National

Uniform Civil Code

Observing that the Uniform Civil Code cannot be violative of any provision of the constitution, the Law Commission has said that it is planning to recommend religion-wise "piece meal" amendments to family laws if it finds it difficult to come out with a composite uniform civil code. The commission is in the process of segregating the nearly 45,000 suggestions it has received on its questionnaire on the uniform civil code.

Amid a raging debate on uniform civil code, the law panel had in October last year sought public views on the subject to revise and reform family laws, saying the aim is to address social injustice rather than to do away with the plurality of laws. In an appeal issued then, the commission had said the objective behind the endeavor is to address discrimination against vulnerable groups and harmonize various cultural practices.

What is uniform civil code?
Uniform civil Code is a proposal to have a generic set of governing laws for every citizen without taking into consideration the religion.

Article 44 of the Constitution says that there should be a Uniform Civil Code. According to this article, "The State shall endeavor to secure for the citizens a uniform civil code throughout the territory of India". Since the Directive Principles are only guidelines, it is not mandatory to use them.
India needs a Uniform Civil Code for the following reasons:

- A secular republic needs a common law for all citizens rather than differentiated rules based on religious practices.
- Another reason why a uniform civil code is needed is gender justice. The rights of women are usually limited under religious law, be it Hindu or Muslim. The practice of triple talaq is a classic example. Many practices governed by religious tradition are at odds with the fundamental rights guaranteed in the Indian Constitution.

- Courts have also often said in their judgements that the government should move towards a uniform civil code including the judgement in the Shah Bano case.

Minority tag for Hindus: NCM forms committee

The National Commission for Minorities (NCM) has formed a three-member committee to look into whether Hindus should get minority status in eight states where they are not the dominant religious group. The committee will submit a report on this in three months.

Hindus are in a minority in Lakshadweep (2.5%), Mizoram (2.75), Nagaland (8.75), Meghalaya (11.53), J&K (28.44), Arunachal Pradesh (29) Manipur (31.39) and Punjab (38.4). It is argued that in the absence of the "minority" tag, benefits meant for the minority communities were being given away to majority community in each state in an illegal and arbitrary manner.

NCM:
The Union Government set up the National Commission for Minorities (NCM) under the National Commission for Minorities Act, 1992. Six religious communities, viz; Muslims, Christians, Sikhs, Buddhists, Zoroastrians (Parsis) and Jains have been notified in Gazette of India as minority communities by the Union Government all over India. Original notification of 1993 was for Five religious communities Sikhs, Buddhists, Parsis, Christians and Muslims.
The NCM adheres to the United Nations Declaration of 18 December 1992 which states that "States shall protect the existence of the National or Ethnic, Cultural, Religious and Linguistic identity of minorities within their respective territories and encourage conditions for the promotion of that identity."

NGT to form one-member benches

Amending the National Green Tribunal (Practices and Procedure) Rules, 2011, the Centre has passed a notification allowing the NGT chairperson to "constitute a single-member bench" in "exceptional circumstances."

However, the notification does not define the "exceptional circumstances".

<u>According to the earlier rules</u>, the bench consisted of "two or more members" with at least one judicial member and another expert.

About the National Green Tribunal (NGT):
What is it?
NGT has been established under the National Green Tribunal Act 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
Ambit: The tribunal deals with matters relating to the enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property.

Other facts:
- The Tribunal is not bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.
- The Tribunal's dedicated jurisdiction in environmental matters shall provide speedy environmental justice and help reduce the burden of litigation in the higher courts.
- The Tribunal is mandated to make and endeavour for disposal of applications or appeals finally within 6 months of filing of the same.

Members:
Sanctioned strength: currently, 10 expert members and 10 judicial members (although the act allows for up to 20 of each).
Chairman: is the administrative head of the tribunal, also serves as a judicial member and is required to be a serving or retired Chief Justice of a High Court or a judge of the Supreme Court of India.
Selection: Members are chosen by a selection committee (headed by a sitting judge of the Supreme Court of India) that reviews their applications and conducts interviews. The Judicial members are chosen from applicants who are serving or retired judges of High Courts.
Expert members are chosen from applicants who are either serving or retired bureaucrats not below the rank of an Additional Secretary to the Government of India (not below the rank of Principal Secretary if serving under a state government) with a minimum administrative experience of five years in dealing with environmental matters. Or, the expert members must have a doctorate in a related field.

Autonomy of Election Commission

The Supreme Court has sought the Attorney-General's assistance on a PIL petition pointing out the vagueness in the procedure for removal of Election Commissioners, saying it affects the Election Commission's autonomy.

What's the issue?
A petition has been filed in the Supreme Court arguing that though the proviso to <u>Article 324 (5) of the Constitution safeguards the Chief Election Commissioner (CEC) from arbitrary removal, the same provision is silent about the procedure for removal of the two Election Commissioners</u>.
It only provides that they cannot be removed from office except on the recommendation of the CEC. The petition said the ambiguity about the removal procedure of the Election Commissioners may affect the functional independence of the Commission.

Constitutional provisions:
The CEC and the Election Commissioners have a tenure of six years, or up to the age of 65, whichever is earlier, and enjoy the same status and receive salary and perks as available to Supreme Court judges.
Removal of ECs: The CEC and the Election Commissioners enjoy the same decision-making powers which is suggestive of the fact that their powers are at par with each other. However, Article 324(5) does not provide similar protection to the Election Commissioners and it merely says that they cannot be removed from office except on the recommendation of the CEC.

Way ahead:
The petition has asked the Supreme Court to provide Election Commissioners with the same protection against arbitrary removal as the Chief Election Commissioner. It is because the

element of independence sought to be achieved under the Constitution is not exclusively for an individual alone but for the institution.

National Nutrition Mission

The cabinet has approved the setting up of a National Nutrition Mission (NNM) with a three-year budget of Rs9,046.17 crore, to rein in malnourishment and stunted growth.

Key facts:
- NNM will address three aspects—the food that should be given to rein in stunting, undernourishment, low birthweight and anaemia; the delivery system required for it; and monitoring of the entire process.
- Under the mission, the government is targeting a reduction of 2% a year in stunting, undernutrition and low birthweight among 100 million people. Also, it aims to reduce anaemia among young children, women and adolescent girls by 3% a year.
- The mission would include several components like an ICT (information and communications technology)-based real-time monitoring system, incentivizing of states and Union territories to meet their targets, social audits, and setting up of nutrition resource centres.

Implementation:
Under NNM, the ministries of women and child development, health and family welfare, and water and sanitation will work together. The mission will form an apex body that would fix targets and monitor, supervise and guide nutrition-related interventions across the ministries.
- The implementation strategy for NNM would be based on intense monitoring and a convergence action plan up to the grass-roots level. The programme would be undertaken in a phased manner, covering 315 districts in 2017-18, 235 districts in 2018-19 and the remaining districts in 2019-20.
- NNM would be implemented using information technology as the basic tool; workers at anganwadis (women and child development centres) would be given smartphones and their supervisors smart tablets to

monitor daily activities and compile reports. The move will be a deviation from the old practice of maintaining registers and will also help to reduce pilferage.

Way ahead:
It is very important to invest in nutrition in India because balanced diet and healthy nutrition plays a pivotal role in overall development of women and children. Healthy women deliver healthy children and nurture a good society, and healthy and nourished children are the country's future. Therefore, to tackle undernutrition problem in the country, various ministries need to work in convergence and not silos and NNM will be a platform to do so. NNM will ensure convergence, and lead to better results.

Sustainable Action for Transforming Human capital

NITI Aayog's prescription for the State — to bring private sector players in a big way into the functioning of public hospitals in districts — has been met with strong opposition in Karnataka. Karnataka, which has been selected for the SATH (Sustainable Action for Transforming Human capital) programme in the health sector, has opposed the aayog's proposal to privatise well-functioning district hospitals in Tier 2 and Tier 3 cities for treatment of non-communicable diseases (NCDs).
The state has sternly opposed any terms and conditions for entering into an agreement with McKinsey & Company, consultants for implementation of the model. It is of the view that the proposal will have adverse implications for the public healthcare system of the State.

Background:
The SATH program embodies the philosophy of co-operative federalism. NITI Aayog selected the three states through a three stage challenge-process – expression of interest, presentations by the states and assessment of commitment to health sector reforms. Finally, three states: Assam, Uttar Pradesh and Karnataka were chosen based on objective assessment criteria affecting the potential for impact and likelihood of success. A consortium of reputed technical consultants are closely working with NITI Aayog and the states to conceptualize the initiatives and provide support in the implementation process.

About SATH programme:
Furthering the agenda for cooperative federalism, NITI Aayog has launched SATH, a program providing 'Sustainable Action for Transforming Human capital' with the State Governments. The vision of the program is to initiate transformation in the education and health sectors. The program addresses the need expressed by many states for technical support from NITI.

SATH aims to identify and build three future 'role model' states for health systems.

NITI will work in close collaboration with their state machinery to design a robust roadmap of intervention, develop a program governance structure, set up monitoring and tracking mechanisms, hand-hold state institutions through the execution stage and provide support on a range of institutional measures to achieve the end objectives.

The program will be implemented by NITI along with McKinsey & Company and IPE Global consortium, who were selected through a competitive bidding process.

International/ Bilateral

US recognizes Jerusalem as Israel's capital

In a major announcement, United States President Donald Trump has officially recognized Jerusalem as the capital of Israel night and has directed the State Department to initiate the process of moving the American embassy from Tel Aviv to Jerusalem, which many Arab leaders warn can trigger an upheaval in the already volatile Middle East. Israel considers the "complete and united Jerusalem" its capital, but Palestinians claim East Jerusalem for the capital of their future state.

What is the international status of Jerusalem?
The walled Old City of Jerusalem, at just one square kilometer, is home to sites that are among the holiest in Judaism, Christianity, and Islam. Because of its unique cultural and religious significance, the UN General Assembly set aside Jerusalem to be a corpus separatum, or separated body, under UN trusteeship when it voted in 1947 to divide the British mandate of Palestine into two states, an Arab one and a Jewish one.

That position remained the international consensus even after the partition plan itself was preempted by Israel's declaration of independence in 1948 and the subsequent invasion by Arab powers. An armistice the following year divided the mandate along what has become known as the Green Line, which cuts through the middle of Jerusalem. Israel established its seat of government in the western half of the city, while, across a no man's land lined with barbed wire, Jordan took control of the city's eastern half, including the Old City.

Israel captured East Jerusalem in 1967 and subsequently annexed it, redrawing its municipal borders to include surrounding Arab villages. In 1980, Israel's parliament, the Knesset, designated the united city as Israel's capital. By contrast, the West Bank, also captured in 1967, was not annexed; it remains under military occupation and Palestinians have partial self-government there, through the Palestinian Authority (PA). While Israel controls the city, the Oslo Accords, signed by Israel and the Palestine Liberation Organization (PLO) in 1993, stipulated that Jerusalem's disposition would only be decided on in permanent-status negotiations between the parties. Other major issues under negotiation concern refugees' right of return, security arrangements, borders, and mutual recognition.

Jerusalem is home to nearly one million residents. West Jerusalem's population of some 330,000 is almost entirely Jewish. The eastern half of the city, which comprises the Old City, Palestinian neighborhoods, and refugee camps, along with some newer Jewish settlements, is home to about 320,000 Arabs and 212,000 Jews. Unlike Palestinians who live elsewhere in Israel, most Palestinian East Jerusalemites have permanent residency, but not citizenship, since they do not recognize Israeli sovereignty over the city.

How have other countries reacted?
The Islamic world is outraged. Palestinian President Mahmoud Abbas has warned of "dangerous consequences", Jordan's King Abdullah II and Saudi King Salman have cautioned the US, Turkey has threatened to cut ties with Israel, Iran has declared that "the Palestinian nation will achieve victory", China has said it "could sharpen regional conflict", Egypt, the Arab League and several European nations have expressed grave reservations, and the Pope has pleaded for status quo. Hamas

has threatened an intifada, and Hezbollah could react aggressively. India, friends with both Palestine and Israel, could face a quandary.

Trump's announcement is likely to compound a broader crisis of confidence among Palestinians that President Mahmoud Abbas, who has been in office for many years beyond his electoral mandate, can deliver statehood. Fatah and Hamas have called for protest.

Nuclear Suppliers Group (NSG) membership

Even as China continues to stall India's Nuclear Suppliers Group (NSG) membership, Russia has come out strongly in support of India saying that India's application cannot be "interlinked" with that of Pakistan and that Moscow is discussing the issue with Beijing at different levels.

China has favoured a criteria-based approach for expansion of the 48-member group, which controls international nuclear commerce, instead of one based on merit, in what India sees as an attempt to draw a false equivalence between India's case and Pakistan's.

What is NSG?
Nuclear Suppliers Group (NSG) is a multinational body concerned with reducing nuclear proliferation by controlling the export and re-transfer of materials that may be applicable to nuclear weapon development and by improving safeguards and protection on existing materials. Interestingly, the NSG was set up in 1974 as a reaction to India's nuclear tests to stop what it called the misuse of nuclear material meant for peaceful purposes.

India sought membership of the NSG in 2008, but its application hasn't been decided on, primarily because signing the NPT or other nuclear moratoriums on testing is a pre-requisite. However, India has received a special

waiver to conduct nuclear trade with all nuclear exporters.

India, Pakistan, Israel and South Sudan are among the four UN member states which have not signed the NPT, the international pact aimed at preventing the spread of nuclear weapons.

Why India should be granted NSG membership?
In this game of developing nuclear weapons India has not indulged in any dubious/clandestine activity and its programme has been developed solely by years of hard work indigenously. By this single act India has shown that developing a credible nuclear weapons programme through honest and civilian means is possible for any country having high-level scientific manpower and materials.

Besides, by declaring a voluntary moratorium on further underground nuclear tests India has effectively acted in sense and spirit of NPT/CTBT provisions. By steering its programme only as a minimum deterrence and pledging NFU unless faced with an attack of weapons of mass destruction (WMD), India has established itself as a responsible nuclear state.

Benefits associated with NSG membership- Once admitted, an NSG member state gets:
- Timely information on nuclear matters.
- Contributes by way of information.
- Has confirmed credentials.
- Can act as an instrument of harmonization and coordination.
- Is part of a very transparent process.

International Solar Alliance

With 19 countries ratifying its framework agreement, the International Solar Alliance (ISA) has become the first treaty-based international government organisation to be based in India.

Significance of this event:
This marks the culmination of India's efforts, which had taken a lead role in setting up the ISA—an alliance of 121 sunshine countries situated between the Tropics of Cancer and Capricorn. ISA also signals that New Delhi would employ it as a foreign policy tool to cement its leadership among developing countries.

- The ISA now has become a treaty based inter-governmental international organisation and it will

be recognized by UN legally to become fully functionable.

- Guinea became the 15th country to ratify this agreement.
- Other prominent intergovernmental organisations in the energy sector include the Vienna-based Organisation of the Petroleum Exporting Countries (Opec) and Paris-based International Energy Agency (IEA).

About ISA:
The ISA is an Indian initiative, jointly launched by the Prime Minister Narendra Modi and the president of France on 30 November 2015 in Paris, on the sidelines of COP-21, the UN climate conference. It aims at addressing obstacles to deployment at scale of solar energy through better harmonization and aggregation of demand from solar rich countries lying fully or partially between the tropics of Cancer and Capricorn.

- The ISA, headquartered in India, has its secretariat located in the campus of the National Institute of Solar Energy, Gurgaon, Haryana.
- The Paris Declaration, establishing the ISA, states that the countries share the collective ambition to undertake innovative and concerted efforts for reducing the cost of finance and cost of technology for immediate deployment solar generation assets.

UN Peace keeping

The opening ceremony of the Indian UN Peace Keeping Training by Mobile Training Team of CUNPK was recently conducted at the Vietnamese Centre for Peace Keeping located at Thaach Hon, Hanoi. The ceremony was attended by the Indian Mobile Training Team (MTT). This is in the furtherance to the ongoing training assistance being extended to the Vietnamese Centre for Peace Keeping by the Centre for UN Peace Keeping, New Delhi (CUNPK).

The need for prospective peace keepers to be well trained before deployment in the mission area is a pre requisite for effective peace keeping. Towards this end, the vast experience gained by the Indian Defence Forces would be

of great assistance to the Vietnam People's Army.

<u>What you need to know about UN Peacekeeping?</u>
United Nations Peacekeeping was created in 1948. Its first mission involved the establishment of the UN Truce Supervision Organization (UNTSO), which served to observe and maintain ceasefire during the 1948 Arab-Israeli War.

- UN Peacekeeping maintains three basic principles: Consent of the parties, impartiality and non-use of Force except in self-defence and defence of the mandate.
- The UN Peacekeepers are led by the Department of Peacekeeping Operations (DKPO). There are currently 17 UN peace operations deployed on four continents.
- UN Peacekeepers are from diverse backgrounds, from areas all around the world. They include police, military and civilian personnel. They are often referred to as Blue Berets or Blue Helmets because of their light blue berets or helmets.
- The UN Peacekeeping Force won the Nobel Peace Prize in 1988.
- The United Nations Charter gives the United Nations Security Council the power and responsibility to take collective action to maintain international peace and security. For this reason, the international community usually looks to the Security Council to authorize peacekeeping operations.

International North South Transportation Corridor

The International North South Transportation Corridor (INSTC) connecting Mumbai with St Petersburg and beyond – which has been 17 years in the making – is set to be operationalised from the middle of next month with the first consignment from India to Russia.

About INSTC:
What is it? India, Iran and Russia had in September 2000 signed the INSTC agreement to build a corridor to provide the shortest multi-model transportation route linking the Indian Ocean and the Persian Gulf to the Caspian Sea via Iran and St Petersburg. From St Petersburg, North Europe is within easy reach via the Russian Federation. The estimated capacity of the corridor is 20-30 million tonnes of goods per year.

The route primarily involves moving freight from India, Iran, Azerbaijan and Russia via ship, rail and road. The objective of the corridor is to increase trade connectivity between major cities such as Mumbai, Moscow, Tehran, Baku, Bandar Abbas, Astrakhan, Bandar Anzali and etc.

Significance of the corridor: Conceived well before China's Belt and Road Initiative (BRI), INSTC will not only help cut down on costs and time taken for transfer of goods from India to Russia and Europe via Iran but also provide an alternative connectivity initiative to countries in the Eurasian region. It will be India's second corridor after the Chabahar Port to access resource rich Central Asia and its market.

Background:
The absence of viable surface transport connectivity is a serious impediment to trade with the Eurasian region. Currently, transport of goods between India and Russia mostly takes place through the sea route via Rotterdam to St Petersburg. In the case of the Central Asian region, goods are routed through China, Europe or Iran. The routes through China and Europe are long, expensive and time-consuming. Therefore, there is a need to have a logistics route that would be shorter, cheaper and faster.

Gulf Cooperation Council (GCC)

The 38th Gulf Cooperation Council summit is being held in Kuwait. The summit comes at a delicate time after Saudi Arabia, Bahrain, the United Arab Emirates and Egypt all cut ties with Qatar in June, accusing Doha of backing extremism and fostering ties with Iran – charges that Qatar vehemently denies.

Kuwait has played mediator and acted as a conduit for communication between the boycotting countries and Qatar.

What is GCC?
The Gulf Cooperation Council (GCC) is a political and economic alliance of six countries in the Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

- Established in 1981, the GCC promotes economic, security, cultural and social cooperation between the six states and holds a summit every year to discuss cooperation and regional affairs.
- Due to their geographic proximity, similar political systems and common sociocultural stances, the immediate goal was for these countries to protect themselves from threats after the Iran-Iraq War.

Structure:
The GCC comprises six main branches that carry out various tasks, from the preparation of meetings to the implementation of policies. They are- Supreme Council, Ministerial Council, Secretariat-General, Consultative Commission, Commission for the Settlement of Disputes and the Secretary-General.

Role of GCC today:
Whether the GCC still has a relevant function and role in the region is questionable. Though it was created for the purpose of solidifying union ranks, the blockade imposed on Qatar by its neighbours has largely annulled these principles.

The Gulf states have in the past differed in their views on several issues that have unfolded in the region over the past two decades. The role of the GCC has also been diminishing ever since the 2003 US-led invasion of Iraq, with the six states illustrating various approaches to the war and its consequences. This has been enhanced during the wave of protests that swept the Middle East in 2011, known as the Arab Spring. Saudi Arabia has gained a dominant role within the GCC today.

Pact on Rohingya

Bangladesh and Myanmar recently signed a Memorandum of Agreement to begin the repatriation of more than 6,20,000 Rohingya refugees who have fled to Bangladesh in the past few months. Further, a joint working group

including officials from Bangladesh, Myanmar and the United Nations High Commission for Refugees (UNHCR) will be set up in three weeks, and Myanmar would begin to repatriate the refugees within two months, by January 23, 2018.

What had led to the exodus?
Since August, when the Myanmar military began a crackdown on Rohingya villages in Rakhine after a series of terror strikes on army camps, the numbers that have escaped burning homes and alleged atrocities by the authorities, have risen rapidly, with most seeking shelter across the border in Kutupalong camp of Bangladesh's Cox's Bazaar. The UN has condemned the violence as a case of "ethnic cleansing" and "genocide", putting pressure on Myanmar's leadership to end it.

How did China help?
Talks between Bangladesh and Myanmar appear to have been guided not by international agencies, but by China. China had announced that it favoured a "three-step" solution, comprising a ceasefire in Rakhine, a bilateral repatriation deal for the Rohingya to Myanmar and long-term solutions including the economic development of the Rohingya areas.

Why is China interested?
Beijing has deep interests in Rakhine, especially in the Kyaukpyu Port, with oil and energy pipelines to Yunnan province forming part of a $10 billion economic zone in its Belt and Road Initiative.
While on the one hand, China has protected the Myanmar regime from international sanctions at the UN thus far, it has tied itself to the success or failure of the repatriation agreement, on which the fate of the Rohingya now rest.

Way ahead:
According to the deal, Myanmar has committed not to delay sending those repatriated back to their original homes, but this task will be made more difficult by the fact that that many of the Rohingya villages have been burnt down. Also of concern is the stipulation that those who will be accepted by Myanmar must show their Myanmar-issued identity cards, not just their Bangladesh-issued refugee cards. Finally, international human rights agencies have warned that refugees cannot be forced to return while threat of violence against them persists, even as they process the trauma borne of the atrocities they fled from.

International Maritime Council

India has been re-elected to the Council of the International Maritime Organization [IMO] under Category "B" at the recently held 30th session of the Assembly of the IMO in London. With re-election in IMO, India will continue to engage with the international maritime community to further her maritime interests and promote the welfare of her citizens.

India has been one of the earliest members of the IMO, having ratified its Convention and joined it as a member-state in the year 1959. India has had the privilege of being elected to and serving the Council of the IMO, ever since it started functioning, and till date, except for two years for the period 1983-1984.

About IMO:
The International Maritime Organization – is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships.

- It has 171 Member States and three Associate Members.
- The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for shipping and its remit today includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping.
- IMO is governed by an assembly of members and is financially administered by a council of members elected from the assembly.
- The IMO's structure comprises the Assembly, the Council, the Maritime Safety Committee, the Marine Environment Protection Committee, the Legal Committee, the Technical Cooperation Committee, and the secretariat, headed by a Secretary-General.

IMO council:
The IMO Council acts as the IMO's Governing Body. It has a crucial role to play in deciding various matters in relation to the global shipping industry, including its work programme strategy and budget.

- Members of the Council consist of 40 member states, elected by its Assembly including 10 members in category A with the largest interest

in providing international shipping services; 10 members in category B with the largest interest in international seaborne trade and 20 members in category C with special interests in maritime transport or navigation.

- India has been one of the earliest members of the IMO, having ratified its Convention and joined it as a member-state in the year 1959.

Economy

Railways appoints IRSDC as nodal agency for station redevelopment plan

Indian Railways has decided to appoint its joint venture company Indian Railway Station Development Corp. Ltd (IRSDC) as the nodal agency for its ambitious station redevelopment programme, in an attempt to expedite the revamp of 400 A1 and A category railway stations. Under the Rs1 trillion station redevelopment plan, Indian Railways plans to revamp 400 railway stations by monetizing 2,700 acres of spare railway land.

The appointment of IRSDC, a joint-venture between Ircon International Ltd and Rail Land Development Authority (RLDA), took place following recommendations from a three-member committee of experts, which had submitted its report in November.
The report recommended IRSDC's appointment as a nodal agency to ensure a speedy redevelopment process because the firm has shown notable performance in handling its model projects in places such as Gandhinagar and Surat.

About IRSDC:
Indian Railway Stations Development Corporation Limited (IRSDC) is a Joint Venture company of Ircon International Limited (IRCON) (A Govt. of India Undertaking, under Ministry of Railways) and Rail Land Development Authority (RLDA), a statutory authority under the Ministry of Railways. The core purpose of IRSDC as envisioned is to build world class railway stations that apply state of the art sustainable technologies in delivering delight to the users.

Petcoke imports from US will choke India further: Experts

India has emerged as the biggest importer of U.S. oil refinery by-product 'petcoke'. U.S. oil refineries that are unable to sell a dirty, fuel waste product at home are exporting vast quantities of it to India instead. Refineries are sending it around the world, especially to energy-hungry India, which last year got almost a fourth of all the fuel-grade "petcoke" the U.S. shipped out. In 2016, the U.S. sent more than 8 million metric tonnes of petcoke to India.

What is petcoke?
Petroleum coke, the bottom-of-the-barrel leftover from refining Canadian tar sands crude and other heavy oils, is cheaper and burns hotter than coal. But it also contains more planet-warming carbon and far more heart- and lung-damaging sulphur.

Concerns:
The petcoke burned in factories and plants is contributing to dangerously filthy air in India, which already has many of the world's most polluted cities. It contains 17 times more sulfur than the limit set for coal, and a staggering 1,380 times more than for diesel.

Rising petcoke imports:
Indian purchases of US fuel-grade petcoke skyrocketed two years ago after China threatened to ban the import of high-sulfur fuels. Although Indian factories and plants buy some petcoke from Saudi Arabia and other countries, 65% of imports in 2016 were from the US.

- India's cement companies were first to bring in petcoke, and still import the most, though cement experts say some sulfur is absorbed during manufacturing. As word spread of the cheap, high-heat fuel, other industries began using it in their furnaces — producing everything from paper and textiles to brakes, batteries and glass.
- Petcoke's use was further encouraged by low import tariffs and a lack of regulations on its most potent pollutants. Industries also like that petcoke, which is around 90% carbon, burns hot. So they can use less of it to produce the same heat as coal — though coal still

overshadows petcoke in factory furnaces.

- Within a decade, India's petcoke appetite grew so voracious that it began producing and selling its own, and Indian refineries today are making about as much as the country is importing.

Need for regulation:

The country has seen a dramatic increase in sulfur dioxide and nitrogen dioxide emissions in recent years, concentrated in areas where power plants and steel factories are clustered. Those pollutants are converted into microscopic particles that lodge deep in the lungs and enter the bloodstream, causing breathing and heart problems.

Petcoke, critics say, is making a bad situation worse across India. About 1.1 million Indians die prematurely as a result of outdoor air pollution every year, according to the Health Effects Institute, a nonprofit funded by the U.S. Environmental Protection Agency and industry.

Institutional measures:

The government's environment ministry has dismissed the idea that petcoke threatens public health in the nation's capital. But the country's Supreme Court, which has consistently demanded or enacted tougher pollution control measures, recently banned petcoke use by some industries as of November 1 in the three states surrounding pollution-choked New Delhi. It also demanded tighter pollution standards that if enforced could further limit its use nationwide.

Small Farmers' Agri-Business Consortium (SFAC)

Union Agriculture and Farmers Welfare Minister, Shri Radha Mohan Singh recently chaired the 22nd meeting of Board of Mangement (BOM) of Small Farmers' Agri-Business Consortium (SFAC). Various activities of SFAC were reviewed during the meeting.

About SFAC:

Small Farmers Agribusiness Consortium (SFAC) is an Autonomous Society promoted by Ministry of Agriculture, Cooperation and Farmers' Welfare, Government of India. It was registered under Societies Registration Act 1860. The Society is also registered as Non-Banking Financial Institution by Reserve Bank of India.

Management: The Society is governed by Board of Management which is chaired, ex-officio, by Hon'ble Union Minister for Agriculture and Farmers Welfare as the President and the Secretary, Department of Agriculture, Cooperation and Farmers Welfare, Government of India, is the ex-officio Vice-President.

Functions: SFAC is implementing the central schemes of Government of India namely VCA, EGCGS for economic inclusion of small and marginal farmers in agribusiness activities. Society is pioneer in organising small and marginal farmers as Farmers Interest Groups, Farmers Producers Organisation and Farmers Producers Company for endowing them with bargaining power and economies of scale. Recently the Society has been entrusted with the task of implementation of the critically important Delhi KisanMandi and National Agriculture Market Scheme on e-platform to progressively free agricultural trade and offer price discovery to farmers.

Regional Rapid Transit System (RRTS)

An indo-spanish technical cooperation (government to government) agreement has been signed. This agreement will provide institutional mechanism for mutual cooperation in the field of urban transport and specially in implementation of RRTS project.

The agreement will enable availability of technical advice on specific issues, besides providing training and collaboration in the technical areas of Track, Signalling, Rolling Stock, Safety, Multi modal integration, station design etc.

About RRTS:

RRTS, first of its kind project in India, with design speed of 180 kmph will use state of the

art technologies for track structure, rolling stock and signalling system. Expertise and experience in India on these technologies for higher speeds being limited, International expertise will be tapped for efficient implementation of project, operation of system and developing capacity in the country.

Significance of RRTS: RRTS will significantly reduce the travel time between important NCR towns. On completion, RRTS will emerge as the fastest, comfortable and safe mode of transport in NCR.

RRTS consists of three corridors viz., Delhi-Ghaziabad-Meerut, Delhi-Gurgaon-Alwar and Delhi-Panipat sections with a total length of 380 kms.

Implementation: National Capital Region Transport Corporation, a Joint Venture of Government of India and State Governments of Uttar Pradesh, Rajasthan, Haryana and Delhi, is mandated to design, construct, operate & maintain rail based Regional Rapid Transit System (RRTS).

Science & Tech. / Ecology/ Health

Sentinel satellite

Sentinel- 5P, a European satellite tracking the levels air pollutants around the world has beamed back new views of the Earth's atmosphere, including images of pollution drifting away from power plants in India. The worst of this pollution runs from north of Patna in Bihar to south of Raipur in Chhattisgarh. The Sentinel-5P satellite is designed to make daily global maps of the gases and particles that pollute the air.

About the Sentinel- 5P satellite:
Sentinel-5P is the latest spacecraft in a fleet of Earth observers being commissioned by the European Union and the European Space Agency. It was launched into an 824 kilometre high orbit by a Russian rocket on October 13 this year. When fully operational, the new Sentinel will be an extremely powerful tool to monitor air quality.

It carries an instrument called Tropomi – a spectrometer that observes the reflected sunlight coming up off the Earth, analysing its many different colours. This helps detect the presence of trace gases such as nitrogen dioxide, ozone, sulphur dioxide, methane, and carbon monoxide in the atmosphere.

UNICEF report on air pollution

The UNICEF has released the report on air pollution titled- 'Danger in the air: How air pollution can affect brain development in young children'. The report has once again set alarm bells ringing about high levels of air pollution and its likely impact on brain development among infants.

Highlights of the report:
- Nearly 17 million infants worldwide live in areas where outdoor air pollution is at least six times higher than international limits. These babies are at a risk of suffering brain damage. Air pollution-related ailments has led to the deaths of over 920,000 children under the age of five every year.
- The threat is much higher in Asia. Nearly 16 million infants belong to Asia. Moreover, 75% of them live in the Indian subcontinent, which has three of the world's 10 most populations countries in the world — India, Bangladesh and Pakistan. In fact, India topped the list of countries with babies at risk, followed by China, the most populated country in the world.
- Focusing on the adverse effect on the development of brain among infants, the UNICEF report has found a direct relationship between exposure to air pollution and cognitive outcomes. Affected infants faced problems of low verbal and nonverbal IQ and memory, reduced test scores, gradepoint averages among school children, along with neurological behavioral issues.
- As per the report, Ultrafine pollution particles (particulate matter that is equal or less than 2.5 microns in diameter) pose an especially high risk because they can more easily enter the blood stream and travel through the body to the brain.
- The report also notes that harmful particles from magnetite, a form of an ore, is a leading cause for pollution in urban areas. As its particles are small, they easily penetrate humans through olfactory

nerves and the gut. Magnetite nano particles are highly toxic to the brain due to their magnetic charge and their ability to help create oxidative stress – which is often the cause of neurodegenerative diseases.

- The report said that poly-cyclic aromatic hydrocarbons (PAHs), a kind of pollutants formed from fossil fuel combustion is responsible for loss of or damage to white matter in infant brains. As PAHs are commonly found in areas of high automobile traffic, the UNICEF report believed that urbanisation without adequate protection and pollution reduction measures will put more children at risk.

Solutions offered by the UNICEF:

- The UNICEF report urged citizens, especially in the developing world — South Asia and China — to be aware of the quality of air they breathe, and protect children from exposure to unhealthy air through protective masks or air filtration systems.
- Putting the onus of safety on the parents, the report urged them to provide their children with healthy and balanced diets to mitigate the threat from air pollution. But while parents can provide the first line of defence to vulnerable children, the UNICEF report also urged macro-level measures to tackle the menace of air pollution.
- In an apparent signal to municipal and political authorities to take action against the issue, the report also said that reducing air pollution means replacing fossil fuel combustion with cleaner, renewable sources of energy, including appropriate use of solar, wind and thermal sources.
- The report also urged modern-day town planners to focus on creating new models of urbanisation, which will take care of the rising pollution levels. Rapidly urbanising areas have an opportunity to bypass some of the older planning models and take advantage of sustainable, cleaner innovations. They can also lay the right foundations from the onset.

Akash Missile

Supersonic surface-to-air missile- Akash with indigenous radio frequency seeker was recently test fired from a test range in Odisha. With the successful test firing, India has achieved the capability of making any type of surface to air missile.

What you need to know about the Missile?

- Akash, the supersonic missile, is the first surface-to-air missile with indigenous seeker to be test fired and is being inducted into the Army as short range surface to air missile.
- It has a strike range of about 25 km and carries a 55- kg fragmentation warhead that is triggered by proximity fuse.
- It is an all-weather area air defence weapon system for defending vulnerable areas against medium range air targets penetrating from low, medium and high altitudes.
- Developed by the Defence Research and Development Organisation (DRDO), the Akash missile system has the capability to neutralise aerial targets like fighter jets, cruise missiles and air-to-surface missiles as well as ballistic missiles.
- The system is designed to neutralise multiple aerial targets attacking from several directions simultaneously. The system is autonomous and its operation is fully automated. There is flexibility in deployment.
- It uses state-of-the-art integral ram jet rocket propulsion system and the onboard digital autopilot ensures stability and control. Electro-pneumatic servo actuation system controls cruciform wings for agile response and thermal batteries provide onboard power supply.

New graphene-based battery

Samsung Electronics has developed core battery technology using graphene to make lithium-ion batteries last longer and charge more quickly, a potential industry milestone if mass produced.

Significance of this breakthrough:
Standard lithium batteries require charging time of at least an hour to fully charge, even with quick charging technology, so numerous attempts to explore new innovative materials have been started.
Among the materials looked at, graphene, a material with high strength and conductivity, has widely become the primary source of interest. In theory, a battery based on the "graphene ball" material requires only 12 minutes to fully charge.

About Graphene:
Graphene has been touted in the global electronics industry as a "miracle material" given its strength, electrical conductivity and elasticity, and has been seen as an alternative to lithium-ion batteries since its discovery in 2004. It is a form of carbon that can be used to develop smaller, slimmer batteries but with higher capacity.

- Graphene is a carbon material that is one atom thick. Its thin composition and high conductivity means it is used in applications ranging from miniaturised electronics to biomedical devices. These properties also enable thinner wire connections; providing extensive benefits for computers, solar panels, batteries, sensors and other devices.
- The potential applications of graphene include water filtration and purification, renewable energy, sensors, personalised healthcare and medicine, to name a few.
- Graphene has excellent electronic, mechanical, thermal and optical properties as well. Its uses range from improving battery performance in energy devices, to cheaper solar panels.

'Petro' cryptocurrency

Venezuelan has launched its own cryptocurrency, called the "Petro," which will be backed by the country's vast natural resource reserves. The country has also approved the creation of a BlockchainBase observatory to oversee the development and rollout of the new cryptocurrency.

OPEC member Venezuela boasts the largest proven reserves of crude oil in the world, but has struggled against the plunge in oil prices which began in 2014.

Purpose of Petro:
The purpose of Petro will be to advance the country's monetary sovereignty, to carry out financial transactions and to defeat the financial blockade against the country.

Value of Petro:
The value of the new cryptocurrency will be pegged to the country's vast reserves of oil and gas as well as its mineral wealth, including gold.

Way ahead:
With the new cryptocurrency, Venezuela hopes it can overcome the economic blockade which the U.S. has put on the country. The blockade has caused the country's national currency, the Bolivar, to lose around 57% of its value in the last four weeks.
While it's great to see yet another country deciding to set up a national cryptocurrency, Venezuela will likely garner some friction from the U.S. over the move. The Trump administration has already been railing against Venezuela and its socialist leadership in-between tirades against Iran and North Korea.

What you need to know about the cryptocurrencies?
Founded as a peer-to-peer electronic payment system, cryptocurrencies enable transfer of money between parties, without going through a banking system. These digital payment systems are based on cryptographic proof of the chain of transactions, deriving their name, Cryptocurrency. These employ cryptographic algorithms and functions to ensure anonymity (privacy) of the users (who are identified by an alphanumeric public key), security of the transactions and integrity of the payment systems. "Decentralised Digital Currency" or "Virtual Currency" is also interchangeably used for a cryptocurrency.

How are they used?
Cryptocurrency is fundamentally a decentralised digital currency transferred directly between peers and the transactions are

confirmed in a public ledger, accessible to all the users. The process of maintaining this ledger and validating the transactions, better known as mining, is carried out in a decentralised manner. The underlying principle of the authenticity of the present to historical transactions is cryptographic proof, instead of trust; different from how it happens in the case of traditional banking systems.

Clinical trials

With a huge talent pool and growing demand for innovation in drugs and medical devices to address the rising disease burden, the demand for the creation of a favorable environment for clinical trials in the country has once again come to the fore.

Epidemiological transition, in recent decades, compounded with the burgeoning population as well as widespread malnutrition and poverty, have resulted in the steep rise in both communicable and non-communicable diseases in the country, across all age groups. To counter this rising burden of disease, there is a compelling need for local clinical trials.

After a peak in 2009-2010, the clinical research sector in India is continually contracting. India represents 17.5% of the world's population but conducts only 1.4% of global clinical research. This is unfortunate, considering we have all the requisite factors, such as English-speaking health-care professionals, a large number of experts, steady economic growth, access to world-class technologies, strong IT- and data-management infrastructure, access to ethnically diverse patient populations and competitive operational costs. All these factors present clear advantages for clinical research.

Roadblocks:
- India has been lagging in this area primarily because the regulatory system in India for clinical research has become increasingly a deterrent for biopharmaceutical- and device-companies which sponsor clinical trials. The existing legal framework lacks credibility, in terms of predictability and transparency, in the criteria and protocols governing clinical research.
- Clinical trials also seem to be misunderstood in the media and have sometimes been portrayed as experimental procedures, where new

products are being unsafely tested on people.
- There have also been instances of lapses in confidentiality or non-adherence to protocols or shortcomings in getting informed consent from participants and these are to be totally condemned. Because of this they have received wide support.

Recent push by the government:
- Recognising the importance of local clinical trials in developing better and safer drugs, the Government of India is now working on new policies that could ensure swift approvals to begin clinical trials without making compromises on patient safety.
- The Government has taken steps such as recognising ethics committees, centralising a system whereby adverse side-effects can be appropriately investigated by the Drugs Controller General of India and formally recognising centres which are capable of conducting clinical trials in accord with regulations.
- To further speed up the availability of new and effective drugs, the Government has proposed waiving off clinical trials for those drugs that have already proved their efficacy in developed markets.

Way ahead:
Health research is not only crucial to the development of new diagnostic tools and treatments, it goes on to guiding the planning of health-care services in the appropriate direction, facilitating continuous evaluation and improvement of medical care, and allowing a thorough investigation of risk factors and disease associations. Therefore, Improvements in the overall policy environment can have a significant impact on attracting and securing greater investment and the associated economic gains.

To reap the benefits of clinical trials, our objective should be to bring about more clinical research in the country while maintaining high standards to ensure patient safety and accuracy of data.

World AIDS Day 2017

World AIDS Day takes place on the 1st December each year. It's an opportunity for people worldwide to unite in the fight against HIV, to show support for people living with HIV, and to commemorate those who have died from an AIDS-related illness. <u>Founded in 1988, World AIDS Day was the first ever global health day.</u>

![#SeeRed World AIDS Day 1 December 2017]

WHY IS WORLD AIDS DAY IMPORTANT?
Globally, there are an estimated 36.7 million people who have the virus. Despite the virus only being identified in 1984, more than 35 million people have died of HIV or AIDS, making it one of the most destructive pandemics in history.

Today, scientific advances have been made in HIV treatment, there are laws to protect people living with HIV and we understand so much more about the condition. Despite this, many people do not know the facts about how to protect themselves and others, and stigma and discrimination remain a reality for many people living with the condition.

World AIDS Day is important because it reminds the public and government that HIV has not gone away – there is still a vital need to raise money, increase awareness, fight prejudice and improve education.

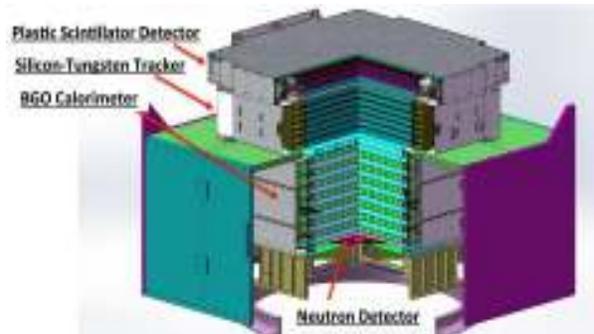*What is the difference between HIV and AIDS?*
HIV stands for human immunodeficiency virus. This virus leads to infection and it attacks the immune system. While HIV can be transmitted between people, AIDS is a condition that is acquired only after a person has contracted the HIV infection. AIDS is the final stage of the HIV infection.

How can HIV be diagnosed?
Serological tests, such as RDTs or enzyme immunoassays (EIAs), detect the presence or absence of antibodies to HIV-1/2 and/or HIV p24 antigen. No single HIV test can provide an HIV-positive diagnosis. It is important that these tests are used in combination and in a specific order.

China's DAMPE probe

A Chinese satellite which was sent to the skies to look for evidence of the annihilation or decay of dark matter particles in space has detected unexpected and mysterious signals in its measurement of high-energy cosmic rays, bringing scientists closer to proving the existence of the invisible matter. The mysterious dark matter is believed to comprise a quarter of universe.

The satellite, Dark Matter Particle Explorer (DAMPE), also called Wukong or "Monkey King", has measured more than 3.5 billion cosmic ray particles with the highest energy up to 100 tera-electron-volts (TeV), including 20 million electrons and positrons, with unprecedented high energy resolution, Xinhua reported.

Significance of these findings:
Precise measurement of cosmic rays, especially at the very high energy range, are important for scientists to look for traces of dark matter annihilation or decay, as well as to understand the universe's most energetic astrophysical phenomena, such as pulsars, active galaxy nuclei and supernova explosions.

What is Dark Matter?
Dark matter is one of the great riddles of physics. While normal matter – making up the stars and planets and so on – is understood to account for just four percent of the mass-energy density of the universe, dark matter is believed to make up a quarter, yet its nature is unknown and yet to be detected. Its existence has been postulated through observations of the cosmos and, though elusive, it is key to the formation of the galaxies and structure of the universe.

About DAMPLE:
DAMPE, short for DArk Matter Particle Explorer, was designed to look for clues to support one hypothesis for dark matter, which

claims it consists of weakly interacting massive particles, or WIMPs. The idea for DAMPE was to collect the high energy cosmic ray electrons and anti-matter counterpart positrons, which are emitted by phenomena such as supernovae and pulsars.

Cyclone Ockhi

Context: The deep depression which had formed in the Bay of Bengal near Kanyakumari district in Tamil Nadu, bordering Kerala, has now intensified into a cyclonic storm named Ockhi. The name Ockhi was given by Bangladesh which in Bengali means 'eye'.

How are cyclones named?
The World Meteorological Organisation (WMO) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) started the tropical cyclone naming system in 2000. Tropical cyclones are named to provide ease of communication between forecasters and the general public regarding forecasts, watches, and warnings.
The Cyclones worldwide are named by 9 regions — North Atlantic, Eastern North Pacific, Central North Pacific, Western North Pacific, North Indian Ocean, South West Indian Ocean, Australian, Southern Pacific, South Atlantic. *Cyclones in the North Indian Ocean basin are named by the Indian Meteorological Department* and the first tropical cyclone was named in 2004 as Onil (given by Bangladesh).
Eight north Indian Ocean countries — Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand, gave eight names each which was combined into a list of 64 names. One name from each country is picked in an order to name the cyclones.
The previous storm Mora that caused severe flooding across Northeast India in May was named by Thailand. Mora is the name of one of the healing stones and also means star of the

sea. The next cyclone will be named Sagar — a name given by India.

Clean Sea-2017

The Regional Level Marine Oil Pollution Response Exercise titled 'Clean Sea – 2017', was recently conducted at sea off Port Blair.

The objective of the exercise was to ascertain preparedness of the Indian Coast Guard, resource agencies and other stakeholders in responding to a major oil spill in line with the provisions of NOS-DCP (National Oil Spill Disaster Contingency Plan).

Background:
Indian Coast Guard is responsible for marine environment protection in the maritime zones of India and is the coordinating authority for response to oil spills in Indian waters. The Force has drawn up a National Oil Spill Disaster Contingency Plan (NOSDCP) and has established three pollution response centres at Mumbai, Chennai and Port Blair.

National Oil Spill Disaster Contingency Plan:
India promulgated National oil spill Disaster contingency plan (NOS-DCP) in the year 1996. Coast guard was designated as central coordination authority.

The objectives of the plan are:
- To develop appropriate and effective systems for the detection and reporting of spillage of oil.
- To ensure prompt response to prevent, control, and combat oil pollution.
- To ensure that adequate protection is provided to the public health and welfare, and the marine environment.

- To ensure that appropriate response techniques are employed to prevent, control, and combat oil pollution, and dispose off recovered material in an environmentally accepted manner.
- To ensure that complete and accurate records are maintained of all expenditure to facilitate cost of recovery.