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Harappan Civilisation:

Why in News?

A team led by Prof. Vasant Shinde, Vice-Chancellor, Deccan College Post-Graduate and Research Institute, Deemed University, Pune, is on the brink of recreating the faces of a few skeletal remains, dug up during the excavation of a Harappan site at Haryana's Rakhigarhi village in Hisar, in collaboration with South Korean scientists.

Details:

- The team was recreating the faces of five skeletal remains and the results would be available within the next two months.
- The archaeologist, who along with his 25-member team — comprising experts from different fields — had excavated the site from 2012-16, said they had dug up cemeteries in a targeted excavation to find about 40 human remains.

How is it being done?

- The skeletal remains were CT scanned and the data fed into a programme developed by the Korean scientists to fill them “layer by layer with blood and flesh to show as to how the Harappan people looked like.
- While the technique in itself is not new, with forensic scientists having helped investigators probe crimes by recreating faces using this technology, it will be the first instance when it will be used in India for the ancient population.
- The technique has also been used to recreate faces for the inhabitants of Egyptian and the Mesopotamian civilizations, but never for the Harappan population.

About Rakhigarhi Site:

- Rakhigarhi is one of the largest sites of the Harappan civilisation.
- The major objectives behind the excavation there, were to trace its beginnings and to study its gradual evolution from 6000 BCE to 2500 BCE, besides protecting it from encroachment by the locals since the village is settled exactly on top of it.
- Another aim was to find out who the Harappan people were.
- There was a lot of debate whether they had come from West or were locals.

Significance of Find:



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- The findings from excavation have now largely substantiated that the Harappans were locals. explaining that the excavation hinted at the gradual evolution of the Harappans proving that they were locals.
- The structural activity, pottery, jewellery and other crafts seem to have evolved gradually.
- They did not immediately start with town and villages but started with circular structures to evolve to rectangular ones and then arranged them in a pattern in the third stage before setting up cities in the fourth stage.
- It substantiates the hypothesis that they were locals and did not come from outside, contrary to the view held by some scholars.
- Harappans, credited with several present day traditions such as the folded hands greeting or namaste, chicken tandoor, use of the bindi and yoga, also seemed to have started the marriage system.

New Research on Dravidian Language:

Context:

The Dravidian [language](#) family, consisting of 80 varieties spoken by nearly 220 million people across southern and central India, originated about 4,500 years ago, a study has found.

This estimate is based on new linguistic analyses by an international team, including researchers from the Max Planck Institute for the Science of Human History in Germany, and the Wildlife Institute of India in Dehradun.

Details of Study:

- The researchers used data collected first-hand from native speakers representing all previously reported Dravidian subgroups.
- South Asia, reaching from Afghanistan in the west and Bangladesh in the east, is home to at least six hundred languages belonging to six large language families, including Dravidian, Indo-European and Sino-Tibetan.
- The Dravidian language family, consisting of about 80 language varieties (both languages and dialects) is today spoken by about 220 million people, mostly in southern and central India, and surrounding countries.
- The Dravidian language family's four largest languages — Kannada, [Malayalam](#), Tamil and Telugu — have literary traditions spanning centuries, of which Tamil reaches back the furthest, researchers said.



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- Along with [Sanskrit](#), Tamil is one of the world's classical languages, but unlike Sanskrit, there is continuity between its classical and modern forms documented in inscriptions, poems, and secular and religious texts and songs.

Significance of Study:

- The study of the Dravidian languages is crucial for understanding prehistory in Eurasia, as they played a significant role in influencing other language groups.
- Neither the geographical origin of the Dravidian language nor its exact dispersal through time is known with certainty.
- The consensus of the research community is that the Dravidians are natives of the Indian subcontinent and were present prior to the arrival of the Indo-Aryans (Indo-European speakers) in India around 3,500 years ago.
- Researchers said that it is likely that the Dravidian languages were much more widespread to the west in the past than they are today.

How reliable is the Research?

- The researchers used advanced statistical methods to infer the age and sub-grouping of the Dravidian language family at about 4,000-4,500 years old.
- This estimate, while in line with suggestions from previous linguistic studies, is a more robust result because it was found consistently in the majority of the different statistical models of evolution tested in this study.
- This age also matches well with inferences from [archaeology](#), which have previously placed the diversification of Dravidian into North, Central, and South branches at exactly this age, coinciding with the beginnings of cultural developments evident in the archaeological record.

Polar Vortex:

Why in News?

A blast of Arctic air from the polar vortex brought dangerous, bone-chilling cold to a wide swath of the United States on Tuesday, stretching from the Dakotas through Maine, with snow expected as far south as Alabama and Georgia.

The Midwest was the hardest-hit region, as temperatures plunged below zero Fahrenheit (-18°C). By nightfall the mercury was hovering at 0°F in Chicago, 7°F (minus 14°C) in Detroit and minus 21°F (minus 29°C) in Minneapolis.



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What is Polar vortex?

- The brutal blast known as the polar vortex is a stream of cold air that spins around the stratosphere over the North Pole, but whose current has been disrupted and is now pushing south into the United States.
- A **polar vortex** is an upper level [low-pressure area](#) lying near the Earth's poles.
- There are two polar vortices in the [Earth's](#) atmosphere, overlying the [North](#) and [South Poles](#).
- The bases of the two polar vortices are located in the middle and upper [troposphere](#) and extend into the [stratosphere](#).
- Beneath that lies a large mass of cold, dense Arctic air.

Rotation and Extent:

- A polar vortex strengthens in the winter and weakens in the summer due to its dependence on the temperature difference between the equator and the poles.
- The vortices span less than 1,000 kilometers (620 miles) in diameter, within which they rotate counter-clockwise in the [Northern Hemisphere](#) and in a clockwise fashion in the [Southern Hemisphere](#).
- As with other cyclones, their rotation is driven by the [Coriolis effect](#).

Vande Bharat Express:

Why in News?

India's first semi-high-speed train, Vande Bharat Express, was flagged off by Prime Minister from the New Delhi Railway Station amid sombre mood in the backdrop of the terror attack in Pulwama.

About the train:

- The train will travel from Delhi to Varanasi in 9 hours and 45 minutes.
- This includes stoppage time of 40 minutes each at Kanpur and Allahabad where there will be special programmes.
- The semi-high speed Train 18, which has been recently rechristened Vande Bharat Express, can run up to a maximum speed of 160 kmph and has travel classes like Shatabdi trains but with better facilities.
- It aims to provide a totally new travel experience to passengers.



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- The bookings for the train have begun and it will run commercially from February 17 from Delhi to Varanasi five days a week.
- It has 16 air-conditioned coaches of which two are executive class.
- The total seating capacity is 1,128 passengers.
- All coaches are equipped with automatic doors, GPS-based audio-visual passenger information system, on-board hotspot WiFi for entertainment purposes and very comfortable seating.
- All toilets are bio-vacuum type.
- The lighting is dual mode, that is diffused for general illumination and personal for every seat.

Tagore Awards for Cultural Harmony:

Why in News?

The President of India, Shri Ram Nath Kovind, presented the Tagore Award for Cultural Harmony for the years 2014, 2015 and 2016 to Shri Rajkumar Singhajit Singh, Chhayanaut (a cultural organisation of Bangladesh) and Shri Ram Vanji Sutar respectively.

About the Award:

- Award is a celebration of Indian traditions of culture and of our civilisational wealth – whether in literature or music, art or drama, sculpture or handicrafts, design or digital art.
- Each region in our country has a distinct cultural identity.
- Yet, in its essence, culture does not divide – it unites and harmonises all of India and all of humanity.

Contributions of Awardee:

- Shri Rajkumar Singhajit Singh is one of our greatest exponents of Manipuri dance.
- He has bridged this age-old art form of Manipur with not only modern sensibilities but with other parts of the country.
- Chhayanaut is an organisation that has promoted and preserved the works and philosophy of Rabindranath Tagore in Bangladesh.
- And Shri Ram Vanji Sutar is a sculptor and scholar who represents an art tradition that goes back thousands of years to our ancient past. These days he is most well-known for the Statue of Unity.

Structure of Earth:



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Scientists have discovered massive mountains in the Earth's mantle, an advance that may change our understanding of how the planet was formed.

Details of Study:

- In a study published in the journal Science, scientists used data from an enormous earthquake in Bolivia to find mountains and other topography on a layer located 660 km straight down, which separates the upper and lower mantle.
- Lacking a formal name for this layer, the researchers simply call it “the 660-km boundary.”
- To peer deep into the Earth, scientists from the Princeton University in the U.S. and the Institute of Geodesy and Geophysics in China, used the most powerful waves on the planet, which are generated by massive earthquakes.

How was it Done?

- Data from earthquakes that are magnitude 7.0 or higher send out shockwaves in all directions that can travel through the core to the other side of the planet — and back again.
- For this study, the key data came from waves picked up after a magnitude 8.2 earthquake — the second-largest deep earthquake ever recorded — that shook Bolivia in 1994.
- Scientists used powerful computers to simulate the complicated behaviour of scattering waves in the deep Earth.
- The technology depends on a fundamental property of waves: their ability to bend and bounce.
- Just as light waves can bounce (reflect) off a mirror or bend (refract) when passing through a prism, earthquake waves travel straight through homogenous rocks but reflect or refract when they encounter any boundary or roughness..

The presence of roughness on the 660-km boundary has significant implications for understanding how our planet formed and evolved.



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Groundwater Pollution:

Why in News?

Scientists have found microplastics contaminating a groundwater source that accounts for 25% of the global drinking water supply.

Details of Study:

- Microplastics are already known to contaminate the world's surface waters, yet scientists have only just begun to explore their presence in groundwater systems.
- Fractured limestone aquifers are a groundwater source that accounts for 25% of the global drinking water supply.
- The study, published in the journal Groundwater, identified microplastic fibres, along with a variety of medicines and household contaminants, in two aquifer systems in the U.S.
- It is estimated that 6.3 billion metric tonnes of plastic waste have been produced since the 1940s, and 79% of that is now in landfills or the natural environment.

Effects of Plastic:

- Plastic in the environment breaks down into microscopic particles that can end up in the guts and gills of marine life, exposing the animals to chemicals in the plastic.
- As the plastics break down, they act like sponges that soak up contaminants and microbes and can ultimately work their way into our food supply.
- Groundwater flows through the cracks and voids in limestone, sometimes carrying sewage and runoff from roads, landfills and agricultural areas into the aquifers below.
- The researchers identified a variety of household and personal health contaminants along with the microplastics, a hint that the fibres may have originated from household septic systems.

UN Report on Hunger:

Why in News?



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Feeding a hungry planet is growing increasingly difficult as climate change and depletion of land and other resources undermine [food](#) systems, the U.N. Food and Agricultural Organization said on Wednesday as it renewed appeals for better policies and technologies to reach “zero hunger.”

Hunger and Climate Change:

- Population growth requires supplies of more nutritious food at affordable prices, but increasing farm output is hard given the “fragility of the natural resource base” since humans have outstripped Earth’s carrying capacity in terms of land, water and climate change, the report said.
- About 820 million people are malnourished.
- The FAO and International Food Policy Research Institute released the report at the outset of a global conference aimed at speeding up efforts to achieve zero hunger around the world.

Civil strife, conflicts

- Food security remains tenuous for many millions of people who lack access to affordable, adequately nourishing diets for a variety of reasons, the most common being poverty.
- But it’s also endangered by civil strife and other conflicts.
- In Yemen, where thousands of civilians have died in airstrikes by a Saudi-led coalition, the aid group Save the Children says 85,000 children under 5 may have died of hunger or disease in the civil war.
- In Afghanistan, severe drought and conflict have displaced more than 2,50,000 people, according to UNHCR, the U.N. refugee agency.

Salient Observations of report:

- FAO Director-General Jose Graziano da Silva noted that the number of hungry and malnourished people in the world has risen to levels last seen a decade ago.
- After decades of gains in fighting hunger, this is a serious setback and FAO and the U.N. sister agencies, together with member governments and other partners, are all very concerned.
- The FAO estimates that global demand for food will jump by half from 2013 to 2050.



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- Farmers can expand land use to help make up some of the difference, but that option is constrained in places like Asia and the Pacific and urbanisation is eating up still more land that once may have been used for agriculture.
- Increasing farm output beyond sustainable levels can cause permanent damage to ecosystems, the report said, noting that it often causes soil erosion, pollution with plastic mulching, pesticides and fertilizers, and a loss of biodiversity.
- China destroys 12 million tons of tainted grain each year, at a loss of nearly \$2.6 billion, the report said.

National Conference on “Prison Design”:

Why in News?

The first ever National Conference on “**Prison Design**” will begin in Visakhapatnam, Andhra Pradesh tomorrow(29th January 2019). The two-day conference is being hosted by the DG Prison, Andhra Pradesh on the behalf of State and is being sponsored by the Bureau of Police Research & Development (BPR&D).

Aim of Conference:

- This conference aims to provide a platform to the Sr. Police officers, Prison officers and Architects from Prison Department and Police Housing Corporation to meet and deliberate upon on the various issues relating with planning, Design and Constructions of prison keeping in view the safety and security need as well as administrative ease of day to day functioning of the prison.
- The idea of conference is also to incorporate new construction technology, Information and Communication Technologies and modern safety and security gadgets in Prison Administration, besides ensuring conducive living environment in a holistic sense.

Prison administration:

- Prison Administration is a very important aspect of Criminal Justice System.
- Though as per the constitutional provision, it is a state subject but the Govt of India over the years has been providing all the requisite support and assistance to modernise the correctional administration system in the country.

About BPR&D:

- BPR&D is committed to provide synergetic platform to all Prison professionals, Police Officials and civil Architects to evolve better “**Prison Designs**” suiting to the safety and security needs of the prison.



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- It also aims to ease handling of the administration of the prisons on one hand and provide conducive structures for humane living conditions for the inmates as per the constitutional mandates.

Programme for International Students Assessment (PISA)

Why in News?

A Signing ceremony of Agreement between India and OECD for India's participation in Programme for International Student Assessment (PISA) 2021, in presence of Union HRD Minister, Shri Prakash Javadekar was held in New Delhi today.

Details of agreement:

- India will participate in the Programme for International Students Assessment (PISA) to be conducted by the Organization for Economic Cooperation and Development (OECD) in 2021.
- The participation in PISA 2021 would indicate the health of the education system and would motivate other schools /states in the subsequent cycles.
- This will lead to improvement in the learning levels of the children and enhance the quality of education in the country.
- OECD has agreed to ask some of the questions based on Indian context.

About PISA:

- PISA is a **competency based assessment** which unlike content-based assessment, measures the extent to which students have acquired key competencies that are essential for full participation in modern societies. It would lead to recognition and acceptability of Indian students and prepare them for the global economy in the 21st century.

What are the key features of PISA?

1. PISA is a triennial international survey (every three years) which aims to evaluate the education system worldwide by testing the skills and knowledge of 15-year-old students.
2. Students are assessed in reading, mathematics, science and collaborative problem-solving.
3. Participation in PISA allows benchmarking performance against a wide range of countries.
4. PISA uses test items aligned with international benchmarks. Test items are adapted to the local context and language, pilot tested and validated before being used for the test.
5. OECD have agreed to contextualize the questions for Indian students.



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Benami Property:

Why in News?

The Income Tax Department has confiscated assets worth ₹6,900 crore till now as part of its action under the [anti-benami transactions law](#).

What is a Benami Transaction?

A benami transaction is an arrangement in which a property (movable or immovable) is transferred to or held in the name of one person (benamidar) but is actually owned and enjoyed by another person (beneficial owner).

Benami Transactions (Prohibition) Amendment Act, 2016:

Salient Features:

- The PBPT Act defines benami transactions, prohibits them and further provides that violation of the PBPT Act is punishable with imprisonment and fine.
- The PBPT Act prohibits recovery of the property held benami from benamidar by the real owner.
- Properties held benami are liable for confiscation by the Government without payment of compensation.
- An appellate mechanism has been provided under the PBPT Act in the form of Adjudicating Authority and Appellate Tribunal.
- The Adjudicating Authority referred to in section 6(1) of the Prevention of Money Laundering Act, 2002 (PMLA) and the Appellate Tribunal referred to in section 25 of the PMLA have been notified as the Adjudicating Authority and Appellate Tribunal, respectively, for the purposes of the PBPT Act.
- A Joint / Additional Commissioner of Income-tax, an Assistant / Deputy Commissioner of Income-tax and a Tax Recovery Officer in each Pr. CCIT Region have been notified to perform the functions and exercise the powers of the Approving Authority, Initiating Officer and Administrator, respectively under the PBPT Act.

Swachh Bharat Mission

Why in News?

The Swachh Bharat Mission Grameen (SBMG) of Ministry of Drinking Water and Sanitation, held a National Workshop on Solid and Liquid Waste Management (SLWM) on 30th and 31st January 2019 in New Delhi.



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About the Workshop:

- The workshop emphasized the importance of Fecal Sludge Management (FSM) for rural census towns and large dense villages and Galvanizing Organic Bio-Agro Resource–dhan (GOBAR-DHAN) in rural areas.
- It also covered Plastic Waste Management, Grey Water Management and featured case studies from across the country.
- The experts on FSM shared various technological and operational models, specific to different geographic terrains and climatic conditions.
- Innovative Solid Waste Management initiatives from across the country were shared by the States.
- This included transforming waste into construction bricks and fuel during the harsh winters in Leh district in Jammu and Kashmir.
- Kerala showcased the “Green Protocol” being implemented in Thiruvananthapuram district using the 3Rs (Reduce, Reuse and Recycle) to minimize waste generation.
- Rajgarh district from Madhya Pradesh presented the experience of successfully implementing the GOBAR-DHAN project.

About GOBAR-DHAN Yojana:

- In an effort to make the villages open defecation free and improve the lives of villagers, the Finance Minister in his budget speech in Feb 2018 announced the launch of Galvanizing Organic Bio-Agro Resources Dhan (GOBAR-DHAN) scheme.
- Currently cattle dung and a portion of agricultural waste is used as cooking fuel.
- However, WHO estimates about 5 lakh deaths in India alone due to indoor air pollution caused by unclean cooking fuel.

Benefits of Scheme:

- Women and children suffer the most, as they spend large amounts of their time near indoor cooking hearth.
- Bio-gas, the most common form of bio-fuel, is a clean form of energy and can be obtained from cattle dung, poultry droppings, crop residue, kitchen waste, etc.
- Gobar-Dhan shall benefit rural people in general and women in particular from this clean fuel and also through improvements on health and improvement in cleanliness in the villages.
- This initiative shall support biodegradable waste recovery and conversion of waste into resources.
- This shall provide economic and resource benefits to farmers and households and also support creating clean villages which is the objective of Swachh Bharat Mission (Gramin).



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INF Agreement:

Why in News?

The United States will stop complying with a landmark nuclear pact with Russia as soon as this weekend after last-ditch talks with Moscow to save it fell flat.

Background:

- Washington has long accused Russia of flouting the 1987 Intermediate-range Nuclear Forces Treaty (INF), alleging that a new Russian missile, the Novator 9M729, called the SSC-8 by NATO, violates the pact, which bans either side from stationing short- and intermediate-range, land-based missiles in Europe.
- Russia denies that, saying that the missile's range puts it outside the treaty, and has accused the U.S. of inventing a false pretext to exit a treaty Washington wants to leave anyway so as to develop new missiles.
- It has also rejected a U.S. demand to destroy the new missile.

About INF:

- The **Intermediate-Range Nuclear Forces Treaty (INF Treaty, formally Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles)** is a 1987 [arms control](#) agreement between the [United States](#) and the [Soviet Union](#) (and later its [successor state](#) the [Russian Federation](#)).
- Signed in [Washington, D.C.](#) by [President Ronald Reagan](#) and [General Secretary Mikhail Gorbachev](#) on 8 December 1987, the treaty was ratified by the [United States Senate](#) on 27 May 1988 and came into force on 1 June 1988.
- The INF Treaty eliminated all nuclear and conventional missiles, as well as their launchers, with ranges of 500–1,000 kilometers (310–620 mi) (short-range) and 1,000–5,500 km (620–3,420 mi) (intermediate-range).
- The treaty did not cover sea-launched missiles.
- By May 1991, 2,692 missiles were eliminated, followed by 10 years of on-site verification inspections

Public Procurement Policy in CPSEs

Why in News?



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As per DPE MoU guidelines, negative mark is given to MoU evaluated CPSEs for non-compliance of Public Procurement Policy for Micro and Small Enterprises issued by Ministry of MSME.

About the Policy:

The Policy:

- Public Procurement Policy for MSEs Order, 2012 has been notified under section 11 of MSMED Act, 2006.
- The Policy is effective from 1st April 2012 (Gazette notification on 26th March 2012).
- The objective of Policy is promotion and development of Micro and Small Enterprises by supporting them in marketing of products produced and services rendered by them. However, the policy rests upon core principle of competitiveness, adhering to sound procurement practices and execution of supplies in accordance with a system which is fair, equitable, transparent, competitive and cost effective.

Salient features of the Policy:

- Every Central Ministry /Department / PSUs shall set an annual target for 20% procurement from MSE Sector.
- A sub-target of 4% out of 20% target of annual procurement earmarked for procurement from MSEs owned by SC/ST entrepreneurs.
- Overall procurement goal of minimum 20% has become mandatory from 1st April 2015.
- Tender sets free of cost and exemption from payment of earnest money to registered MSEs.
- MSEs quoting price within price band L-1 + 15%, when L1 is from someone other than MSE, shall be allowed to supply at least 20% of tendered value at L-1 subject to lowering of price by MSEs to L-1.
- 358 items are reserved for exclusive procurement from MSEs.
- Ministry /Department/CPSUs shall prepare their annual procurement plan to be uploaded on their official website.
- For enhancing participation of MSEs in government procurement, Ministry /Department/CPSUs shall conduct Vendor Development Programmes or Buyer Seller Meets for MSEs especially for SC/ST entrepreneurs.



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Status of National Gas Grid

The Government has envisaged to develop the National Gas Grid.

At present about 16,788 Km natural gas pipeline is operational and about 14,239 Km gas pipelines are being developed to increase the availability of natural gas across the country.

Details:

- These pipelines have been authorized by Petroleum and Natural Gas Regulatory Board (PNGRB) and are at various stages of execution viz. Pre-Project activities/laying/testing/commissioning etc.
- PNGRB has authorized GAIL to develop North East gas pipeline to develop approximately 750 km long Barauni - Guwahati pipeline as an integral part of Jagadishpur -Haldia -Bokaro Dhamra Pipeline (JHBDPL) project which will connect North East region with the National Gas Grid.
- Further, PNGRB has also authorized Indradhanush Gas Grid Limited (IGGL), a joint venture company of five Central Public Sector Enterprises (CPSEs) i.e. IOCL, ONGC, GAIL, OIL and NRL for the development of North East Gas Grid to connect eight states of North Eastern India.

2nd National Conference of Micro Missions of National Police Mission

Context:

Bureau of Police Research & Development (BPR&D) will organize the 2nd National Conference of Micro Missions of National Police Mission (NPM) here tomorrow.

The two day Conference will discuss the issues of Skills and Competence at grass-root level, Attitudinal Changes in Police, Gender Sensitization, harnessing technology and Community Policing.

About National Police Mission:

- The National Police Mission (NPM) has so far developed 35 projects; some important among them are Transparent Recruitment Process, Police- Community Policing, Student Police Cadet Programme.
- The NPM is having knowledge based strength of 140 police officers from across the country from State/UTs/CAPFs/CPOs.
- The BPR&D will be giving NPM Awards to 09 officers for their contribution in Micro Missions and successful preparation of the implementable projects.



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- The National Police Mission Division of BPR&D strives in the direction of transforming the Police Forces of the country into effective instrument for maintenance of Internal Security and meeting challenges of the next century.
- Since its inception, NPM has been working for empowering the Police Forces by enhancing the skills and competence at grass root level.
- To achieve the mandate of NPM, eight micro missions are working under BPR&D. BPR&D organizes Conference on National Police Mission annually.

About BPRD:

The Government of India formally established the Bureau of Police Research and Development (BPR&D), under the Ministry of Home Affairs giving a new orientation to then existing Police Research and Advisory Council (1966) for the following reasons and with the primary objective of modernization of police force:

1. To take direct and active interest in the issues
2. To promote a speedy and systematic study of the police problems,
3. To apply science and technology in the methods and techniques used by police.

Health and Wellness Centres under Ayushman Bharat:

Why in News?

The key components of PMJAY and HWCs under Ayushman Bharat are given below:

Prime Minister Jan ArogyaYojana [PMJAY]

1. Government of India has launched Ayushman Bharat PradhanMantri Jan ArogyaYojana (PMJAY) on 23.09.2018. PMJAY is a centrally sponsored scheme. It is entirely funded by Government and the funding is shared between Centre and State governments as per prevailing guidelines of Ministry of Finance.
2. PMJAY provides health coverage up to Rs. 5 lakh per family per year for secondary and tertiary hospitalization to around 10.74 crore poor and vulnerable families (approx. 50 crore beneficiaries).
3. PMJAY is an entitlement-based scheme. This scheme covers poor and vulnerable families based on deprivation and occupational criteria as per SECC data.
4. PMJAY provides cashless and paperless access to services for the beneficiary at the point of service in any (both public and private) empanelled hospitals across India. In other words, a beneficiary from one State can avail benefits from an empanelled Hospital anywhere in the Country.



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5. Under PMAJY, the States are free to choose the modalities for implementation. They can implement the scheme through insurance company or directly through the Trust/ Society or mixed model.
6. There is no restriction on family size, ensuring all members of designated families specifically girl child and senior citizens get coverage.
7. At the national level, the National Health Authority (NHA) has been set up to implement the scheme.
8. AnMoU has been signed between National Health Agency (now National Health Authority) and 33 States/UTs to implement PMJAY.
9. About 1393 treatment packages are available for the beneficiaries under PMJAY.
10. The details of package, operational guidelines and key features are available at [www. pmjay.gov.in](http://www.pmjay.gov.in)

About Ayushman Bharat - Health and Wellness Centres:

- In order to expand access to Comprehensive Primary Health Care (CPHC), under Ayushman Bharat - Health and Wellness Centres (HWCs), Sub Health Centres (SHCs) and Primary Health Centres (PHCs) are being strengthened as Health and Wellness Centres (HWCs).
- The HWCs are to provide preventive, promotive, rehabilitative and curative care for an expanded range of services encompassing reproductive and child health services, communicable diseases, non-communicable diseases, palliative care and elderly care, oral health, ENT care, and basic emergency care.
- While under PMJAY free hospitalisation care is being provided to around 10.74 crore families belonging to identified criteria as per SECC database, both rural & urban, under Ayushman Bharat - Health and Wellness Centres (HWCs), Comprehensive Primary health care is being delivered through HWCs covering prevention, promotion and ambulatory care at primary level.

JUNK FOOD:

Why in News?

The standards for food grains have been prescribed under sub-regulation 2.4.6 of Food Safety and Standards (Food Product Standards and Food Additives) Regulations, 2011 which have to be complied with by all Food Business Operators (FBOs).

What is Junk Food?



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- 'Junk Food' is not defined under the Food Safety and Standards Act, 2006 and Regulations thereunder.
- However, draft guidelines titled as 'Guidelines for making available Wholesome Nutritious, Safe and Hygienic Food to School Children in India' prepared by an Expert Group /Central Advisory Committee as per the directions of the Hon'ble High Court of Delhi has been issued by FSSAI wherein the availability of most common High in Fat, Sugar and Salt (HFSS) foods in schools have been restricted/limited.
- FSSAI has been leading 'The Eat Right India' movement since July, 2018 to improve public health in India and combat negative nutritional trends to fight lifestyle diseases.

Eat Right Movement:

- The strength of 'The Eat Right Movement' lies in its holistic and collaborative approach, with stakeholders on both the demand and supply-side joining to make a difference through some clearly identified steps.
- On the demand side, the Eat Right Movement focuses on empowering citizens to make the right food choices, on the supply side, it nudges food businesses to reformulate their products, provide better nutritional information to consumers and make investments in healthy food as responsible food businesses.

About FSSAI Act:

- The implementation and enforcement of Food Safety and Standards Act, 2006, and Rules and Regulations made thereunder primarily lies with State/UT Governments.
- The Food Safety and Standards Authority of India (FSSAI) has specifically asked State Food Safety Commissioners to ensure compliance of prescribed standards of food grains, inter-alia, by FCI, Food & Supply Departments and Fair Price Shops.
- Regular surveillance, monitoring, inspection and random sampling of food products, including food grains distributed under Public Distribution System, are carried out by the officials of Food Safety Departments of the respective States/UTs
- Where the food samples are found non-conforming to the prescribed standards, penal action is taken against the defaulting FBOs as per provisions of the Food Safety and Standards (FSS) Act, 2006 and Rules, Regulations made thereunder.

DD Arunprabha

Why in News?



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Prime Minister Shri Narendra Modi will launch DD Arunprabha, a dedicated 24x7 Doordarshan satellite channel for Arunachal Pradesh and lay the foundation stone of a permanent campus of Film and Television Institute of India (FTII) at Arunachal Pradesh on 9.2.2019.

Details:

- **DD Arunprabha**, set to become the 24th satellite channel operated by Doordarshan,
- It will be equipped with state of the art facilities, including a Digital Satellite News Gathering unit to provide live coverage from remote locations, for 24x7 telecast.
- The playout facility and the earth stations established at DDK Itanagar will ensure seamless transmission of DD Arunprabha.
- **Benefits:**
- The channel will showcase the rich tradition and diversity of local culture.
- Not only will it help integrate North-East with the country, but will also bring alive the magnificence of North-East by airing content sensitive to the needs and aspirations of local population including news, travelogues, mythological shows, documentaries, magazines, tele-films, reality shows, daily shows etc.
- It will provide a boost to the talented youngsters of the North-East in film and television sector.

Mega Food Park

Why in News?

Union Minister for Food Processing Industries Smt Harsimrat Kaur Badal today laid foundation stone Mega Food Park in Mathura in Uttar Pradesh.

About the Park:

- The Mega Food Park is being set up in 57.41 acre of land at a cost of Rs. 120.77 Crore.
- Government of India has approved a financial assistance of Rs. 50.00 Crore to the project.
- The Park also has a common administrative building for office and other uses by the entrepreneurs and 5 PPCs at Aligarh, Mathura, Kanshiram Nagar, Bharatpur & Agra having facilities for primary processing and storage near the farms.

Benefits:

- Mega Food Park will leverage an additional investment of about Rs. 250 crore in 25-30 food processing units in the park and generate a turnover of about Rs. 450-500 crore annually.

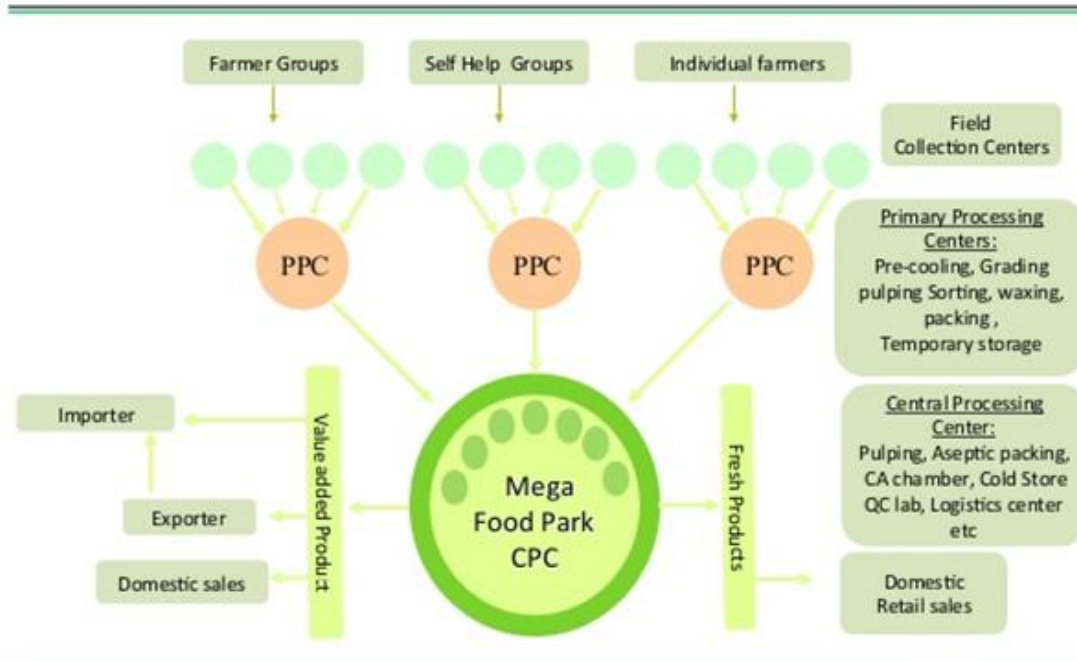


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- The Park will also provide direct and indirect employment to 5,000 persons and benefit about 25,000 farmers in the CPC and PPC catchment areas.
- The modern infrastructure for food processing created at Park will benefit the farmers, growers, processors and consumers of Uttar Pradesh and adjoining areas immensely and prove to be a big boost to the growth of the food processing sector in the State of Uttar Pradesh.

About the Scheme:

Mega Food Park Model: An Illustration





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Mega Food Park Scheme- The Need

- ❖ Food processing sector- a sunrise sector, is capital intensive with long gestation periods
- ❖ Hence, incentives from the Govt. required to promote private investment in the sector
- ❖ The Scheme conceptualized on an Industrial Park Model and customized to the need of food processing sector. Aim also to overcome the weakness plaguing the sector
- ❖ Grant assistance to be provided to entrepreneurs for setting up common infrastructure
- ❖ The common infrastructure to act as the feeder point for processing units to be set up in the periphery area

Background:

- Mega Food Parks create modern infrastructure facilities for food processing along the value chain from farm to market with strong forward and backward linkages through a cluster based approach.
- Common facilities and enabling infrastructure is created at Central Processing Centre and facilities for primary processing and storage is created near the farm in the form of Primary Processing Centers (PPCs) and Collection Centers (CCs).
- Under the Scheme, Government of India provides financial assistance upto Rs. 50.00 Crore per Mega Food Park project.

National Commission for Minorities (NCM) :

Why in News?

The [Supreme Court](#) on Monday directed the National Commission for Minorities (NCM) to take a decision within three months on a representation seeking laying down of guidelines for defining the term 'minority' in the context of Statewise population of a community.

Background:



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- A Bench, headed by Chief Justice of India Ranjan Gogoi asked BJP leader and lawyer Ashwini Upadhyay to refile his representation to the commission which, in turn, will take a decision on it within three months from Monday.
- Mr. Upadhyay, in his plea, said the term 'minority' needed to be redefined and reconsidered in the context of population of a community in a State, instead of nationwide population data.
- The plea said that Hindus, who are a majority community as per national data, are a minority in several northeastern States, and in Jammu and Kashmir.
- However, the Hindu community is deprived of benefits that are available to the minority communities in these States, the plea said, adding the commission should reconsider the definition of minority in this context.

About NCM:

National Commission for Minorities
<p>The National Commission for Minorities (NCM) is a body constituted by the Government of India to monitor and evaluate the progress of people classified as minorities by the Indian government. Essentially the minorities in India consist of followers of all religions other than Hinduism and weaker sections in the Hindu community. The Commission is also referred to as the Minority Commission. It was formed as a result of an act of the Indian Parliament in 1993.[1]</p>
<p>UN Declaration</p> <p>The NCM adheres to the UN 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." [1]</p>

Manufacturing of Mobile Handsets

Context:

One hundred twenty-seven units are manufacturing mobile handsets in the country and all of them are operating from the Domestic Tariff Area (DTA).

As per information received from the Ministry of Electronics and Information Technology (MeitY), the mobile handset manufacturing operations in DTA are governed by the applicable duty structure.

The benefits available to manufacturers of mobile handsets include:



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- Rationalized tariff structure and a Phased Manufacturing Programme (PMP) and their sub-assemblies, parts;
- availing Capex benefits under the Modified Special Incentive Package Scheme (M-SIPS),
- 100% FDI permitted for manufacture of mobile handsets and their sub-assemblies, parts, export incentive of 4% of FoB value of export under the Merchandise Export from India Scheme (MEIS) and
- specified capital goods for manufacture of mobile handsets are permitted for import at 'Nil' Basic Customs Duty (BCD).
- Benefits available to the units under SEZ Act, 2005 & SEZ Rules, 2006 include duty free import and domestic procurement of goods for development, operation and maintenance of SEZ units.

Most Favored Nation:

Why in News?

India on Friday announced that it had decided to withdraw the [Most Favoured Nation \(MFN\) status](#) granted to Pakistan and would also take all possible steps to isolate the country at the international level after Thursday's [car bomb attack](#) in which at least 37 CRPF men were killed in the Kashmir Valley.

Details:

- Ministry of External Affairs would announce the diplomatic steps to be taken against Pakistan.
- A notification would be issued by the Commerce Ministry withdrawing the MFN status.

What is MFN status?

- In international economic relations and international politics, "**most favoured nation**" (MFN) is a status or level of treatment accorded by one [state](#) to another in [international trade](#).
- The term means the country which is the recipient of this treatment must nominally receive equal trade advantages as the "most favoured nation" by the country granting such treatment. (Trade advantages include low [tariffs](#) or high [import quotas](#).)
- In effect, a country that has been accorded MFN status may not be treated less advantageously than any other country with MFN status by the promising country.



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- The members of the [World Trade Organization](#) (WTO) agree to accord MFN status to each other. Exceptions allow for preferential treatment of [developing countries](#), regional [free trade areas](#) and [customs unions](#).
- Together with the principle of [national treatment](#), MFN is one of the cornerstones of WTO [trade law](#).

Benefits:

- "Most favoured nation" relationships extend reciprocal bilateral relationships following both [GATT](#) and WTO norms of reciprocity and non-discrimination.
- In bilateral reciprocal relationships a particular privilege granted by one party only extends to other parties who reciprocate that privilege, while in a multilateral reciprocal relationship the same privilege would be extended to the group that negotiated a particular privilege.
- The non-discriminatory component of the GATT/WTO applies a reciprocally negotiated privilege to all members of the GATT/WTO without respect to their status in negotiating the privilege.
- Most Favoured Nation status is given to an international trade partner to ensure non-discriminatory trade between all partner countries of the WTO.

Defence Cooperation:

Why in news?

India concluded defence cooperation and security protection agreements with Germany and Sweden during the ongoing visit of Defence Minister Nirmala Sitharaman there.

Details of Agreement:

- **The agreement will enable both the countries to share classified information with each other.**
- India and Sweden have had a memorandum of understanding on cooperation in the area of defence since 2009.
- Earlier in Germany on February 12 to 13, Ms. Sitharaman met her counterpart Dr. Ursula von der Leyen and signed an implementing arrangement on enhanced defence and defence industry cooperation to strengthen military to military engagement as well as defence industry and research and development linkages.



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- Both Germany and Sweden are important suppliers of defence equipment to India and their companies are currently in the race for multi-billion tenders to supply submarines and fighter aircraft.

International Court of Justice:

Why in News?

Pakistan is committed to implementing the decision of the International Court of Justice (ICJ) in the Kulbhushan Jadhav case, a senior Pakistani official said as the country's delegation left for the Hague on Friday for the oral proceedings in the case that will commence at the world court from February 18.

Background:

- Indian national Jadhav, was sentenced to death by a Pakistani military court on charges of espionage and terrorism in April 2017.
- India moved the ICJ in May the same year against the verdict.
- A 10-member bench of the ICJ on May 18, 2017, had restrained Pakistan from executing Jadhav till adjudication of the case.
- "The oral proceedings on the International Court of Justice are commencing on February 18.
- India will present its case before the court.
- Pakistan claims that its security forces arrested Jadhav from the restive Balochistan province on March 3, 2016 after he reportedly entered from Iran.
- However, India maintains that Jadhav was kidnapped from Iran where he had business interests after retiring from the Navy. Jadhav's sentencing had evoked a sharp reaction in India.
- India had approached the ICJ for "egregious" violation of the provisions of the Vienna Convention on Consular Relations, 1963, by Pakistan in Jadhav's case.

What is Vienna Convention on Consular Relations?

- The **Vienna Convention on Consular Relations** of 1963 is an international [treaty](#) that defines a framework for [consular relations](#) between independent states.
- A consul normally operates out of an embassy in another country, and performs two functions:

(1) protecting in the host country the interests of their countrymen, and



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(2) furthering the commercial and economic relations between the two states.

- The treaty provides for [consular immunity](#).
- The treaty has been ratified by 179 states

About ICJ:

- The **International Court of Justice** (abbreviated **ICJ**) is the principal judicial organ of the [United Nations](#) (UN).
- It settles legal disputes between member [states](#) and gives advisory opinions to authorized UN organs and specialized agencies.
- It comprises a panel of 15 judges elected by the [General Assembly](#) and [Security Council](#) for nine-year terms.
- It is seated in the [Peace Palace](#) in [The Hague, Netherlands](#).

Central WAQF Council

Why in News?

For the first time since the Independence, the Central Government has been providing 100 per cent financial help to utilise Waqf properties across the country for educational empowerment and job-oriented skill development of the needy sections of the society.

About Central waqf council:

- **Central Wakf Council, India** is an [Indian statutory body](#) established in 1964 by the [Government of India](#) under Wakf Act, 1954 (now a sub section the Wakf Act, 1995) for the purpose of advising it on matters pertaining to working of the State Wakf Boards and proper administration of the [Wakfs](#) in the country.
- Wakf is a permanent dedication of movable or immovable properties for religious, pious or charitable purposes as recognized by [Muslim Law](#), given by [philanthropists](#).
- The grant is known as mushrut-ul-khidmat, while a person making such dedication is known as Wakf

The Council

The Council is headed by a Chairperson, who is the Union Minister in charge of Wakfs and there are maximum 20 other members, appointed by Government of India as stipulated in the Wakf Act.

Deendayal Disabled Rehabilitation Scheme'at Kolkata



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Why in News?

Ministry of Social Justice & Empowerment, Department of Empowerment of Persons with Disabilities implements a scheme titled 'Deendayal Disabled Rehabilitation Scheme (DDRS)'. A Regional Conference on the scheme was organized at Kolkata, West Bengal today.

About the Scheme:

- Under DDRS, Financial assistance is provided to about 600 NGOs every year.
- About 26% of total NGOs under DDRS and 46% of Special School for Children with Intellectual Disabilities are from Eastern and North-Eastern States.
- DDRS is a Central Sector Scheme of Government of India which is being implemented since 1999 for providing financial assistance to NGOs working for education and rehabilitation of persons with disabilities.
- This scheme was revised in 2018 and the revision is effective from 1st April 2018.

Highlights of Conference:

- This Regional Conference was organized in order to disseminate the provisions of the revised scheme and to bring the Department closer to the implementing agencies and other stakeholders.
- This conference provided a wonderful opportunity for interactions with all stakeholders ranging from the Central Government to the implementing agencies.
- An in-depth understanding of the scheme would enable better outreach in terms of better facilities to end beneficiaries, i.e. persons with disabilities.
- The conference was an effective step towards good governance where the functionaries of the Central Govt. Ministries are reaching various parts of the country for creating awareness among the public.
- It leads to the ultimate objective towards ensuring welfare of Divyangjan and the dignity they deserve.

Initiatives on women's safety:

Why in News?

The Ministry of Women and Child Development has conceptualized several initiatives to promote safety of women in their living spaces, working spaces and the public spaces.

Panic Button

- The idea of having a panic button on the mobile phone was conceived way back in 2015 and after a series of deliberations with the Ministry of Telecom, mobile phone manufacturers and mobile telephony service providers.



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- Ministry of Telecom mandated a physical panic button on all mobile phones in the country.
- It was also noted that such a panic button must be backed by an emergency response mechanism through the local police when panic button message would alert the specified family members etc. of a woman in distress situation.
- This system was then conceptualized in collaboration with the Ministry of Home Affairs and state governments were asked to put in place a dedicated Emergency Response Centre through which the entire system will be operated.

SCIM portal under Safe City Project

- In order to provide safety for women in public spaces, the Government has identified eight cities for implementation of Safe City project.
- The 8 major cities which have been chosen are Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Lucknow and Mumbai.
- Detailed projects for this have been prepared jointly by the municipal bodies and the local police authorities.
- The projects include creation on ground assets & resources and mindset safety of women.

Key features of the safe city project include:

- a. Identification of sensitive hot spots in each city,
- b. Installation of CCTV surveillance covering the entire hot spot.
- c. Automated number plate reading machines to be deployed in extremely sensitive areas.
- d. Intensive patrolling in vulnerable areas beyond the identified hot spots.
- e. Improving street lighting and public toilet facilities for women.
- f. Others like setting up women help desks in police stations, augmentation of women support centres etc.

DNA Analysis Facilities in States

- In view of the complaints of delay in cases of sexual assault investigations, it was proposed that dedicated DNA analysis facilities should be created in the forensic science laboratories on a mission mode.
- Timely testing of DNA samples from the crime scene is the quickest process of obtaining forensic evidence in cases of sexual assault on women.
- In the initial phase, dedicated DNA analysis facilities have been sanctioned for the forensic science laboratories located at Chennai, Madurai, Agra, Lucknow, Mumbai and Kolkata.
- Expert technicians are also being recruited and trained for the forensic analysis.



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India-Saudi Arabia Relation:

Why in News?

India and [Saudi Arabia](#) will launch a mechanism for coordinated decisions regarding strategically important issues, sources said on Monday.

The announcement came a day before the Saudi Crown Prince Mohammed Bin Salman arrives here as part of his tour of Asia, where he chose Pakistan as his first destination.

Background:

- India and Saudi Arabia have a strong independent strategic partnership and it will be further strengthened with the launching of the Strategic Partnership Council that will cover critical areas of mutual interest.
- Ministry of External Affairs, NITI Aayog and other government agencies are expected to be the constituent units of this council.
- The visit has acquired greater attention here as Prince Mohammed Bin Salman declared himself an “ambassador of Pakistan” during his Islamabad visit.
- The Pakistan visit by Prince Mohammed brought investment of \$20 billion, even as India had begun to campaign for international isolation of the country after the Pulwama attack.

Stand on Pulwama Attack:

- Saudi Arabia has displayed greater appreciation of India’s concerns regarding cross-border terrorism as recently seen in the Pulwama attack.
- The Saudi understanding of terrorism has evolved and they have a far better understanding of terrorism in Kashmir.



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GS-3

UDAN 3.0 results

Why in News?

The union Minister for Civil Aviation and Commerce Shri Suresh Prabhu announced the results of UdeDeshKaAamNaagrik (**UDAN**) Scheme here today.

UDAN Round 3

Ministry of Civil Aviation launched the largest bidding round under the highly successful UDAN Scheme, also integrating a number of iconic tourism sites in coordination with the Ministry of Tourism.

Key Features of UDAN 3 included:

1. Inclusion of Tourism Routes under UDAN 3 in coordination with the Ministry of Tourism
2. Inclusion of Seaplanes for connecting Water Aerodromes, and
3. Bringing in a number of routes in the North-East Region under the ambit of UDAN

Effective implementation

To ensure effective implementation of the Scheme and quick commencement of operations once the bidding process is over, MoCA and AAI, in parallel, are also coordinating with the Ministry of Tourism, Ministry of Defence and the State Governments for various facilitating actions.

Way forward

- Requests from few state governments, including north-eastern region, would be considered to cover specific pre-determined routes under the special round of the UDAN Scheme.
- This is expected to help in connecting remote areas which have not been connected yet. Unserved routes connecting served airports would be considered for bidding with the support from the concerned State Governments / Ministry of Tourism / DoNER etc.



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PSLV-C44 successfully launches Microsat-R and Kalamsat-V2

Context:

India's Polar Satellite Launch Vehicle (PSLV-C44) successfully injected Microsat-R and Kalamsat-V2 satellites into their designated orbits. .

Significance:

- This flight marked the first mission of PSLV-DL, a new variant of PSLV with two strap-on motors.
- In the previous PSLV launch on November 29, PSLV-C43 had successfully launched India's HysIS as well as 30 customer satellites from abroad.
- In his post-launch address, Chairman Dr K Sivan said the PSLV-C44 mission was unique as it was for the first time ISRO used the last stage of the rocket as a platform to perform experiments in space.
- This new low cost technology will help students to conduct several inspiring experiments in space by attaching their instruments to the last stage of the rocket.

About the Mission:

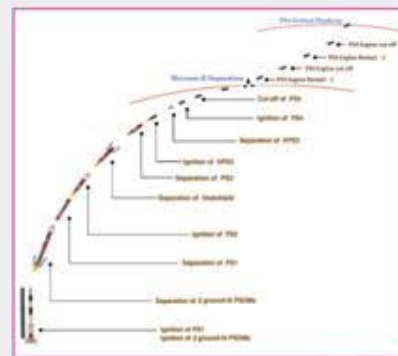
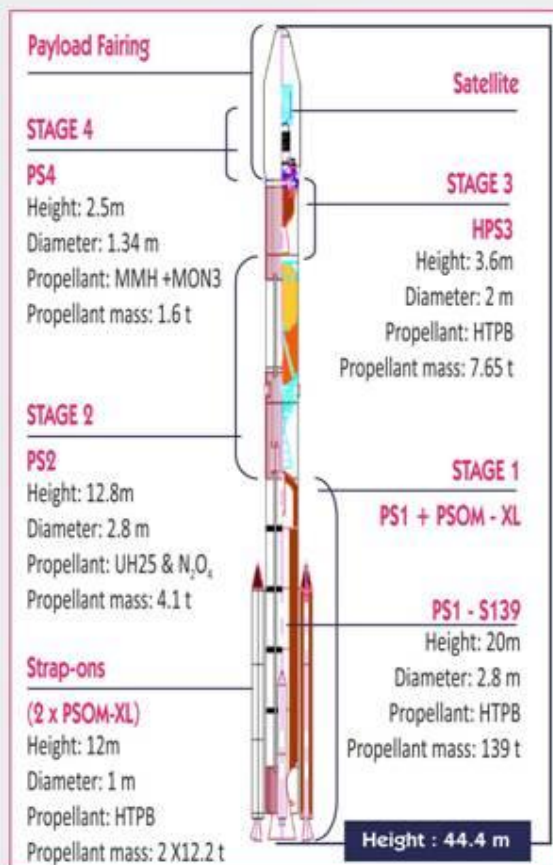


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PSLV-C44

PSLV-C44 Successfully Launched from First Launch Pad at Satish Dhawan Space Centre SHAR, Sriharikota

- PSLV-C44 is the 46th Flight of PSLV and 1st Flight of PSLV-DL (with two strap-ons) variant
- PSLV-C44 was launched from the First Launch Pad (FLP) at Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota
- Kalamsat, a student satellite, is the first to use fourth stage of PSLV as orbital platform
- Microsat-R is an imaging satellite



Event Name	Time after lift-off	Altitude (km)	Inertial Velocity (m/s)
PS1 Ignition	0.00	0.025	451.9
PSLV Strap-On Motor Ignition	0.42	0.025	451.9
PSLV Strap-On Motor Separation	69.90	23.941	1078.4
PS1 Separation	109.58	59.077	1871.3
PS2 Ignition	109.78	59.281	1870.4
Heat Shield Separation	168.58	115.751	2377.4
PS2 Separation	262.12	187.751	4055.6
PS3 Ignition	263.32	188.551	4053.8
PS3 Separation	487.72	273.906	6529.1
PS4 Ignition	498.12	275.310	6527.2
PS4 Engine Cut-off	766.56	276.576	7735.2
MICROSAT-R Separation	813.56	277.295	7740.0
PS4 Engine Restart-1	3275.52	269.040	7748.3
PS4 Engine Cut-off Restart-1	3291.68	269.057	7794.4
PS4 Engine Restart-2	6026.52	450.145	7591.7
PS4 Engine Cut-off Restart-2	6041.26	450.215	7638.1
Start of Orbital Platform function	6151.00	450.000	
End of Orbital Platform function	54000.00	450.000	



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Successful Flight Test of LRSAM

Why in News?

Ship launched Long Range Surface-to-Air Missile (LRSAM) has been successfully test fired from INS Chennai against an incoming aerial target flying at low altitude, today.

About the Missile:

- The missile destroyed the target with a direct hit. All the mission objectives have been met.
- **Barak 8** also known as LR-SAM or as MR-SAM is an Indian-Israeli [surface-to-air missile](#) (SAM), designed to defend against any type of airborne threat including aircraft, helicopters, [anti-ship missiles](#), and [UAVs](#) as well as [ballistic missiles](#), cruise missiles and combat jets.
- Both maritime and land-based versions of the system exist.
- Barak 8 was jointly developed by [Israel Aerospace Industries](#) (IAI), India's [Defence Research & Development Organisation](#) (DRDO), Israel's [Administration for the Development of Weapons and Technological Infrastructure](#), [Elta Systems](#), Rafael and other companies. [Bharat Dynamics Limited](#) (BDL) produce the missiles.

National Agricultural Higher Education Project (NAHEP)

Why in News?

In order to make agriculture education useful, the recommendations of the 5th Dean Committee have been implemented in all the Agricultural Universities under which amendment of agricultural degree courses has been done to include biotechnology, information technology, bio-informatics, remote sensing, organic farming, agriculture business management etc.

About the Project:

- Emphasis has been given on experiential learning, skill and entrepreneurship development.
- Along with this, four new programs, B.Tech (Biotechnology), B.Sc. Community Science, B.Sc. Food Nutrition and Dietetics and B.Sc. Sericulture have also been included.
- ICAR has recently launched Rs 1100 crore ambitious National Agricultural Higher Education Project (NAHEP) to attract talent and strengthen higher agricultural education in the country.
- This project will be funded by the World Bank and the Indian Government on a 50:50 basis.



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- In addition, a four year degree in Agriculture, Horticulture, Fisheries and Forestry has been declared a professional degree.
- Rajendra Agriculture University has been upgraded as Dr. Rajendra Prasad Central Agricultural University to strengthen the government's effort to bring green revolution in Eastern India including North East.

Other Steps Taken:

- In order to promote the participation of students in agricultural business, Student READY (Rural Entrepreneurship Awareness Development Yojana) scheme is being run, under which practical experience of agriculture and entrepreneurship is provided to undergraduate students.
- A MoU has been signed between the Ministry of Agriculture and Farmers' Welfare and the Ministry of Skill Development and Entrepreneurship to promote skill development in the field of agriculture.
- Under this, skill development training programs are being organized regularly in KVKs across the country. These training programs are based on agriculture and related topics.

Superbug:

Why in News?

In a significant find in the global spread of multi-drug resistant (MDR) bacteria, scientists have found a "superbug" gene — first detected in New Delhi over a decade back — in one of the last "pristine" places on Earth that is some 12,870 km away.

Details of Find:

- Soil samples taken in Svalbard — a Norwegian archipelago between mainland Norway and the North Pole — have now confirmed the spread of blaNDM-1 (called New Delhi Metallo-beta-lactamase-1) into the High Arctic.
- This Antibiotic-Resistant Gene (ARG), originally found in Indian clinical settings, conditionally provides multi-drug resistance (MDR) in microorganisms, revealed the research team from U.K.'s Newcastle University.
- British scientists later found the "superbug" in New Delhi's public water supply.
- Since then, the resistant gene has been found in over 100 countries, including new variants.

How it reached there?



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- Carried in the gut of animals and people, the new research said that blaNDM-1 and other ARGs were found in Arctic soils that were likely spread through the faecal matter of birds, other wildlife and human visitors to the area.

Project Cosmic Microwave Background-Bharat

Why in news?

A three-week long programme entitled, '[Cosmology – The next decade](#)', which consisted of a school to train early career researchers and a workshop for active researchers in the field of cosmology came to a close on January 25.

In the workshop, [project CMB-Bharat](#), which could help us listen to the faintest murmurs of the early universe, was discussed.

About the Project:

- CMB expands into Cosmic Microwave Background, and the scientific space project CMB-Bharat has been presented as a [proposal to ISRO](#) and is being considered by it.
- This was one highlight of the workshop that also saw discussions on the X-ray telescope eROSITA which is to be launched in June 2019.

CMB-Bharat

- CMB-Bharat is a proposal for comprehensive next generation Cosmic Microwave Background (CMB) mission in international collaboration with major Indian contribution.
- It proposes 'near-ultimate' survey polarisation that would exhaust the primordial information in this 'gold-mine' for cosmology."

Significance of project:

- The "ultrahigh goal" according to him was that the project would reveal the first clear signature of quantum gravity and ultrahigh energy physics in the very early universe.
- This referred to quantum gravitational waves, which are different from what LIGO detectors had observed that were classical in nature.
- The "high" goals lay in neutrino physics where we could discover more about the neutrino species, their total mass and mass hierarchy; map all dark matter and most baryons in the observable universe.



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- The problem of knowing the hierarchy of masses of the different species of neutrino is a very deep one and being hotly pursued by many countries.
- The “legacy” was to improve probe of the cosmological model by a factor of over 10 million, and to generate rich galactic and extragalactic astrophysics datasets.
- CMB-Bharat mission presents an unique opportunity for India to take the lead on prized quests in fundamental science in a field that has proved to be a spectacular success, while simultaneously gaining valuable expertise in cutting-edge technology for space capability through global cooperation.

IEA’s Report “The Future of Rail”

Why in News?

Minister of Railways & Coal, Shri Piyush Goyal launched the report “The Future of Rail” of International Energy Agency (IEA) at an event here today.

About the Report:

- “The Future of Rail” the first-of-a-kind report analyses the current and future importance of rail around the world through the perspective of its energy and environmental implications.
- The report reviews the impact of existing plans and regulations on the future of rail, and explores the key policies that could help to realise an enhanced future rail.
- This first ever global report has a focus on India, elaborating on the unique social and economic role of rail in India, together with its great enduring potential, to show how India can extend and update its networks to harness rail at a scope and scale that is unparalleled.

Backgrounder:

- The IEA is an inter-governmental organisation that works to ensure reliable, affordable and clean energy for its 30 member countries and 8 association countries.
- Its mission is guided by four main areas of focus: energy security, economic development, environmental awareness and engagement worldwide.

India and IEA:

- India and the International Energy Agency (IEA) have benefited from a long, on-going bilateral relationship and cooperation in a broad range of area.
- These include energy security, statistics, energy efficiency, market analysis for oil, gas, electricity, renewables, system integration and implementation agreements for enhanced technologies.



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- India has been the focus of many recent IEA analyses and reports for instance through the special focus chapter on the Indian Power sector of the Energy Technology Perspectives (ETP) publication and the World Energy Outlook (WEO).
- High level policy dialogues have been further intensified over the last few years including a statement of intent on data and research cooperation, and a memorandum of understanding on clean energy research and development tracking.
- IEA has also held workshops and training programmes in India on energy data training, energy efficiency, strategic petroleum reserves, and the integration of renewables into the grid.

Regional testing laboratory of CPRI

Why in News?

Shri R K Singh, Union Minister of State (IC) for Power and New & Renewable Energy, Government of India laid the foundation stone of Regional testing laboratory of Central Power Research Institute (CPRI) at Nashik, Maharashtra today.

Benefits:

- Manufacturers in the western region will be greatly benefited as they can test their products close to their manufacturing units.
- This would reduce the turnaround time and overhead cost.
- This shall help the power utilities in the country to install reliable and quality equipment in the power system network.

Why is it Needed?

- Electrical Equipment plays a vital role in the Power System Network right from Generation, Transmission & Distribution.
- Such electrical equipment needs to be tested and certified as per the national and international standards.
- Electricity demand in the country has increased rapidly and is expected to rise further in the years to come.
- In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required.
- This leads to growth of electrical industries and development of indigenous products.
- Keeping this in view, Government of India has sanctioned establishing Research and Testing facilities in the western region at Nashik at an outlay of Rs 115.3 Cr.

About CPRI :



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- To cater to the testing needs, CPRI, Autonomous body under Ministry of Power, Govt of India serves as an Independent third party testing laboratory.
- CPRI has been serving for the past five decades in the field of Testing and Certification, Research, Consultancy, Third Party Inspection services, Training & Vendor Analysis.

Effect of Sonar on Whales:

Why in News?

Scientists have long known that some beaked whales beach themselves and die in agony after exposure to naval sonar, and now they know why: the giant sea mammals suffer decompression sickness, just like scuba divers.

The explanation was laid out on Wednesday by 21 experts in the Royal Society journal Proceedings B.

How does it affect?

- Evolution has turned whales into perfectly calibrated diving machines.
- The heart rate slows, blood flow is restricted, oxygen is conserved.
- So how could they wind up with nitrogen bubbles poisoning its veins, like a scuba novice rising too quickly to the surface?
- Short answer: beaked whales — especially one species known as Cuvier's — get really, really scared.
- "In the presence of sonar they are stressed and swim vigorously away from the sound source, changing their diving pattern.
- The stress response, in other words, overrides the diving response, which makes the animals accumulate nitrogen.
- One type of sonar developed in the 1950s — mid-frequency active sonar (MFAS), — in particular, throws these whales off balance.
- It is used today by Navies.

Evidences:

- The most deadly episode, in 2002, saw 14 stranded in the Canary Islands during a NATO naval exercise.
- Outwardly, the whales showed no signs of disease or damage: they had normal body weight, and no skin lesions or infections.



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- Internally, nitrogen gas bubbles filled the veins, and their brains were ravaged by haemorrhaging.
- Autopsies also revealed damage to other organs, as well as to the spinal cord and central nervous system.
- As with altitude sickness, reactions — in humans, and probably in whales — to nitrogen bubbles in the blood vary in type and intensity.
- A 2003 study in Nature on the link between sonar and whale deaths led Spain to ban naval exercises around the Canary Islands in 2004.

Project 75(I) submarines

Why in News?

The Defence Acquisition Council (DAC), in a landmark decision today, also approved indigenous construction of six submarines for the Indian Navy at a cost of over Rs. 40,000 crores.

About the Project:

- This is the second project under the MoD's ambitious Strategic Partnership (SP) model that aims at providing a significant fillip to the Government's 'Make in India' programme.
- SP model envisages indigenous manufacturing of major defence platforms by an Indian Strategic Partner, who will collaborate with foreign OEM to set up production facilities in the country.
- The model has a long term vision of promoting India as a manufacturing hub for defence equipment through transfer of niche technologies and higher Indigenous Content thereby enhancing self-sufficiency for meeting the future requirements of the Armed Forces.

Background:

- Today's DAC approval would be second such project following indigenous production of 111 Naval Utility Helicopters that was approved in August 2018.
- Construction of six submarines under Project 75(I) will provide a major boost to the existing submarine design and manufacturing eco-system in India through transfer of design and equipment technology as well as necessary skill sets.
- The DAC also approved the acquisition of approximately 5000 Milan Anti Tank Guided Missiles for the Army.

PETROTECH-2019

Context:



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PETROTECH-2019, the 13th International Oil & Gas Conference & Exhibition, being organised under the aegis of the Ministry of Petroleum & Natural Gas, Government of India, is all set to be inaugurated on February 10, 2019.

Background:

- India's flagship hydrocarbon international conference is expected to be inaugurated by Prime Minister of India.
- Over 95 Energy Ministers from partner countries have been invited by the Minister for Petroleum and Natural Gas to participate in the Conference.
- The three-day mega event will showcase the recent market and investor friendly developments that have taken place in the India's oil and gas sector.
- It is expected to see participation of over 86 eminent speakers and 7000 delegates from around 70 countries, including technologists, scientists, planners, policy-makers, management experts, entrepreneurs, service-providers and vendors.

Focus of Event:

The PETROTECH 2019 exhibition will focus on development in technologies for exploration & production, process control, refining and pipeline and services, systems, products, oil field hardware, software, analytical instruments, Renewable, R&D, HSE, training and publications of technical literature.

NSSO Unemployment Report:

The National Sample Survey Office's (NSSO's) data showing a record spike in unemployment in 2017-18, which was published in a news report on Thursday, is a validation of trends seen on the ground, according to [labour](#) economists, job-seekers and workers' representatives.

Salient Observations of Report:

- The NSSO findings are not surprising, but they are alarming.
- The trends of rising unemployment were already visible.
- The data, as cited by the news report, shows that there has been a rise in unemployment and a decline in the labour force participation rate (LFPR) post demonetisation.
- The LFPR is a measure of people looking for jobs.
- So, if this is declining while unemployment is growing, it means that there is a very real and serious crisis in jobs.



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- Thursday's Business Standard report on the NSSO report said overall unemployment was at a 45-year high, with youth between the ages of 15 and 29 facing higher rates of joblessness than others.

Data about Informal Sector:

- The informal sector employs more than 90% of the country's workforce, and has witnessed a decline in available work and wages in the last two year.
- Daily wage labourers say they used to get at least 20 days of work each month.
- After demonetisation, they get only ten days.

Glacier Melt:

Why in News?

NASA scientists have discovered a gigantic cavity, almost 300 metres tall, growing at the bottom of the Thwaites Glacier in West Antarctica, indicating rapid decay of the ice sheet and acceleration in global sea levels due to [climate change](#).

The findings, published in the journal Science Advances, highlight the need for detailed observations of Antarctic glaciers' undersides in calculating how fast sea levels will rise in response to warming.

Details of Research:

- Researchers expected to find some gaps between ice and bedrock at Thwaites' bottom where ocean water could flow in and melt the glacier from below, NASA said in a statement.
- The size and explosive growth rate of the newfound hole, however, surprised them.
- It is big enough to have contained 14 billion tonnes of ice, and most of that ice melted over the last three years.

How was Observation Made?

- The cavity was revealed by ice-penetrating radar in NASA's Operation IceBridge, an airborne campaign beginning in 2010 that studies connections between the polar regions and the global climate.
- The researchers also used data from a constellation of Italian and German space-borne synthetic aperture radars.



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- These very high-resolution data can be processed by a technique called radar interferometry to reveal how the ground surface below has moved between images.

Significance:

- Thwaites Glacier is currently responsible for about 4% of global sea level rise, researchers said.
- It holds enough ice to raise the world ocean a little over 65 centimetres and backstops neighbouring glaciers that would raise sea levels an additional 2.4 metres if all the ice were lost.
- Even with this accelerating retreat, however, melt rates on this side of the glacier are lower than on the western side, they said.

Employment Opportunities to Youth Under NCS Project

Why in News?

The Ministry has signed strategic Memorandum of Understanding (MoUs) with the private partners like job portals, placement organizations and reputed institutions for maximizing the reach of the National Career Service (NCS) project.

What is NCS?

The NCS portal provides a nation-wide online platform for jobseekers and employers for job matching in a dynamic, efficient and responsive manner.

1. The NCS will make available a rich repository of career content on over 3000 occupations across 53 sectors.
 2. The services under NCS are available online and can be accessed directly, through career centres, Common Service Centres, mobile devices, cyber cafes etc.
 3. The NCS Portal will facilitate organisation of job fairs where both employers and job seekers can interact. A dedicated helpdesk (multi-lingual) is also available from Tuesday to Sunday on 1800-425-1514 for assisting users.
- The Government has also approved the establishment of 37 Model Career Centres which will be functional this year.
 - The NCS will establish a network of career counsellors where the career centres will become the hub of career counselling in their area.
 - The portal will offer a variety of other services like information on skill development courses, apprenticeship, internship, career counselling, etc.



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Solar Photovoltaic (PV) Power Projects

Why in News?

The Cabinet Committee on Economic Affairs (CCEA), chaired by Prime Minister, Shri Narendra Modi, has approved the Ministry of New & Renewable Energy's proposal for implementation of the Central Public Sector Undertaking (CPSU) Scheme Phase-II for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects,.

Details of Project:

- The 12,000 MW or more capacity of grid connected solar power projects will be set up by the Government Producers in 4 years period, i.e. 2019-20 to 2022-23.
- The Scheme will mandate use of both solar photovoltaic (SPV) cells and modules manufactured domestically as per specifications and testing requirements fixed by MNRE.
- With the implementation of the above mentioned Scheme, 12,000 MW or more of grid connected solar PV power projects would be set up by Government Producers in 4 years i.e. 2019-20 to 2022-23, thereby creating investment of about Rs. 48,000 crores.

Benefits of Project:

- The Scheme will also help in giving a push to "Make-in-India" by encouraging Government Producers to procure solar cells and modules from domestic manufacturers.
- The Scheme will create sufficient demand for domestically produced solar PV cells and modules for next 3 to 4 years.
- The proposal for setting up 12,000 MW Solar Power Projects will provide direct employment to around 60,000 persons for about one year in pre-commissioning activities/ construction phase and around 18,000 persons for about 25 years in the operation and maintenance period.
- In addition, more than 1,20,000 additional employment opportunities will be created for the local population by way of involvement in setting up of Solar Power Projects and also in manufacturing of domestically produced cells and modules.

Rashtriya Kamdhenu Aayog :

Context:



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The Union Cabinet chaired by the Prime Minister Shri Narendra Modi has approved the proposal for establishment of Rashtriya Kamdhenu Aayog for Conservation protection and development of cows and their progeny.

Impact:

- The setting up of Rashtriya Kamdhenu Aayog will lead to conservation, protection and development of cattle population in the country including development and conservation of indigenous breeds.
- It will result in increased growth of livestock sector which is more inclusive, benefitting women, and small and marginal farmers.
- The Rashtriya Kamdhenu Aayog will work in collaboration with Veterinary, Animal Sciences or Agriculture University or departments or organizations of the Central/State Government engaged in the task of research in the field of breeding and rearing of cow, organic manure, biogas etc.

Background:

- The creation of Rashtriya Kamdhenu Aayog for the conservation, protection and development of cows and their progeny will provide the policy framework and direction to the cow conservation and development programmes in the country and for ensuring proper implementation of laws with respect to the welfare of cows.
- It is in pursuance of the announcement of setting up of the Aayog in the Union Budget 2019-20.

INS Trikand :

Why in News?

INS Trikand, a front-line warship of the Indian Navy, participated in a multinational training exercise 'CUTLASS EXPRESS – 19' held from 27 Jan to 06 Feb 19.

Aim of Exercise:

The aim of the exercise was to improve law enforcement capacity, promote regional security and progress inter-operability between the armed forces of the participating nations.

It is for the purpose of interdicting illegal maritime activity in the Western Indian Ocean.

During the exercise, Naval, Coast Guard and Marine Police personnel from a number of East African countries were jointly trained by mentors from USA, India, and Netherlands, with support of international organisations like the International Maritime



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Organisation (IMO), Combined Maritime Force (CMF) and European Naval Forces (EUNAVFOR).

About the Exercise:

- The exercise was conducted in two phases.
- The first, called the Command Post Exercise (CPX) was conducted from 27 Jan to 02 Feb 19.
- It involved training of personnel on shore for coordination and conduct of VBSS operations.
- During the CPX, extensive training and interaction was carried out between the officers and sailors of the Indian Navy and personnel from the participating nations.
- The second phase called the Final Training Exercise (FTX) was conducted from 03 - 05 Feb 19.
- This phase consisted of actual boarding operations at sea and live boardings were out onboard INS Trikand, anchored off Djibouti harbour.

About INS Trikand:

- INS Trikand is equipped with a versatile range of sensors and weapons enabling her to address threats in all the three dimensions – air, surface and sub-surface.
- The ship's extended endurance at sea makes it an ideal platform for prolonged deployments, including the present one, in which she is carrying out Presence and Surveillance missions and Anti-piracy operations in the Gulf of Aden and Western Arabian Sea.
- The ship is a part of the Indian Navy's Western Fleet and operates under the Flag Officer Commanding-in-Chief, Western Naval Command, headquartered at Mumbai.

Banking Sector Reforms:

In terms of Reserve Bank of India's Extant Guidelines on Priority Sector Lending, a target of 10 percent of Adjusted Net Bank Credit (ANBC) or Credit Equivalent of Off-Balance Sheet Exposure (CEOBE), whichever is higher, has been prescribed for lending to Weaker Sections. Reserve Bank monitors the performance of banks against the stipulated priority sector targets/ sub-targets on a quarterly as well as annual basis.

To strengthen banks and foster a culture of clean and responsible banking, the Government has followed a comprehensive 4 R's approach of recognition, resolution, recapitalization and reforms.

- A number of steps have been taken to promote the functioning of PSBs, including, inter alia, the following:



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1. Reforms, as per the PSB Reforms Agenda adopted by PSBs-
 2.
 - i. increasing access to banking services from home and mobile through digital banking and enhanced customer ease,
 3.
 - i. enabling easy accessibility to senior citizens and the differently-abled, through online update of pension life certificates, etc.
 - ii. instituting efficient practices for effective coordination in large consortium loans by restricting number of lenders in consortium and by adoption of standard operating procedures,
 - iii. strict segregation of pre- and post-sanction roles and responsibilities for enhanced accountability,
 - iv. ring-fencing of cash flows and use of technology and analytics for comprehensive diligence across data sources for prudent lending,
 - v. institution of transparent and robust one-time settlement mechanism with automated escalation and monitoring,
 - vi. monitoring of loans above ₹250 crore through specialised agencies for effective vigil,
 - vii. establishment of stressed asset management verticals in banks for focused recovery and timely and effective management of stressed accounts,
 - viii. institution and implementation of a risk appetite framework for a structured approach to manage, measure and control risk and check aggressive and imprudent lending,
 - ix. monetisation of non-core assets for strengthening capital base,
 - x. enabling faster bill realisation for MSMEs through discounting by banks on the Trade Receivables electronic Discounting System (TReDS),
 - xi. enabling proactive reach-out to borrowers and stepping-up cluster-based financing to MSMEs, and
 - xii. developing human resources by rewarding top performers and enabling specialisation through job-families, and role based learning for executives.
- Comprehensive checking of all accounts above ₹ 50 crore that turn **NPA** being checked for wilful default and fraud.
 - **Strengthening governance** through professional and arms-length top-level appointments of Whole Time Directors (WTDs) and Non-executive Chairmen of PSBs through the Banks Board Bureau, institution of performance-based extension in WTD appointments and bifurcation of the position of Chairman and Managing Director (MD) into those of non-executive Chairman and an MD & CEO.
 - **The Insolvency and Bankruptcy Code, 2016 (IBC)** has been enacted, which has provided for the taking over management of the affairs of the corporate debtor at the outset of the corporate insolvency resolution process.



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- **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act** has been amended to make it more effective, with provision for three months' imprisonment in case the borrower does not provide asset details and for the lender to get possession of mortgaged property within 30 days.
- Under the PSB Reforms Agenda, PSBs have created **Stressed Asset Management Verticals** for stringent recovery, segregated pre- and post-sanction follow-up roles for clean and effective monitoring, initiated creation of online one-time settlement platforms, and committed to monitoring large-value accounts through specialized monitoring agencies

New Policy for Overseas Borrowings

Why in News?

Reserve Bank of India (RBI), in consultation with the Government of India (GoI), has rationalized the framework for External Commercial Borrowing (ECB) and Rupee Denominated Bonds and notified a new Policy.

Features of Policy:

- Under the New Policy, all entities eligible to receive Foreign Direct Investment (FDI) are permitted to raise ECBs up to USD 750 million or equivalent per financial year under automatic route subject to certain terms and conditions prescribed in the Guidelines, replacing the system of sector wise limits.
- The Minimum Average Maturity Period (MAMP) has been kept at 3 years for all ECBs, irrespective of the amount of borrowing .
- Additionally, Port Trusts, Units in SEZ, SIDBI, EXIM Bank, registered entities engaged in micro-finance activities, viz., registered not for profit companies, registered societies/trusts/cooperatives and non-government organisations can also borrow under this framework.

Benefits from New Policy:

- This Expanded List of eligible borrowers will enable a wider set of Indian companies to raise ECBs up to USD 750 million or equivalent per financial year under the automatic route replacing the earlier system of sector wise limits.
- The recent changes that have been brought-out in the ECB policy are a part of this continued effort and are likely to help wider set of eligible borrowers i.e. corporates and other entities to avail ECBs to meet their capital needs with the Uniform Minimum Average Maturity Period requirements, uniform all-in-cost ceilings and small negative end-use list.

Conference of Parties(COP) of the Convention on the conservation of migratory species of wild animals(CMS)



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Why in News?

The 13th Conference of Parties (COP) of the Convention on the conservation of migratory species of wild animals (CMS), an environmental treaty under the aegis of United Nations Environment Programme, is going to be hosted by India during 15th to 22nd February, 2020 at Gandhinagar in Gujarat.

India and CMS:

- India has been a Party to the CMS since 1983.
- The Conference of Parties (COP) is the decision-making organ of this convention.
- In order to protect the migratory species throughout their range countries, a Convention on Conservation of Migratory Species (CMS), has been in force, under the aegis of United Nations Environment Programme.
- Also referred to as the Bonn Convention, it provides a global platform for the conservation and sustainable use of migratory animals and their habitats and brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.
- The convention complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector.
- Under this convention, migratory species threatened with extinction are listed on Appendix I and Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them.
- Migratory species that need or would significantly benefit from international co-operation are listed in Appendix II of the Convention.
- India has also signed non legally binding MOU with CMS on the conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008) and Raptors (2016).

What are Migratory Species?

- Migratory species are those animals that move from one habitat to another during different times of the year, due to various factors such as food, sunlight, temperature, climate, etc.
- The movement between habitats, can sometimes exceed thousands of miles/kilometres for some migratory birds and mammals.
- A migratory route can involve nesting and also requires the availability of habitats before and after each migration.

Migratory species in India:

- India is temporary home to several migratory animals and birds.



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- The important among these include Amur Falcons, Bar headed Gheese, Black necked cranes, Marine turtles, Dugongs, Humpbacked Whales, etc.
- The Indian sub-continent is also part of the major bird flyway network, i.e, the Central Asian Flyway (CAF) that covers areas between the Arctic and Indian Oceans, and covers at least 279 populations of 182 migratory water bird species, including 29 globally threatened species.
- India has also launched the National Action Plan for conservation of migratory species under the Central Asian Flyway.

Indo-US Trade relation:

Context:

India could lose a vital U.S. trade concession, under which it enjoys zero tariffs on \$5.6 billion of exports to the United States, amid a widening dispute over its trade and investment policies, people with close knowledge of the matter said.

GSP withdrawal

- A move to withdraw the Generalised System of Preferences (GSP) from India, the world's largest beneficiary of a scheme that has been in force since the 1970s, would be the strongest punitive action against India since President Donald Trump took office in 2017, vowing to reduce the U.S. deficit with large economies.
- US has repeatedly called out India for its high tariffs. Indian Prime Minister Narendra Modi has courted foreign investment as part of his Make-in-India campaign to turn India into a manufacturing hub and deliver jobs to the millions of youth.
- The trigger for the latest downturn in trade ties was India's new rules on e-commerce that restrict the way Amazon.com Inc. and Walmart-backed Flipkart do business in a rapidly growing online market set to touch \$200 billion by 2027.

Reasons:

- The GSP was tied to the trade package and since that deal had slipped further away, the U.S. was considering withdrawing or scaling back the preferential arrangement, people familiar with the matter said.

Agricultural Loan:

Why in News?



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The Reserve Bank of India (RBI) on Thursday raised the limit of collateral-free agricultural [loans](#) to ₹1.6 lakh from the current ₹1 lakh with a view to help small and marginal farmers.

Details:

- The [Central bank](#) also decided to set up an internal working group (IWG) to review agricultural credit and arrive at a workable policy solution.
- The Interim Budget had also announced measures to boost the farming sector in addition to annual payment of ₹6,000 to small and marginal farmers.
- Currently, the banks are mandated to extend collateral-free agricultural loans up to ₹1 lakh. This limit was fixed in the year 2010.
- “Keeping in view the overall inflation and rise in [agriculture](#) input costs since then, it has been decided to raise the limit for collateral-free agriculture loans from ₹1 lakh to ₹1.6 lakh.
- This will enhance coverage of small and marginal farmers in the formal credit system.
- The IWG will examine issues related to agricultural credit and arrive at workable solutions and policy initiatives.

Solar cell:

Context:

The 36-year-old has developed a novel inkjet processing method for perovskites — a new generation of cheaper solar cells — that makes it possible to produce solar panels under lower temperatures, thus sharply reducing costs.

Details:

- Perovskite solar cells have the potential to address the world energy poverty.
- Solar panels coated with the mineral are light, flexible, efficient, inexpensive and come in varying hues and degrees of transparency.
- They can easily be fixed to almost any surface — be it laptop, car, drone, spacecraft or building — to produce electricity, including in the shade or indoors.
- Though the excitement is new, perovskite has been known to science since at least the 1830s, when it was first identified by German mineralogist Gustav Rose while prospecting in the Ural mountains and named after Russian mineralogist Lev Perovski.



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- Initially the process was complicated and required ultra high temperatures, so only materials that could withstand extreme heat — like glass — could be coated with perovskite cells.

Self-sufficient buildings

- The Swedish construction group Skanska is testing the cutting-edge panels on the facade of one of its buildings in Warsaw.
- It also inked a licencing partnership with Saule for exclusive right to incorporate the technology in its projects in Europe, the U.S. and Canada.

Unregulated Deposit Schemes Bill:

Why in News?

The Union Cabinet on Wednesday approved the official amendments to an Act that classifies any deposit scheme not registered with the government as an offence and bans it, the government announced.

Provisions of Bill:

- Among the provisions is one that bans deposit takers from promoting, operating, issuing advertisements or accepting deposits in any unregulated scheme.
- The principle is that the Bill would ban unregulated deposit taking activities altogether, by making them an offence ex-ante rather than the existing legislative-cum-regulatory framework that only comes into effect ex-post with considerable time lags.
- The Bill creates three different types of offences:

- (i) running of unregulated deposit schemes,
- (ii) fraudulent default in regulated deposit schemes, and
- (iii) wrongful inducement in relation to unregulated deposit schemes.

- The government said the Bill provides for “severe punishment and heavy pecuniary fines” to act as a deterrent.
- The penalties could involve jail term as well as the sale of the offenders’ assets to pay back the defrauded party within set timelines.
- “The Bill has adequate provisions for disgorgement or repayment of deposits in cases where such schemes nonetheless manage to raise deposits illegally.



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- The Bill provides for attachment of properties/assets by the competent authority, and subsequent realisation of assets for repayment to depositors.”

Benefits:

- The Banning of Unregulated Deposit Schemes Bill 2018 was introduced in Parliament on July 18, 2018 and was referred to the standing committee, which submitted its seventieth report on the Bill to Parliament on January 3, 2019
- The amendments will further strengthen the Bill in its objective to effectively tackle the menace of illicit deposit-taking activities, and prevent such schemes from duping poor and gullible people of their hard-earned savings.”

Rainwater harvesting:

Context:

Firmenich, a Geneva-based perfumery, along with its joint venture partner Jasmine Concrete provided funds for setting up Bhungroo, a water-harvesting system.

About the Project:

- Firmenich sources flowers, gum and essential oils from a number of farmers in the country through its suppliers and has joint ventures with some suppliers.
- It decided to set up the model, with technical inputs from Sustainable Green Initiatives Forum, on a trial basis on two farms.
- The company did a preliminary survey in and around Mr. Shanmugasundaram’s lands to identify an area with a gradient to harvest rain water.
- There were heavy rains thrice last September. The water from the farm flowed to the filter chamber through the channel and was harvested.
- The farmers can recover 70% of the water harvested in this system.
- Its main benefit is farmers can use the water collected in times of need and avoid crop loss.
- If a group of farmers, who have adjacent lands, come together and implement it, they will have collective benefit and the cost will work out lower.

Doubling Farmer’s Income:

Why in News?



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The Union Cabinet on Thursday approved the Agriculture Export Policy, aimed at increasing India's [exports](#) to \$60 billion by 2022 from the current \$37 billion.

About the Policy:

- With this policy, Govt. aim to increase that to \$60 billion by 2022.
- This is in line with the Prime Minister's vision of doubling farmers' income.
- The objectives of the policy are, apart from doubling farmers' income, to diversify the export basket and destinations, and to boost high-value and value-added exports, with a focus on perishables.
- The policy also aims to promote the export of "novel, indigenous, organic, ethnic, traditional and non-traditional" products.
- The objective also is to provide an institutional mechanism for market access, tackling barriers, and dealing with sanitary and phytosanitary issues.
- In order to do this, the Centre will work with the State governments to create clusters that can focus on particular crops.

World Bank:

David Malpass, has formally been confirmed as the U.S.' choice to head the World Bank, U.S. President Donald Trump announced.

About World Bank:

- The **World Bank** (French: Banque mondiale)[3] is an [international financial institution](#) that provides loans to [countries](#) of the world for capital projects.
- It comprises two institutions: the [International Bank for Reconstruction and Development](#) (IBRD), and the [International Development Association](#) (IDA). The World Bank is a component of the [World Bank Group](#).
- The World Bank's most recent stated goal is the [reduction of poverty](#).
- As of November 2018, the largest recipients of world bank loans were India (\$859 million in 2018) and China (\$370 million in 2018), through loans from IBRD.

WB President:

- The President of the Bank is the president of the entire [World Bank Group](#).
- The president is responsible for chairing the meetings of the Boards of Directors and for overall management of the Bank.



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- Traditionally, the President of the Bank has always been a US citizen nominated by the United States, the largest shareholder in the bank (the managing director of the [International Monetary Fund](#) having always been a European).
- The nominee is subject to confirmation by the Board of Executive Directors, to serve for a five-year, renewable term. While most World Bank presidents have had banking experience, some have not

National Productivity Week

Why in News?

National Productivity Council (NPC), an autonomous registered society under Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.

Theme:

- NPC is celebrating its 61st Foundation Day on 12th February with the theme “**Circular Economy for Productivity & Sustainability**”.
- NPC observes foundation day as Productivity Day and the National Productivity Week from February 12-18, 2019.

Details:

- This year theme represents a unique opportunity for circular business model for Make à Use à Return.
- It presents an opportunity for long term economic prospects and regeneration of materials. Transitioning to an efficient circular economy will benefit industry and all stakeholders now and in future.

What is Circular Economy?

- The circular economy follows the principle of preservation and enhancement of natural capital by controlling finite stocks and balancing renewable resource flows.
- The other principles suggest optimizing of resource yields by circulating products, components, and materials at their highest utility at all times, in both technical and biological cycles.

Advantages:

- Circular economy has the potential to increase productivity and create jobs, whilst reducing carbon emissions and preserving valuable raw materials. It provides for a way of creating value.



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- It works by extending product life span through improved design and servicing and relocating waste from the end of the supply chain to the beginning – in effect, using resources more efficiently by using them over and over.
- The challenge lies in building circular economy knowledge and capacity.
- To integrate circular economy principle in strategy and process, NPC has been in forefront enhancing of such efforts in enhancing productivity.

New Ports under Sagarmala Project

Why in News?

The Minister of State for Road Transport, Shipping and Chemical & Fertilizers informed that 14 number of CEZs in 8 states have been identified under the Sagarmala Programme.

- In the state of Kerala, one CEZ namely “Development of CEZ in Kerala –Malabar” has been identified under the Sagarmala Programme.
- The project is in concept phase and appraisal/approval of various Governments/agencies is under progress.

What is CEZ?

- Coastal Economic Zones are an effort by the Federal Govt of India to promote exports by providing infrastructure and facilities to entrepreneurs to set up businesses and industries near Ports that manufacture goods or provide services that are export oriented.

About Sagarmala Programme:

- **Sagarmala Programme** is an initiative of Government of India to enhance the performance of logistics sector in India.
- The programme envisages unlocking the potential of waterways and coastline, to minimize infrastructural investments required to meet these targets.
- It entails ₹8.5 trillion (US\$120 billion or €100 billion) investment for setting up of new mega ports, modernization of India's existing ports, development of 14 **Coastal Employment Zones (CEZs)** and **Coastal Employment Units**, enhancement of port connectivity via road, rail, multi-modal logistics parks, pipelines & waterways and promote coastal community development, resulting in boosting merchandise exports by US\$110 billion, and generation of around 10,000,000 direct and indirect jobs.

Aims of Programme:



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- Sagarmala aims to modernize [India's Ports](#) so that port-led development can be augmented and coastlines can be developed to contribute in India's growth.
- It also aims for "transforming the existing Ports into modern world class Ports and integrate the development of the Ports, the Industrial clusters and hinterland and efficient evacuation systems through road, rail, inland and coastal waterways resulting in Ports becoming the drivers of economic activity in coastal areas

Basic Facilities in Tribal Areas

Why in News?

The Ministry of Tribal Affairs administers three schemes namely

- (i) Grants under Article 275(1) of the Constitution,
- (ii) Special Central Assistance to Tribal Sub-Scheme (SCA to TSS) and
- (iii) Development of Particularly Vulnerable Tribal Groups (PVTGs) under which activities for enhancement of medical facilities are supported.

Details of Scheme:

- As per the scheme guidelines of schemes "Grants under Article 275(1) of the Constitution" and "Special Central Assistance to Tribal Sub-Scheme (SCA to TSS)", 10 - 15% of the total fund allocation has to be for activities related to health sector like addition to / strengthening of building infrastructure of CHC/PHC, Mobile dispensaries in remote locations, conduct of screening for acute health problems like Sick Cell Anemia amongst the tribal students and provision of health cards, focus on eradication of prevalent endemic health problems like Malaria, Leprosy, TB, etc.
- These schemes are demand driven and funds are released to State Governments based on State Plan and approval of the Project Appraisal Committee (PAC).
- The Ministry of Tribal Affairs has no specific scheme for construction of Colleges and Hospitals, but it plays a gap filling role to activities of the line ministries and also supports the State Governments and Union Territory Administrations in construction of Eklavya Model Residential Schools (EMRS), Ashram Schools, Primary Health Centres, Sub Centres & Community Health Centres through its schemes of Special Central Assistance to Tribal Sub Schemes.

Defence Innovation Hubs:

Why in News?

The Innovations for Defence Excellence (iDEX) framework of the Government envisages setting up and managing independent Defence Innovation Hubs (DIHs).



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About the hubs:

- These DIHs will serve as platforms where innovators can get information about needs and feedback from the Services directly and create solutions for India's major defence platforms.
- This structure is also geared towards attracting more innovators to work for the defence sector in India.
- The Defence Innovation Organisation set up under iDEX has announced setting up of two DIHs in Tamil Nadu (Coimbatore) and Maharashtra (Nashik).
- The Framework to Fund Defence Innovation Hubs under iDEX, approved by the Board of Defence Innovation Organisation (DIO) prescribes the following minimum criterion for setting up Defence Innovation Hubs:
 - Any Central Government recognized Incubator including but not limited to:
 - Department of Science and Technology (DST) recognized Incubators.
 - Atal Innovation Mission, NITIAayog created Atal Incubation Centers (AICs) and Established Incubation Centers (EICs).
 - Ministry of MSME recognized incubators.
 - Any other incubator recognized or funded through any Central government scheme.
 - The incubator located in districts mentioned in the list of SME clusters hosted by the Ministry of MSME in collaboration with UNIDO.
 - Incubator / Hub promoted by local industry associations.

Industrial Output growth :

Context:

Industrial output growth remained subdued at 2.4% in December 2018 on account of contraction in the mining segment and poor show by the manufacturing sector.

Salient Observation:

- Factory output as measured in terms of the Index of Industrial Production (IIP) had grown by 7.3% in December 2017, according to the data released by the Central Statistics Office (CSO) on February 12.
- The industrial growth for November 2018 was revised downwards to 0.3% from the provisional estimate of 0.5% released in January 2019.
- During April-December 2018, industrial output grew at 4.6% against 3.7% in the same period of the previous fiscal.
- The manufacturing sector, which constitutes 77.63% of the index, recorded a low growth of 2.7% in December as against 8.7% expansion in the year-ago month.



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- Mining sector production contracted by 1% in December as against 1.2% growth in December 2017.
- The growth of the power sector output remained flat at 4.4% in December 2018.
- Capital goods output grew at 5.9%, compared to 13.2% growth a year ago. Consumer durables output grew by 2.9% as against a growth of 2.1% in December 2017. Consumer non-durable goods growth was also low at 5.3% in December 2018 as compared to 16.8% growth in the year-ago month.

Sectoral Growth:

- In terms of industries, 13 out of 23 industry groups in the manufacturing sector showed positive growth during December 2018.
- As per use-based classification, primary goods production declined by 1.2% and intermediate goods by 1.5%.
- Infrastructure/ Construction Goods grew at 10.1%

National Minimum Wage:

Why in News?

An expert panel has recommended that a need-based national minimum wage for workers across the country be set at ₹375 per day, or ₹9,750 per month.

Salient Points of report:

- In a report submitted to the Ministry of Labour and Employment on Thursday, an Expert Committee on Determining the Methodology for Fixation of the National Minimum Wage has also recommended different national minimum wages for “different geographical regions of the country to suit the local realities and as per socio-economic and labour market contexts.”
- These regional wage recommendations range from ₹342 per day in some States including Bihar, Uttar Pradesh and West Bengal to ₹447/day for States such as Delhi, Goa, Haryana, Himachal Pradesh and Punjab.
- While the Minimum Wages Act was enacted in 1948, it stipulates different wages according to occupation and State; there is no national minimum wage.
- In 2016, then Finance Minister Arun Jaitley hiked minimum wages for unskilled non-agricultural workers by 42% to ₹350 per day.
- The Code on Wages Bill, 2017, had proposed a national minimum wage and five regional minimum wages.



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- However, it was referred to a parliamentary standing committee which, in its December 2018 report, said State governments must be consulted before any national minimum wage is set by the Centre.

NASA Mars Rover:

Why in News?

Opportunity, a remarkably durable NASA rover designed to roll along the surface of Mars for three months, has stopped communicating with Earth after 15 years of service, officials said on Wednesday, ending a mission that astounded the U.S. space agency.

Engineers lost contact with the solar-powered vehicle on June 10 during a dust storm that encircled Mars. Since then, NASA officials made numerous attempts to reach the six-wheeled rover, which is about the size of a golf cart.

Reasons for Damage:

- Opportunity's equipment may have been compromised by the storm, which struck while the rover was at a site called Perseverance Valley and blotted out sunlight needed by the robot's solar panels, officials said.

About the Vehicle:

- The vehicle was built to drive six-tenths of a mile (1 km), but ended up covering 28 miles (45 km) and lasting longer on Mars than any other robot sent to the surface of the Red Planet.

History of Mission:

- As Opportunity explored craters on Mars, it gathered evidence to demonstrate the planet in the ancient past was wet and warm enough to possibly sustain life, NASA said.
- That included the discovery of white veins of the mineral gypsum, an indication of water moving through underground fractures.
- Opportunity landed on Mars in January 2004, a few weeks after its rover twin, Spirit.
- Spirit ended its mission in 2010 after becoming stuck in soft soil.



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- The Opportunity mission cost more than \$1 billion, with about 300 JPL staff members dedicated to the project soon after it landed, John Callas, project manager for Mars Exploration Rovers, said by phone.
- The team had dwindled to 30 by the time Opportunity went silent.
- Another NASA rover called Curiosity, which arrived on Mars in 2012, continues its work on the Martian surface, collecting soil samples to analyze them for signs of organic compounds.
- And NASA's InSight spacecraft, the first robotic lander designed to study the deep interior of a distant world, touched down safely on the surface of Mars in November, with instruments to detect planetary seismic rumblings never measured anywhere but Earth.
- InSight and the next Mars rover mission, scheduled for 2020, are both seen as precursors for eventual human exploration of Mars, an objective NASA

Ships building in India:

Why in News?

In a big step to promote the Make in India initiative and incentivize ship building activity in the country, the Ministry of Shipping has revised its guidelines for chartering of ships by providing Right of First Refusal (RoFR) to ships built in India.

Details:

- Henceforth, whenever a tendering process is undertaken to charter a vessel, a bidder offering a ship built in India will be given the first priority to match the L1 quote.
- It is expected that this priority given to ships built in India will raise the demand for such vessels, providing them with additional market access and business support.
- Prior to the revision of the guidelines, the RoFR was reserved for Indian flag vessels as per the relevant provisions of Merchant Shipping Act, 1958.

Why was it needed?

- The review is also in line with the need to give a long term strategic boost to the domestic shipbuilding industry.
- The need to encourage the domestic shipping industry to support the domestic shipbuilding industry, and the need to develop self- reliance and a strong synergy between these vital industries for the overall long term development and economic growth of the country.

Steps taken:



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- The Government of India has taken several steps to promote shipbuilding in India especially by providing long term subsidy for under the Shipbuilding Financial Assistance Policy (2016-2026).
- Budgetary provision of Rs. 30 crore was earmarked in 2018-19 for providing financial assistance to all Indian Shipyards, excluding Defence Shipyards.

About Regional Maritime Safety Conference

- The Regional Maritime Safety Conference is being organized by India for the first time .
- The objective of the conference is to deliberate on issues related to assuring maritime safety in the India-ASEAN sub region, safeguarding our shores and promoting trade along the sea routes.
- The conference will address a wide range of issues that affect regional maritime safety, including transport safety, maritime law, ship building, transportation of hazardous goods, marine oil spill, pollution and environmental safety.
- The inaugural edition is being organised by the National Maritime Foundation (NMF) in coordination with the Ministry of Shipping and the Ministry of External Affairs

Mariculture:

Background:

About 37% of the area of the entire world is agricultural land, a third of which (about 11%) is used for crops. And as the population of the world rises to 9.7 billion people in 30 years, the land available for crops will reduce. Thus, there is an immediate need to try and improve the efficiency of food production.

Statistics:

Experts predict that agricultural yield must increase by 50% between now and 2050. How to do this is the question facing agricultural scientists across the world.

How to deal with it?

- Plants use sunlight to produce energy for their metabolism and food production.
- This is referred to as photosynthesis (wherein sunlight is used to make energy-rich molecules needed for producing food molecules). However, the efficiency of photosynthesis is rather low, just about 5% in most land crops.



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- The most efficient land crop with 8% average is sugarcane, which is not all that edible, except for the sugar in it. If only we can increase the efficiency of crops such as wheat, rice and other grains!

Genetic engineering

- One way of achieving it has been shown in the model plant tobacco where the scientists could “engineer photosynthesis” by increasing the expression of three genes involved in processing light.
- This increases the tobacco yield by 20%.
- Another way that some other scientists are trying is to reduce what is called photorespiration in plants.
- Here the energy and oxygen produced in the ‘light reaction’ of photosynthesis is drained by the plant to make “wasteful” products in the ‘dark reaction’, and not just carbohydrates and other food material, particularly when the plant’s leaves close in order to reduce water loss by evaporation.

Include seaweeds in our diet

- It is in this context that we need to open our minds and expand our ideas about our food habits.
- The most efficient use of photosynthesis is actually not by land plants but by micro and macro algae, such as seaweeds.
- These are the champions, contributing to about 50% of all photosynthesis in the world. And many of them, notably those with dark green, red and brown colour, are edible.

Seaweed research

- About 844 seaweed species are reported from India, a country with a coast line of 7,500 km. Peninsular India from Gujarat all way to Odisha and West Bengal has a coast line of 5,200 km, and Andaman and Nicobar together have a coast line of 2,500 km.
- Thus, while we have 63% of our land area for crop agriculture, we should not forget this vast coastal area, much of which breeds seaweeds. Research in the area of edible seaweeds in India has been going on for over 40 years.

About Seaweeds:



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- Seaweeds are rich sources of vitamins A and C, and minerals such as Ca, Mg, Zn, Se and Fe.
- They also have a high level of vegetable proteins and omega 3 and 6 fatty acids. Best of all, they are vegetarian, indeed vegan, and do not have any fishy smell, thus good and acceptable.
- For all for those who worry about this “new” introduction, let us recall that India took quickly to imports like potatoes, tea and most recently to soyabean.

Great Indian hornbil:

Why in News?

Amid a changing environment, with natural homes of birds getting depleted as natural forests make way for plantations and other such modified terrain, comes the good news of how the great Indian hornbill (*Buceros bicornis*) adapts to such change.

A group of researchers from NCBS-TIFR in Bengaluru and Nature Conservation Foundation in Mysuru observed eight hornbill nests, three located in contiguous forests and five located in modified habitats such as coffee plantations. They found that the birds followed similar nesting behaviour but adapted to the changed environment.

Details of Study:

- The team chose to study the great Indian hornbills nesting in the Anamalai hills.
- For comparison, the researchers located the study in the modified habitat in the Valparai plateau and the contiguous forests in the Anamalai Tiger Reserve and the Vazhachal Reserve forests.
- The modified habitat included tea, coffee and cardamom plantations and tribal settlements.

Nesting habits

- Hornbills are secondary cavity nesters and choose cavities formed in large trees for nesting.
- Also they are monogamous, and the female, after copulation, seals herself in the hole until the initial breeding period of two-four months is over.
- During this time, the female and the young ones are fed by the male bird, with fruit such as figs and animal matter. So, in principle, along with other threats such as hunting, modified land use, ensuing forest fragmentation, felling of large trees with



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the potential for nesting, the loss of fruit bearing trees could also affect hornbill nesting habits.

- “Great hornbills may adapt to habitat modification provided that their key requirements for food and nesting are fulfilled in the habitats like coffee and forest fragments.
- Considering that hornbills use same nest over years, protection of these known nest trees and retention of large trees that can be potential nests is absolutely essential.
- In addition, it would be necessary to have a diversity of native tree species, particularly figs, laurels and other food plants, the study concludes.

India Pharma 2019 & India Medical Device 2019:

Why in News?

Union Minister of Chemicals and Fertilizers, Statistics and Programme Implementation, Shri D.V. Sadananda Gowda, inaugurated the 4th edition of India's biggest Global Conference on Pharmaceuticals and Medical Devices, in Bengaluru today.

About the event:

- The event is being organized by Department of Pharmaceuticals (DoP), Ministry of Chemicals and Fertilizers, along with Federation of Indian Chambers of Commerce & Industry (FICCI).
- This conference is an endeavour of this Government to provide affordable, quality healthcare to citizens of the country and also to encourage 'Make in India' while promoting the growth and development of Indian Pharmaceutical and Medical Device Industry.

Theme of Event:

The theme of 'India Pharma 2019' is 'Enabling Quality Affordable Healthcare & that of 'India Medical Device 2019' is 'Accelerating Growth to Achieve Universal Healthcare'.

India's Pharma Sector:

- India continues to maintain its leadership position in manufacturing and supply of high quality generic medicines.
- With several proactive measures by the Government, exports have improved and the growth in Pharma sector is back on track.
- The Pharma industry is expected to grow at a CAGR of 15% in the near future.
- On the other hand, as per industry estimates, the medical devices market is expected to grow to \$50 billion by 2025.



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Steps Taken by Govt.:

- Government is taking measures to help Indian pharmaceutical sector become a Rs. 3 lakh crore market, making it a global player.
- Government has taken a number of steps to boost the indigenous API industry growth in India.
- These include constituting a Task Force containing all stakeholders to study the issues of APIs and chart out a strategy to boost their indigenous manufacturing; giving thrust to cluster based development of API industry; in principle approval to 2 API parks, one each in Assam and Andhra Pradesh, among others.
- State Governments plans to set up a special pharmaceuticals SEZ in Hassan and Pharma Parks in Bengaluru and Mangalore.

PCS1X Maritimee-Commerce Portal

Why in News?

Shri Nitin Gadkari, Union Minister of Shipping, Road Transport & Highways, Water Resources, River Development & Ganga Rejuvenation will launch **PCS1x** at the Regional Maritime Safety Conference in Mumbai tomorrow.

What is it?

- **PCS1x** is an upgraded version of the e-commerce portal **Port Community System(PCS)**.
- It has been developed in record time by the Indian Ports Association, based on feedback from stakeholders using PCS.
- PCS 1x is a new generation system with a user-friendly interface that brings together various stakeholders of the maritime sector, and facilitates Government-to-Business, Business -to-Government and Business-to-Business transactions within the required legal framework.
- It ensures extreme levels of cyber security. The architecture of PCS is built on 'open platform' technology to integrate / latch on to any new concept or module available in the industry without disturbing the current ecosystem.
- This is a unique feature which provides unlimited landscape for growth and expansion.

Significance:

- PCS has played a vital role in enhancing 'Ease of Doing Business' in the maritime sector by facilitating a transparent and paperless system for electronic submission of trade document, resulting in faster turnaround time and dwell time.



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- Digitization in EXIM trade, of which PCS is a part, has played a major role in improving India's world ranking in 'Ease of Doing Business'.
- In World Bank's Ease of Doing Business Index India's position stood at 100 in 2017, registering an improvement of 30 points over 2016. It subsequently rose to 77th rank the following year.
- This is primarily due to the ranking in Trading Across Border parameter which improved to 80 from 146 last year.
- It provides a Single Window platform for maritime industry and authorities, a user-friendly mobile application for stakeholders, event-based notification and alerts, interactive dashboard, capability of PCS-to-PCS integration (Indian PCS with other international PCS) and 24/7 helpdesk for location support.
- It also allows better stakeholder coordination.

Start-Ups in India:

Union Minister of Commerce & Industry and Civil Aviation, Suresh Prabhu has cleared a proposal aiming at simplifying the process of exemptions for Start-ups under Section 56 (2) (viib) of Income Tax Act.

The Department for Promotion of Industry and Internal Trade (DPIIT) will be issuing a gazette notification today to this effect.

Salient features:

- With this notification, the definition of Start-ups will be expanded.
- Now an entity will be considered as a Start-up up to a period of ten years from the date of incorporation and registration in place of the earlier duration of 7 years.
- Similarly, an entity will continue to be recognized as a Start-up, if its turnover for any of the financial years since incorporation and registration has not exceeded Rs. 100 crore in place of Rs. 25 crore earlier.
- A Start-up will be eligible for exemption under Section 56 (2) (viib) of Income Tax Act, if it is a private limited company recognized by DPIIT and is not investing in any of the following assets:
 - i. building or land appurtenant thereto, being a residential house, other than that used by the Start-up for the purposes of renting or held by it as stock-in-trade, in the ordinary course of business;
 - ii. land or building, or both, not being a residential house, other than that occupied by the Start-up for its business or used by it for purposes of renting or held by it as stock-in-trade, in the ordinary course of business;
 - iii. loans and advances, other than loans or advances extended in the ordinary course of business by the Start-up where the lending of money is a substantial part of its business;



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- The aggregate limit of Rs. 25 crore will exclude consideration received by eligible Start-ups for the following classes of persons:
 - i. Non-Residents
 - ii. Alternative Investment Funds- Category-I registered with SEBI
 - iii. Listed company having a net worth of Rs.100 Crores or turnover of at least Rs. 250 crore provided that its shares are frequently traded as per SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011

Start-ups will file a duly signed declaration with DPIIT for availing exemption. The declaration will be transmitted by DPIIT to CBDT.

National Electronics Policy 2019:

Why in News?

The Union Cabinet on Tuesday approved the National Electronics Policy 2019 aimed at achieving a turnover of \$400 billion (about ₹26 lakh crore) for the electronics system design and manufacturing (ESDM) sector by 2025, while generating employment opportunities for one crore people.

Benefits of Policy:

- “The policy will enable flow of investment and technology, leading to higher value addition in the domestically manufactured electronic products and increased manufacturing of electronics hardware for local use as well as exports.
- The policy has introduced “easier to implement” incentive schemes, including an interest subvention scheme and credit default guarantee, to replace some of the existing ones under the National Electronics Policy 2012.
- It proposes to provide interest subsidy of 4% on loans up to ₹1,000 crore on plant and machinery, and in case of larger loans, the subsidy would be limited to ₹1,000 crore.

Other Provisions:

- The government proposes to create a fund to provide default guarantee of up to 75% to banks for plant and machine loans of up to ₹100 crore.
- This will eliminate the need for small and new investors to provide third-party collateral... the scheme will be on the pattern of credit guarantee being provided by SIDBI for the SME sector.



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- However, for both these schemes, consultations are on with the Department of Expenditure, the official added.
- They will be launched once the policy is notified.
- To help create an ecosystem, the policy has pitched for 2.0 version of the Electronics Manufacturing Cluster Scheme, under which infrastructure support will be provided for a group of industries that are part of the product supply chain rather than individual industries.
- It has also proposed a sovereign patent fund to acquire intellectual property for chips and chip components.

Rooftop Solar Power Project:

Why in News?

The Cabinet Committee on Economic Affairs on Wednesday approved Phase-II of the Grid Connected Rooftop Solar Programme that aims to achieve a cumulative capacity of 40,000 MW from rooftop solar projects by 2022.

About the Project:

- The programme will be implemented with a total central financial support of ₹11,814 crore.
- The Phase II programme provides for central financial assistance (for residential rooftop solar installations) up to 40% for rooftop systems up to 3kW and 20% for those with a capacity of 3-10kW.
- The second phase will also focus on increasing the involvement of the distribution companies (DISCOM).
- Performance-based incentives will be provided to DISCOMs based on RTS capacity achieved in a financial year [i.e. April 1 to March 31 every year till the duration of the scheme] over and above the base capacity, i.e., cumulative capacity achieved at the end of previous financial year.

About National Solar Mission:

- The **National Solar Mission**, is an initiative of the [Government of India](#) and State Governments to promote solar power.



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- The mission is one of the several initiatives that are part of the National Action Plan on Climate Change.
- The program was inaugurated by former [Prime Minister Manmohan Singh](#) on 11 January 2010 with a target of 20GW by 2022 which was later increased to 100 GW by the [Narendra Modi government](#) in the [2015 Union budget of India](#).
- India increased its solar power generation capacity by nearly 5 times from 2,650 MW on 26 May 2014 to 12,288.83 MW on 31 March 2017. The country added 5,525.98 MW in 2016-17, the highest of any year

Objective

- The objective of the National Solar Mission is to establish [India](#) as a global leader in [solar energy](#), by creating the policy conditions for its diffusion across the country as quickly as possible.
- Under the original plan, the Government aimed to achieve a total installed solar capacity of 20 GW by 2022.
- This was proposed to be achieved in three phase.
- The first phase comprised the period from 2010 to 2013, the first year of the 12th five-year plan.
- The second phase extended up to 2017, while the third phase would have been the 13th five-year plan (2017–22). Targets were set as 1.4 GW in the first phase, 11-15 GW by the end of the second phase and 22 GW by the end of the third phase in 2022.
- The Government revised the target from 20 GW to 100 GW on 1 July 2015.
- To reach 100 GW by 2022, the yearly targets from 2015-16 onwards were also revised upwards.

Current Status:

- India had an installed solar capacity of 161 MW on 31 March 2010, about 2 and half months after the mission was launched on 11 January.
- By 31 March 2015, three months before the targets were revised, India had achieved an installed solar capacity of 3,744 MW