

Indo-Iran Bilateral

What is the issue?

- Iranian President Hassan Rouhani recently concluded his bilateral visit to India on a successful note.
- The visit has underlined the criticality of the Indo-Iran engagement.

What were the highlights of the visit?

- **Qualitative Aspects** - The importance of bilateral ties and the strategic imperative for their growth were stressed in the joint statements issued.
- Discussions were held on enhancing bilateral trade, investment, and ease of doing business between the India and Iran.
- The constitution of an expert group to recommend “trade remedy measures” and a Double Taxation Avoidance Agreement (DTAA) was also contemplated.
- Mr. Rouhani endorsed India’s bid for a permanent seat at the UN Security Council with the veto.
- The joint statement also had a toughly worded warning to the countries harbouring “sanctuaries for terrorism”.
- **Quantitative Aspects** - India and Iran signed agreements and Memorandums of Understanding (MoUs) on a variety of issues.
- India was also awarded the contract to operate the “Shahid Beheshti Port terminal at Chabahar, after the project is completed.
- Significantly, no announcement was made on the Farzad-B gas field that India has expressed an interest in, but a follow up on the same is expected.

What are the significant trade concession give to Iran?

- Just before Mr. Rouhani’s visit, India announced it would allow Indian investment in Iran to be done in rupee terms.
- Notably, this concession is presently enjoyed by only Bhutan and Nepal.
- This allows money lying in Indian banks to be repatriated as payment for Iranian imports, which is mostly oil.
- Till recently, these funds were been blocked because international banks had refused to trade with Iranian entities, fearing further US sanctions.

- In return, Iran extended the credit period for oil payments from India by issuing more generous guidelines.

What are the larger geo-political implications?

- The present Indo-Iran bonhomie is also in the larger geo-political context, considering that the US has been openly hostile to Iran lately.
- Trump administration has been taking a hard line against the Iranian nuclear deal and even called for its scrapping and re-imposition of sanctions.
- Also, USA has recently asked countries to keep a check on their investments in Iran as these might be supporting terrorism and unrest in the Middle East.
- It is hard to predict if the implications if Indian overtures to Iran would impact the Indo-US ties or the Indo-Israeli ties.
- But irrespective of this, Iran is a crucial energy supplier to India and a gateway to central Asia, which mandates a continued cordial relationship to last.

Source: The Hindu

Pilot Projects on DBT in Fertilizers

Why in news?

Union government with the guidance of NITI Aayog is implementing pilot projects on DBT in fertilizers.

How the pilot project is being implemented?

- Initially NITI Aayog decided to roll out the pilot project on DBT in fertilizers in 16 districts.
- Since then DBT in fertilizers has been rolled out in 19 States and Union Territories and 12 States are expected to come on board by Feb 2018.
- By June 2018, DBT in fertilizers is expected to expand its footprint in the entire country.
- These initiatives have been supplemented by Department of Fertilizers, including appointment of 24 State DBT co-coordinators, and organising about 4,500 training sessions across India.

What is the role of technology in DBT in fertilizers?

- Each time a farmer purchases fertilizers from a dealer, he/she presses his or her thumb at a point-of-sale (PoS) device and an authenticated receipt comes out giving details of the purchase and subsidy to be paid by the government directly to the manufacturer.
- The records of dealers are automatically updated and payment is made digitally or in cash.
- Training videos are also placed on YouTube, and the comprehensive redress system in place is being expanded to a multilingual help desk.
- Connectivity issues has been addressed through flexibility in choosing the connectivity option (Wifi, LAN, PSTN) or use of external antenna to improve signal strength.

What are the benefits of DBT technology?

- Farmers, especially those purchasing urea were facing constraints of availability and occasionally overcharged in the past, now satisfied with new DBT mechanism.
- DBT in fertilizer envisages transfer of subsidy to manufacturers upon authentication of purchase by farmers.
- This restricts diversion, prevents leakages, and brings about greater transparency, accountability and efficiency.
- Through this new mechanism farmers received transaction receipts, and were charged the same amount as mentioned in the receipt.
- The grievance redress mechanism has improved and retailers are also satisfied.

What more needs to be done?

- ✓ The application device must be made agnostic so that retailers can use desktops, laptops, tablets, smartphones, etc. to run the application.
- ✓ A toll-free number need to be created soon to allow conversations in regional languages will help the farmers.
- ✓ The waiting time for farmers purchasing fertilizers need to be reduced.
- ✓ While Aadhaar is the preferred form of identification of buyers, other forms of identification should also be used.
- ✓ The Standing Committee on Chemicals and Fertilizers (2016-17), in its 36th Action Taken Report, has recently emphasised that while implementing DBTs, subsidy should be disbursed directly to the farmer's bank account.
- ✓ This requires serious consideration while Phase-I is implemented and stabilised.

Source: The Hindu

More than 40 Indian languages will soon be extinct

As per the Census Directorate, 42 Indian languages are said to be endangered. Due to the small number who speak the languages are expected to soon be extinct.

The languages include dialects as well. The 42 languages are considered endangered because they are spoken by less than 10,000 people.

Endangered languages:

The endangered languages include, 11 from Andaman and Nicobar Islands- Andamanese, Jarawa, Lamongse, Luro, Muot, Onge, Pu, Sanenyo, Sentilese, Shompen and Takahanyilang, 7 from Manipur- Aimol, Aka, Koiren, Lamgang, Langrong, Purum, and Tarao, and 4 from Himachal Pradesh- Baghati, Handuri, Pangvali, Sirmaudi. Mandi, Parji and Pengo from Orissa, Koraga and Kuruba from Karnataka, Gadaba and Naiki from Andhra Pradesh, Mra and Na from Arunachal Pradesh, Tai Nora and Tai Rong from Assam, Bangani from Uttarakhand, Kota and Toda from Tamil Nadu, Birhor from Jharkhand, Nihali from Maharashtra, Ruga from Meghalaya and Toto from West Bengal.

A central scheme is in place to protect these languages.

The Central Institute of Indian Languages has been working on the conservation of these languages.

Under the programme, grammatical descriptions, monolingual and bilingual dictionaries, language primers, anthologies of folklore, encyclopedias of all languages or dialects that are endangered are being prepared.

There are currently 31 languages in India that have been given the status of official languages by state governments and union territories.

Distinction between the two based can be made based on the concept of Mutual intelligibility.

Two languages where speakers can understand each other are considered dialects of the same language,

whereas two languages where the speakers cannot understand each other are separate languages.

Historically two dialects with close enough continuous contact will remain mutually intelligible. With enough separation in time and space dialects will eventually turn into separate languages.

India is one of the few countries with such a huge diversity of languages. If the languages become extinct it will not just mean the loss of the said languages but also a loss of culture. The country wouldn't be the same if it weren't for its diversity, languages are a crucial part of that diversity.

Red Sanders

- Pterocarpus santalinus occurs in the **Tropical Dry Deciduous Forests**.
- It has a highly restrictive distribution in the South Eastern portion of Indian peninsula to which it is endemic.
- It is generally found at altitudes of 150 - 900 m.
- It prefers lateritic and gravelly soil and cannot tolerate water logging.
- It is said to be used in the making of oriental musical instruments like Shamisen, Koto and Erhu and of high demand internationally especially in China.

Nagarjunasagar-Srisailem Tiger Reserve

- The reserve is situated in the Nallamalais - an offshoot of Southern Eastern Ghats of Andhra Pradesh.
- River Krishna forms northern most boundary of the Tiger Reserve.
- The nomadic, shy, food gathering and hunting primitive tribe "Chenchus" of these hill ranges live in groups called gudems amidst forests of this sanctuary.
- The reserve primarily comprises of southern tropical dry mixed deciduous forest.

Map showing Tiger Reserves in India



- The Nagarjuna sagar- Srisailam wildlife Sanctuary attained the Project Tiger status in 1983, then in 1992, it was renamed as Rajiv Gandhi Wildlife Sanctuary.
- Post bifurcation of the state ,the northern part of the reserve in Telgana state which is called Amrabad Tiger reserve

National Large Solar Telescope

- National Large Solar Telescope (NLST) is a proposed ground based 2-m class optical and near infra-red (IR) observational facility in the country.
- It is designed to address the scientific issues related to origin and dynamics of solar magnetic fields.
- The instrument has a broad scope to support and substantiate the solar atmospheric observations from space-based ADITYA mission and ground based MAST telescope (Udaipur).

The birds and the coffee beans

- In India, coffee acreage has increased by 150% between 1990 and 2015.
- Though Arabica variety of coffee is more flavorful, the planters prefer the Robusta variety which is less resource intensive.
- Arabica is generally grown in shaded, low-intensity areas, while full sun monocultures are common for Robusta cultivation
- To test the differential impact of Robusta and Arabica coffee cultivation on the local ecology, researchers carried out a survey of bird species in the plantation areas.
- The survey points out that Robusta farms generally had the same abundances of bird species as Arabica farms.
- The reason behind it was the dense canopy, landscape-level forest cover and less use of pesticide.
- Arabica plantations were more avian species-rich, bird communities in the Robusta agro forests included many fruit-eating species.
- The survey results suggest that coffee cultivation in the Western Ghats has not been inimical to the ecosystem or the endemic avian population.

Khadi and Village Industries Commission (KVIC)

- The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament 1956.
 - In 1957, it took over the work of former All India Khadi and Village Industries Board.
 - The broad objectives that the KVIC has set before it are
1. Social objective: providing employment.
 2. Economic objective: producing saleable articles.
 3. Creating self-reliance amongst the poor and building up of a strong rural community spirit.
- Khadi and Village Industries Commission (KVIC) is the nodal implementing agency for Prime Minister Employment Generation program (PMEGP) at the national level.

Hubble Space Telescope

- Hubble Telescope has tracked the Neptune's Mysterious Shrinking Storm.
 - It is the world's first large, space-based optical telescope, named in honor of astronomer Edwin Hubble.
 - The Hubble is a joint project between NASA and the European Space Agency.
 - Sun is the energy source of this space based telescope.
 - Some of the interesting Hubble Discoveries are
1. Creating a 3-D map of mysterious dark matter.
 2. Discovering Nix and Hydra, two moons of Pluto.
 3. Helping determine the rate of the universe's expansion.
 4. Discovering that nearly every major galaxy is anchored by a black hole.
 5. Helping refine the age of the universe.

Source: PIB, The Hindu, Business Standard

Plea seeks protection for ECs from sacking

The Supreme Court asked the Centre and the Election Commission of India to file their responses on a plea pointing out the vagueness in the procedure for the removal of two Election Commissioners.

The petition filed by advocate Ashwini Kumar Upadhyay said the ambiguity on the removal procedure of the Election Commissioners might affect the functional independence of the EC.

- The CEC and the Election Commissioners have a tenure of six years, or up to the age of 65 years, whichever is earlier, and enjoy the same status and receive salary and perks as available to apex court judges.
- “The CEC and the Election Commissioners enjoy the same decision-making powers... However, Article 324(5) does not provide similar protection to the Election Commissioners,” the plea said.
- The petition argued that the proviso to Article 324 (5) of the Constitution safeguards the Chief Election Commissioner (CEC) from arbitrary removal. The CEC can be removed from office only by the order of the President, just like a judge of the Supreme Court. However, the same constitutional provision is silent about the procedure for removal of the two Election Commissioners. It only provides that they cannot be removed from office except on the recommendation of the CEC.

The petition, in short, seeks to provide Election Commissioners with the same protection against arbitrary removal as the CEC. The plea also sought direction to the Centre to provide an independent secretariat to the Election Commission.

Khalistan casts shadow over Trudeau visit

The Khalistan issue, which kept India-Canada ties on ice through three decades from 1980, has resurfaced, taking away much of the warmth expected during the visit of Canadian Prime Minister Justin Trudeau to India.

- The Canadian government has repeatedly failed to take into account the sensitivities in India over the past when Sikh terror groups received support from elements in that country.
- A major breaking point came last April when Mr. Trudeau attended a “Khalsa Day” parade organised by one of the more radical gurdwarasin Toronto.
 - the parade depicted Sikh militant leaders Jarnail Singh Bhindranwale, Amreek Singh and former General Shahbeg Singh — who were killed in the siege of the Golden Temple and Operation Bluestar in June 1984 — as heroes.

Among other disturbing issues was the felicitation at the parade of a politician responsible for a resolution in the Ontario Assembly that accused India of “genocide” during the 1984 anti-Sikh riots, a vote that India had also protested strongly.

Issues over the growth of Sikh extremist groups, especially those seeking a “Referendum 2020” for the worldwide Sikh diaspora to vote on an “independent Khalistan”, have been raised several times in the past few years.

To add to the tensions, 16 Canadian gurdwaras announced a “ban” last month on the entry of Indian elected officials, consular officials, RSS and Shiv Sena members. The Trudeau government took no action in response to the decision. When asked, officials cited “freedom of expression” issues.

Another sore point on the current visit has been Mr. Trudeau’s insistence on including in his Cabinet those accused of sympathising with the Khalistan movement — Mr. Sajjan and Navdeep Singh Bains — on his visit to Amritsar.

Firms from four nations keen on DMIC

The Delhi Mumbai Industrial Corridor (DMIC), a mega infrastructure project with an estimated investment of \$100 billion, has attracted interest from companies based out of Canada, the U.S., Singapore and Taiwan.

- Representatives of Canadian Commercial Corporation, GIC Singapore, Taiwanese securities industry major Yuanta Securities, as well as executives of some American firms, held talks separately with officials of the DMIC Development Corporation.
- The DMIC Development Corporation is a special purpose company incorporated for the development of the DMIC project.

Canadian Commercial Corporation is a Canada government corporation that aims to boost Canadian trade by helping exporters from that country access government procurement markets in other nations via government-to-government contracting, while GIC Singapore is the Singapore government’s sovereign wealth fund with assets of around \$360 billion.

- The focus areas included defence as well as Maintenance, Repair and Overhaul (MRO). Discussions also revolved around proposals to set up units to manufacture aerospace and defence equipment in DMIC smart cities.
- It is learnt that Singapore-based water companies are keen on participating in the DMIC project and one such firm had even held discussions on taking up a feasibility study regarding water supply in the Manesar-Bawal Investment Region (MBIR).

The first phase of the DMIC Project will cover five Investment Regions (or IR — ‘specifically delineated industrial region with a minimum area of more than 200 square kilometres) and three Industrial Areas (or IA — developed with a minimum area of more than 100 square kilometres).

- As per the government, the Investment Regions include
 - Ahmedabad–Dholera Special IR in Gujarat (903 sq.km, with likely employment for 8 lakh people),
 - Dadri-Noida-Ghaziabad IR in Uttar Pradesh (218 sq.km, likely employment for 12 lakh people),
 - MBIR in Haryana (402 sq.km, estimated employment for 16 lakh people),
 - Khushkhhera-Bhiwadi-Neemrana IR in Rajasthan (160 sq.km, likely employment for 5.2 lakh people) and

- Pitampur-Dhar-Mhow IR in Madhya Pradesh (372 sq.km, estimated employment for 4.5 lakh people).
- The IAs include:
 - Shendra-Bidkin IA in Maharashtra (84 sq. km, with an estimated employment for 7.5 lakh people),
 - Dighi Port IA in Maharashtra (253 sq. km, likely employment for 3.2 lakh people) and
 - Jodhpur-Pali-Marwar IA in Rajasthan (155 sq. km, likely employment for 3.2 lakh people).

South Korean industrial conglomerate Hyosung Corporation is reportedly set to invest about ₹3,400 crore to establish a textile manufacturing facility in the Shendra-Bidkin IA.

- Besides, talks are on to develop the Ahmedabad–Dholera Special IR into an MRO hub for aerospace and defence firms.

PM calls for re-skilling existing workforce

The World Congress on Information Technology (WCIT 2018) or the ‘Olympics of IT’, coming to India for the first time, got under way with Prime Minister Narendra Modi emphasising on re-skilling of existing workforce in the backdrop of emergence of new technologies.

- Skilling citizens for the workplace of the future is important. We also need to ensure that our existing workforce is able to re-skill as new technologies emerge,” PM said, inaugurating the event held in Hyderabad, through video-conferencing.
- We need to reflect on changing nature of jobs in the emerging age of intelligent automation,” he said, pointing to how disruptive technologies such as Blockchain and IoT (Internet of Things) would have “deep impact in the way we live and work. They will require rapid adaptation in our workplaces., the PM said.

Earlier, the Prime Minister unveiled FutureSkills platform, a Nasscom initiative to upskill 2 million technology professionals in India.

S&T

Sheep embryos with human cells grown

In a breakthrough, scientists have successfully grown sheep embryos containing human cells, bringing the ability to grow human organs inside other animals closer to reality.

- Growing human organs inside animals may not only increase supply, but also offer the possibility of genetically tailoring of the organs to be compatible with the immune system of receiver.
- Researchers had recently been able to introduce human stem cells into early pig embryos, producing embryos for which about one in every 1,00,000 cells were human.

The team has now achieved a similar feat with sheep embryos, with an even higher ratio of human to animal cells.

- About one in 10,000 cells in these sheep embryos are human,” said researchers from University of California.

Vaccine can prevent TB infections in adolescents

A clinical trial has provided encouraging new evidence that TB vaccines can prevent sustained infections in high-risk adolescents. The results will be announced at the 5th Global Forum on TB Vaccines in New Delhi.

- In the Phase 2 trial conducted in South Africa, revaccination with the Bacille Calmette-Guerin (BCG) vaccine significantly reduced sustained TB infections in adolescents.
- An experimental vaccine candidate, H4:IC31, also reduced sustained infections, although not at statistically significant levels.
- However, the trend observed for H4:IC31 is the first time a subunit vaccine has shown any indication of ability to protect against TB infection.

The study was conducted to evaluate the safety and immunogenicity of the vaccine regimens, as well as their ability to prevent initial and sustained TB infections among healthy adolescents in the Western Cape Province of South Africa.

According to the World Health Organisation, about one-third of the world’s population has latent TB infection, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit the disease.

- People infected with TB bacteria have a lifetime risk of falling ill with TB of 10%.
- People ill with TB can infect 10-15 other people through close contact over the course of a year.
- Without proper treatment, 45% of HIV-negative people with TB on average and nearly all HIV-positive people with TB will die.

STATE-TELANGANA

Telangana showcases T-Fiber at World IT Congress

A Technology Demonstration Network (TDN) of Telangana government's ambitious broadband connectivity project for all 10 million households was inaugurated by Union Minister of Electronics and IT Ravi Shankar Prasad, at the World Congress on Information Technology (WCIT 2018) in the city.

- The TDN is established in four villages within the Maheshwarammandal. A few houses, a school, a primary health centre and gram panchayat offices in Mansanpally, Thummaloor, Sirigipuram and Maheshwaram villages are connected to the Secretariat, the Raj Bhavan, CM's Camp Office and State Data Centre.
- Speeds of up to 1 gbps for households are provided under the project that will serve as the backbone for extending a range of services such as e-panchayat, telemedicine, e-education, video conferencing and government-to-citizen services such as MeeSeva, IPTV and IP-Phone.
- The project would help deliver government to citizen and government to government services very effectively in the areas of e-governance, education, healthcare.

The T-Fiber programme, which piggybacks on the State government Mission Bhagiratha protected drinking water for households project, was earlier showcased at the World Economic Forum in Davos.