after Iraq (20 per cent), Afghanistan (14 per cent) and Pakistan (8 per cent).

About index:

- The GTI systematically rank the nations of the world according to terrorist activity. It scores a country is calculated based on weightage assigned to four indicators. They are total number of terrorist incidents, injuries, fatalities and property damage sustained in the year in question.

SCIENCE AND TECHNOLOGY

World's first water-wave laser

- Researchers have developed the world's first water-wave laser, demonstrating that lasers can be created by interactions between light and water waves.

About water-wave laser:

- A typical laser can be created when the electrons in atoms become 'excited' by energy absorbed from an outside source, causing them to emit radiation in the form of laser light.
- Main reason water-wave lasers haven't been explored in the past is because the frequency of water wave oscillation on the surface is a whole lot lower than a light wave, suggesting that the production of a laser emission would probably be highly inefficient.
- To overcome that slow oscillation, they created a device that used an optical fibre to deliver light to a small droplet of octane and water.
- This tiny bit of light introduced to the droplet interacts with the waves of the water, bouncing back and forth until enough energy has built up that the light can leave the droplet.
- The interaction between the fibre optic light and the minuscule vibrations on the surface of the droplet are like an echo, "where the interaction of sound waves and the surface they pass through can make a single scream audible several times.
- In order to increase this echo effect in their device, the researchers used highly transparent, runny liquids, to encourage light and droplet interactions."
- The main part is that the introduced light from the optical fibre is enough to deform the water droplet.

- While it seems obvious that any sort of energetic particle smashing into a super tiny droplet of water would make it deform a bit, normal optomechanical devices are harder.
- This deformation, about a million times greater than that of current laser-producing devices, allows for greater control, which could be extremely helpful once the technology is developed further and used in a laboratory setting to study cells.

Analysis:

- This is the first bridge between two areas of research that were previously considered unrelated to one another: nonlinear optics and water waves.
- For now, the water-wave laser offers a “playground” for scientists studying the interaction of light and fluid at a scale smaller than the width of a human hair.
- In future, the laser could be used in tiny sensors that combine light waves, sound and water waves.
- The laser may also be used in ‘lab-on-a-chip’ devices to study cell biology and test new drug therapies.

Graded response action plan to tackle pollution level

- The Supreme Court had accorded its nod to the Centre's graded response action plan to tackle different levels of pollution and asked the Central Pollution Control Board (CPCB) to upgrade its existing infrastructure and set up additional monitoring stations in Delhi-NCR within six months.

About this plan:

- Under the plan, the air quality has been divided into four categories — moderate to poor, very poor, severe and emergency — and specific actions have been prescribed for each situation.
- The Centre termed levels of pollution when particulate matter (PM) 2.5 levels are above 250 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$) or PM 10 levels are above 430 $\mu\text{g}/\text{m}^3$ in the ambient air as severe, and immediate steps need to be taken at such a point, including a ban on construction and implementation of odd-even scheme.
- The graded response, takes into account the seasonality of pollution in Delhi.
- The proposal has been framed keeping in view the key pollution sources in Delhi-NCR. While major sources of pollution, including vehicles, road dust, biomass burning, construction, power plants and industries, remain continuous throughout all seasons, the episodic pollution from stubble burning, increase in biomass burning, etc varies across seasons.
- The actions are to be implemented in the entire NCR, except the action related to stubble burning, which is to be implemented in the states of Delhi, Haryana, Punjab, Rajasthan and Uttar Pradesh.
- A task force of officials from the central and state pollution control boards, health experts and India Meteorological Department officials will also be set up. This body will work on forecasting and review of pollution levels.

Analysis:

- The lessons learnt from Delhi must be implemented in areas around the Indo-Gangetic Plains and entire India, which have equally deplorable air quality due to particulate matter from coal, oil and biomass.
- These measures, which include, higher parking charges, greater investment in public transport and pollution free mobility, measures to stop garbage burning and strict enforcement of PUC norms as well as emission standards for power plants and industries, need to be in force all year-round.
- Once the pollution levels become critical, it is too late. Pollution levels take days to build up and implementing the measures introduces more delay. No country has solved its air pollution problems by tying enforcement of standards to wind conditions only.

Malware and Skimming attacks after demonetization

- With the usage of micro-ATMs and POS counters witnessing a sharp surge post demonetisation, the country's premier cyber security agency CERT-In has cautioned customers, bankers and traders against skimming and malware attacks on these systems and asked them to adopt high-end encryption to plug possible breaches.

Current Affairs

- The CERT-In, nodal agency to combat hacking, phishing attacks and to fortify security-related defences of the Indian Internet domain, has issued two specific advisories for micro-Automated Teller Machines (ATMs) and Point of Sale (POS) terminals.

Advisories of CERT-In:

- Micro-ATMs work with minimal power and connect to central banking servers through a GPRS network, their security features need to be strong and updated to check attempts by hackers who stealthily plan to steal private customer and bank data which leads to loss of their hard earned money by way of hacking or electronic stealing.
- Traditionally, data input into the POS system is in memory in clear text which allows attackers, memory scrapers to be very successful.
- The way to minimise this risk is by encrypting the card data as soon as possible and keeping it encrypted to the maximum extent throughout its life within the system. Point to Point Encryption (P2PE) could be used to address the issue of encrypting data in memory.
- A social engineering attack can be engineered at these facilities, by gaining trust of the owner as the fraudster poses as a member of staff.
- The fraudster would then ask the customer to check the card for damages. The fraudster would have gained confidence from his prey using various tactics such as offering assistance to the customer who perhaps would have tried to use the ATM without success or perhaps the customer who is not familiar with use of micro ATM machine and requires assistance.
- The micro ATM must not transmit any confidential data unencrypted on the network; it must automatically log out the operator and lock itself after a period of inactivity; keep all the micro ATM software, application, anti-virus regularly updated and educate the customer about basic functionalities and security best practises.

About Micro ATM:

- A micro ATM enables the un-banked rural population to access banking services in their villages or towns in a convenient manner and it offers facilities of deposit, withdrawal, funds transfer, balance enquiry and issuance of mini-statement.

QUICK FACTS

- New President of Hockey India - **Mariamma Koshy**
- First ever non European chief of the International Hockey Federation (FIH) - **Narinder Dhruv Batra**
- New Chairman of the National Highways Authority of India is - **Yudhvir Singh Malik**
- International Day for the Elimination of Violence against Women is - **25th November (Theme: Orange the World - raise funds to end violence against women).**
- Author of the book 'Death Under the Deodars'- **Ruskin Bond**
- Person appointed as the CEO of State Bank of Mauritius (SBM) Group- **Siby Sebastian**
- Chief Guest of the 14th Pravasi Bharatiya Divas is - **Antonio Costa**
- New President of FICCI for the year 2017 is - **Pankaj R Patel**
- Person awarded with the International Peace Prize by Indian Government for his efforts in ensuring world peace- **Sri Sri Ravishankar**
- The Infosys Prize 2016 for Humanities is awarded to - **Sunit Amrith**

- The author of the book titled Gita Press and the Making of Hindu India is - **Akshaya Mukul**
- 2016 Mother Teresa International Award is awarded to - **Faraaz Ayaaz Hossain**
- He was posthumously awarded the Mother Teresa Memorial International Award for Social Justice for 2016 - **Faraaz Ayaaz Hossain**