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Important News in the field of:

National
Economy
India and World
International
Science & Environment
Miscellaneous News

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: Aspirant Forum :
AN INITIATIVE BY UPSC ASPIRANTS
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Aspirant Forum is a Community for the UPSC Civil Services (IAS) Aspirants, to discuss and debate the various things related to the exam. We welcome an active participation from the fellow members to enrich the knowledge of all.

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About the ‘CRUX’

Introducing a new and convenient product, to help the aspirants for the various public services examinations. The knowledge of the Current Affairs constitute an indispensable tool for all the recruitment examinations today. However, an aspirant often finds it difficult to read and memorize all the current affairs, from an exam perspective. The Newspapers and magazines are full of information, that may or may not be useful for the exams. Thus, a candidate is forced to spend a substantial amount of his time in selecting and maintaining notes for the current affairs.

Another problem is that it is difficult to get every bit of information, relevant from the exam perspective at one place. Thus, candidates are often found wasting their time in search of current affairs material. It is with this problem in mind that we have come up with the GIST of The Hindu and Press Information Bureau (PIB).

The whole concept of the CRUX is to provide you with a summary of the important news and current affairs, from an exam point of view. By reading the CRUX, you will be able to save your precious time and effort, as you get all the relevant matter in a summarized and convenient form. The Crux is particularly helpful for the Civil Services, Banking, SSC and other exams that have a current affairs section.

The material is being provided in such a manner that it is helpful for both- objective and descriptive sections. Our aim is to help the candidates in their effort to get through the examinations. Your efforts and dedication inspire us to keep going. It is our sincere effort to make your journey easier.

Best Wishes
Editorial Board
Team Aspirant Forum

Courtesy:
The Hindu
Press Information Bureau (PIB)
National

CAG report unearths rampant illegal mining
The State has vast reserves of minerals such as copper, lead, zinc, rock phosphate, soapstone, silica sand, limestone, marble and gypsum. Most of the mineral wealth is found in the Aravalli mountain range. Before reaching these conclusions, the CAG officials undertook joint physical inspection of 136 of the selected 288 mining leases, along with the Mines Department’s representatives, to assess the extent of compliance with environmental provisions during operation of leases and after closure of mines. The CAG said that the illegal mining operations had made an adverse impact on natural resources such as forests, rivers, flora and fauna as well as public health.

Plea to raise minimum age for marriage
Population explosion was a growing menace to fundamental rights, and one of the steps to check this was to raise the minimum age for marriage, a petition filed in the Supreme Court said. It is likely to be listed before a Bench led by Chief Justice Dipak Misra. Petitioner advocate Ashwini Kumar Upadhyay said “fertility depends on the age of marriage”. Therefore the minimum age for marriage for men and women should be made 25 years and 21 years respectively from the current 21 years and 18 years, he said.
The plea said the state had failed to implement effective population control strategy or programme to ensure the well-being of citizens, which was under peril due to the rampant rise in population.

Government cracks the whip again
The government has yet again cracked the whip against the bid to jack up Plan expenditure by withdrawing substantial sums from the treasury and parking it in public accounts. After raising the cash withdrawal ceiling from Rs. 2,000 to Rs. 10,000, the department has issued a circular that funds could be transferred from the treasury only to the account of the end beneficiary and not to the public account of any government organisation, public sector undertaking or local self-government institution (LSGIs).
It has also directed that the fund transfer would be permitted only for paying income tax, ESI, provident fund and other benefits. That also means departments and LSGIs cannot hereafter furnish inflated reports on Plan fund utilisation without incurring actual expenditure.

Borrowing limit
On finding that substantial sums have been deposited in public accounts of autonomous institutions and various departments, the Centre had curtailed the borrowing limit of the State. The curtailment, along with the delay in providing the Central transfers, had upset the financial transactions and the government was forced to regulate cash outgo from the treasury. Recently a Finance Department review found that various departments had deposited about Rs. 5,000 crore in their accounts maintained in the treasury. The funds of institutions such as the Kerala State Financial Enterprises and the security deposits of government contractors were also deposited in the public accounts in the State treasury.
The Centre had considered all these funds while imposing curbs on the State’s borrowing limit. The circular clearly says that henceforth officials would be permitted to withdraw only the funds that could be utilised within the next 30 days.

Positive move
This is being construed as a positive move to avert the strain on State’s finances, avoid bunching of expenditure during the fag end of the financial year and also ensure a meaningful utilisation of the sanctioned funds.

What is the Raisina Dialogue?
Conceived just three years ago, in early 2016, the Raisina Dialogue is India’s premier foreign policy conference. And within this short span, it has emerged as a much-awaited event in the international foreign policy calendar. Organized along the lines of the Shangri-La Dialogue held in Singapore, and co-hosted by the ministry of external affairs (MEA) and the Observer Research Foundation, it takes its name from the Raisina Hills, where India’s seat of power resides.
The Dialogue, since its inception, has attracted academics, scholars, researchers, students, journalists and even politicians who are either interested—or are working—in the field of international relations, geopolitics, security, nuclear issues and Indian foreign policy. That is evident with the fact that even the first edition of the dialogue involved about 120 international participants from 40
countries, while the second edition attracted 250 foreign participants from 65 countries.

**Themes and strategies**
The first edition of the Dialogue took place in March 2016. The overarching theme of that inaugural edition was "Asia: Regional and Global Connectivity". The next year's theme was "The New Normal: Multilateralism with Multi-Polarity". At each Dialogue, these themes provide a contextual backdrop to the sessions, presentations and discussions.

While the first edition was held in March, the next two editions, including the recently concluded one, took place in January. At first glance, this seems nothing more than a shift in schedules. But through a slightly more professional lens, there is nuance in this shift. Some experts in international relations argue that rescheduling happened as part of a calculated decision to hold the event just before the week of Republic Day celebrations.

The rationale being that India is using every opportunity available to use all kinds of platforms to engage with other countries, both bilaterally and multilaterally. For instance, this year the government of India has made the unprecedented move of inviting ten heads of states from ASEAN countries as chief guests for its Republic Day ceremony. In the recently concluded Raisina Dialogue, a significant portion of the discussion revolved around India's eastern neighbours and, more prominently, the emergence of the Indo-Pacific region—one where both India and ASEAN countries have a significant role to play. Considering that the event also took place so close to an India-ASEAN summit means that little has been left to chance. The Dialogue is, then, just one of a quiver full of diplomatic arrows.

**Why does the Dialogue matter?**
An event of such scale sets the tone for the rest of the year. The Dialogue provides a platform for the government to state its position on various questions and issues of international relations. The event gives many experts, and other countries, a glimpse into the Indian government's near-term priorities in international relations. Such insight is exceedingly, and this is no doubt why the Raisina Dialogue has proved to be a success.

The Dialogue also provides a golden chance for young scholars and researchers to interact with a galaxy of stars from the international relations universe. Also, it gives a platform for researchers to network and perhaps even collaborate. And finally, the event creates an ecosystem for the growth and development of think tanks and other policy groups. The Dialogue has arguably played an essential role in the blossoming policy sector in Delhi.

**Raisina Dialogue 2018**
This year, for the first time in the history of the Raisina Dialogue, a serving head of the state was invited to speak. Israeli Prime Minister Benjamin Netanyahu inaugurated the event with an enthusiastic speech on Indo-Israel relations and his love for 'Hard Power'.

To the surprise of many, Indian Prime Minister Narendra Modi didn’t speak at all during the Dialogue despite being present during the inauguration ceremony. Despite that, the Raisina Dialogue has, by all accounts, been a success. For the first time, a third of the speakers in the panels were women. India's external affairs minister, Sushma Swaraj, highlighted this fact during her speech. This year’s theme was “Managing Disruptive Transitions: Ideas, Institutions and Idioms”. Delegates from as many as 86 countries participated this year, included several young researchers selected as 'Young Raisina Fellows'.

**Discussions and debates**
The major issues addressed this year were terrorism, the importance of the Indo-Pacific region, the rising threat from China, and India's growing power in the international system. Apart from Netanyahu's speech, the highlights of this edition of Raisina Dialogue was a statement made by Indian Army chief. General Bipin Rawat talked openly about state-sponsored terrorism and cautioned the media against promoting terrorist groups by giving them too much airspace. Rawat also called for restrictions on social media access to thwart the weaponisation of social media by terrorist groups.

Another significant statement came from India’s foreign secretary, S. Jaishankar, who spoke on India's geopolitical position, and the crucial role it plays in the region. He said, "India has acted as a wall between India's, west which is in turmoil and India's east, which is progressing. India has absorbed many of the evils from its west and has thereby insulated its eastern neighbours".

Eyebrows were raised afterwards when a Raisina Fellow asked Jaishankar why he had made no mention of Indian state-sponsored terrorism in Balochistan. To which the foreign secretary replied: "I was asked to talk about 'facts' and not 'fiction'." The audience burst out in applause. The issue of India shedding its old ‘non-aligned path’ came up several times. More than one panellist said that today India is decisively aligned with the US. It is perhaps in this context that statements by David Petraeus, a US war veteran and ex-director of the CIA, became notable at the Dialogue. Petraeus pointed out that the ‘ideological caliphate’ was a much bigger challenge than the ‘physi-
Aadhaar uncertainty can’t go on, says judge
Justice D.Y. Chandrachud became an unexpected voice from within the Supreme Court to highlight the prevailing uncertainty and dangers, especially in the banking and financial sectors, of waiting till the “last minute” to extend the March 31 deadline for Aadhaar linkage.

One of the five judges on the Constitution Bench hearing the challenge to the Aadhaar scheme, Justice Chandrachud agreed with the apprehensions raised by petitioners on whether the March 31 deadline would be extended or not.

The Bench, led by Chief Justice Dipak Misra, had so far remained non-committal on the extension, saying there was still time. On December 15, the Supreme Court had extended the deadline till March 31 to link Aadhaar with bank accounts, mobile phones and several other essential services, welfare schemes and benefits.

Financial system
“We are dealing with the entire financial system… We cannot let this state of uncertainty prevail… We cannot tell them, like on March 27, whether the deadline is extended or not… A banker cannot be expected to seek compliance from customers within seven days,” Justice Chandrachud addressed Attorney-General K.K. Venugopal.

Justice Chandrachud’s observations and the repeated urging of the petitioners’ lawyers, including senior advocates K.V. Vishwanathan, Arvind P. Datar and Shyam Diwan, to extend the March 31 deadline saw the Chief Justice react positively in favour of an extension.

“Extension of deadline… that we will do. Let them [arguments by petitioners’ lawyers in the Aadhaar case] finish. We will pass the order,” Chief Justice Misra orally observed.

Justice A.K. Sikri indicated from the Bench that it may pass an order to extend the deadline on the next day of hearing, March 13.

For the third day, protests stall Parliament
Proceedings in Parliament were disrupted for the third consecutive day, with protests by members over issues ranging from the banking fraud to regional grievances leading to repeated adjournments.

The Lok Sabha was first adjourned right after it assembled at 11 a.m., with Congress and Trinamool Congress MPs protesting against the Punjab National Bank (PNB) scam, Telugu Desam Party (TDP) members demanding a special package for Andhra Pradesh and Shiv Sena members demanding that Marathi be conferred the status of a classical language.

The protests continued when the House reassembled at noon, with AIADMK members protesting against the vandalising of a statue of Dravidian icon Periyar E.V. Ramasamy.

Telangana RashtraSamithi (TRS) members added to the ruckus, raising slogans demanding an increase in Telangana’s quota in reservation.

Amid the din, Speaker Sumitra Mahajan asked Shiv...
Sena member Anandrao Adsul to speak on his demand. Mr. Adsul said that Marathi fulfilled all criteria for the classical language status. Home Minister Rajnath Singh, who was present in the House, assured Mr. Adsul that the matter would be looked into.

“The issue does not pertain to the Home Ministry. I will speak to the Culture Ministry on this,” Mr. Singh said. Speaker Sumitra Mahajan adjourned the House after this, amid continuing slogans.

Meeting inconclusive
Meanwhile, a meeting convened by the Speaker for the smooth functioning of the House remained inconclusive, with the Opposition demanding an adjournment motion. The Opposition has also been insisting that the discussion on banking frauds be held under a rule that entails voting. The government has agreed for a discussion on “alleged systemic irregularities in the banking sector over the years and its impact on the Indian economy”. The Opposition, however, sees this as too diluted a formulation. Rajya Sabha proceedings were also washed out due to protests on the PNB banking fraud, a special package for Andhra Pradesh, and Cauvery Board issues.

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SC upholds passive euthanasia
The Supreme Court has upheld passive euthanasia and the right to give advance medical directives or ‘Living Wills’ to smoothen the dying process as part of the fundamental right to live with dignity. Passive euthanasia is the act of withdrawing or withholding medical support to a dying patient who has no hope for revival or cure.

Union govt. to set up Arbitration Council
In an effort to make India a global hub for arbitration, the government will set up an Arbitration Council that will grade institutions that offer alternative dispute resolution mechanism for commercial disputes. Union Law Minister Ravi Shankar Prasad, briefing reporters, said as India attracted foreign investments, it was essential to provide for a reliable platform that included arbitration and resolution of commercial disputes in a time-bound manner.

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‘Unwarranted support’
A five-judge Constitution Bench, led by Chief Justice of India Dipak Misra, in four separate and concurring opinions, ruled that the fundamental right to life and dignity under Article 21 of the Constitution includes the “right to die with dignity.” Dignity is lost if a man is allowed or forced to undergo pain and suffering because of “unwarranted medical support.”

“The right of a dying man to die with dignity when life is ebbing out and in the case of a terminally ill patient or a person in permanent vegetative state, where there is no hope of recovery, accelerating the process of death for reducing the period of suffering constitutes a right to live with dignity,” Chief Justice Misra held in his opinion, shared by Justice A.M. Khanwilkar.

In his separate opinion, Justice D.Y. Chandrachud observed that “to deprive a person of dignity at the end of life is to deprive him of a meaningful existence.”

“Meaningful existence” includes a person’s right to self-determination and autonomy to decide his medical treatment, the court held. Justice Ashok Bhushan agreed that right to a dignified life includes a “dignified procedure of death.”

Justice A.K. Sikri, in his separate opinion, said though religion, morality, philosophy, law and society have conflicting opinions about whether right to life includes the right to die, they all agree that a person should die with dignity. The court described the exact stage at which suffering robs a dying person of his dignity.

“A state where the treating physicians and the family
members know fully well that the treatment is administered only to procrastinate the continuum of breath and the patient is not even aware that he is breathing,” Chief Justice Misra wrote.

**Quest to prolong life**

Justice Chandrachud said modern medical science should balance its quest to prolong life with the task of ensuring “quality of life.” One is meaningless without the other, he added.

The court distinguished passive euthanasia from suicide and active euthanasia. It called passive euthanasia as a “mere acceleration of the inevitable conclusion.” Active euthanasia, the court concluded, is unlawful. Suicide involves “overt acts” which culminates in an unnatural death. A valid ‘Living Will’ facilitates passive euthanasia. A failure to legally recognise an advance medical directive inconveniences the “right to smoothen the dying process”, the court reasoned. In cases of terminally ill or permanently vegetative state patients, where there is no hope for revival, priority should be given to the Living Wills and the right of self-determination.

The court referred to how societal pressure and fear of criminal liability by relatives and medical doctors had led to suffering and undignified deaths.

**Right to avoid protracted pain**

The Supreme Court judgment upholding a person’s advance directive to refuse medical treatment attempts to answer the government’s poser whether the concept of ‘Living Will’ acts against a person’s “instinctive urge to survive.”

Additional Solicitor General P.S. Narasimha, for the government, had illustrated how it is unknown whether the struggle to survive is still going on within a dying or a comatose patient, even at the point of time when doctors and relatives resolve to act upon his own advance directive.

Chief Justice Dipak Misra, who headed the five-judge Constitution Bench, addressed this argument by observing that “a patient in a terminally ill or persistent vegetative state exercising the right to refuse treatment may ardently wish to live but, at the same time, he may wish to be free from any medical surgery, drugs or treatment of any kind so as to avoid protracted physical suffering. Any such person who has come of age and is of sound mind has a right to refuse medical treatment.”

“Suffering is a state of mind and a perception, which varies from individual to individual and depends on various environmental and social factors. Continuous advancement in medical science has made possible good pain management in patients of cancer and other terminal illness,” the government had argued. To this, the court said “there is a presumption of capacity whereby an adult is presumed to have the capacity to consent to or to refuse medical treatment.”

**Rajasthan passes Bill to give death penalty for child rape**

Rajasthan became the second State, after Madhya Pradesh, to pass a Bill providing for death penalty to those convicted of raping girls of 12 years and below. The State Assembly passed the Bill seeking to amend the Indian Penal Code with the insertion of new provision by voice vote.

A deterrent

Home Minister Gulab Chand Kataria, who introduced the Criminal Laws (Rajasthan Amendment) Bill, 2018, in the House, said it was a “progressive legislation” aimed at protecting the girl child by laying down a deterrent punishment, including death sentence, to the offenders.

“The Bill will become a law after it gets the Presidential assent. The Rajasthan Assembly has conveyed its feelings to the President. We hope that a similar initiative will be taken by other States and even by the Centre,” Mr. Kataria said after the House rejected a motion moved by some Congress members to circulate the Bill for eliciting public opinion.

According to the National Crime Records Bureau’s 2016 report, the cases of crimes against children have seen a steady increase in Rajasthan. The State recorded 4,034 such cases in 2016, which was 3.8% of the crimes against children registered across the country. In 2015, the State had registered 3,689 cases of crimes against children.

Mr. Kataria said the Bill had inserted two new sections, 376-AA and 376-DD, in the IPC.

Section 376-AA provides for capital punishment or rigorous imprisonment ranging between 14 years and life imprisonment. Section 376-DD makes a similar provision for gang-rape of a girl child, while laying down death penalty or imprisonment from 20 years to life imprisonment for those convicted of the offence. Each of the persons constituting the gang will be deemed to be guilty of the offence.

**The clandestine gold diggers of the Nilgiris**

It’s an illegal gold mine, deep in the heart of one of the hills surrounding the small, picturesque town of Devala in
the Nilgiris, around 70 km from Udhagamandalam.

We crawl through a dark, labyrinthine tunnel with a group of eight local miners, and then venture down an 80-foot-deep shaft, lit only by battery-powered torches tied to the miners’ heads with bits of cloth and rope. At the bottom of the vertical shaft are more tunnels that eventually lead to the “seam” — layers of rock, hewn with pickaxes and rudimentary metal tools by the miners.

The men work in two shifts, sometimes up to 10 to 12 hours at a stretch. Tasks are divided between the groups — one for excavating the mine, while the other cooks a quick meal for the team before catching up on some sleep.

**Long way from town**
The entrance to this damp and claustrophobic mine, excavated over eight months, is a trek of more than five km from Devala. Groups of men carrying rucksacks and little else in terms of equipment, walk along the town’s road before congregating at a tea stall and a provision store at the head of a narrow path leading to the illegal mines.

“It’s an open secret,” says Murali, a lorry driver who has come home for two weeks, and will try his luck in the mines. On the narrow path, the men point out the “pits,” so stragglers don’t fall in.

There are over a hundred such pits along the route, hidden by vegetation and undergrowth. Some are more than a 100-feet-deep, the miners say, used in the past as gateways into the deep tunnels in the hillock. Most have been hollowed out and abandoned, now harbouring snakes and acting as death-traps for large mammals.

Of the numerous mines that have been excavated, around 50-60 in the Devala-Pandalur region are still used regularly, the miners say, though older ones are also routinely prospected by neophytes.

**Bengal cancels transport agreement with Sikkim**
The West Bengal government has cancelled a transport agreement with Sikkim which allowed free movement of commercial vehicles between the two neighbouring States.

Speaking to The Hindu, State’s Transport Minister Sunandan Adhikari accused the Sikkim government of not abiding by the agreement and imposing several restrictions on vehicles entering the State from Bengal. Relations between the two States got strained during the Gorkhaland agitation last year.

“We cancelled the agreement in January as contrary to it the Sikkim authorities allowed our vehicles only in Gangtok, Namchi and Pelling. The restrictions were being imposed on our vehicles even as we allowed vehicles from Sikkim to freely enter Bengal,” said Mr. Adhikari. He said that the agreement was signed in 2013.

**SC shuts the door on foreign law firms**
Keeping India’s legal market exclusively for Indians, the Supreme Court ruled that foreign law firms or foreign lawyers cannot practise law in the country either on the litigation or non-litigation side. This means overseas lawyers or firms cannot open offices in the country, appear in courts or before any authority or render other legal services such as giving opinions or drafting documents.

Upholding similar verdicts of the Bombay and Madras High Courts, a Bench of Justices Adarsh Kumar Goel and Uday Umesh Lalit, however, said there was no bar on foreign law firms or foreign lawyers visiting India for a temporary period on a “fly in and fly out” basis for giving legal advice to their clients on foreign law or their own
system of law and on diverse international legal issues.

*Casual visit*

“We hold that the expression ‘fly in and fly out’ will only cover a casual visit not amounting to ‘practice’,” the Bench said, adding that any dispute in this issue would be decided by the Bar Council of India. The court also ruled that foreign law firms and lawyers did not have an “absolute right” to conduct arbitration proceedings and disputes arising out of contracts relating to international commercial arbitration. Though they might not be debarred from conducting arbitration in India arising out of international commercial arbitration, they would be governed by the code of conduct applicable to the legal profession in India.

**Legal BOPs exempt**

The court said Business Process Outsourcing (BPO) companies providing a range of services to customers like word processing, secretarial support, transcription and proof reading services, travel desk support services and others would not come under the Advocates Act. The ruling settles a long-standing argument on whether foreign firms or attorneys should be allowed to enter the Indian legal market. Sections of the legal fraternity have been opposing their entry, contending that Indian advocates are not allowed to practise in the U.K., the U.S., Australia and other nations, except on fulfilling onerous restrictions like qualifying tests, experience and work permit. It was also argued that foreign lawyers cannot be allowed to practise in India without reciprocity. The closely watched case saw 32 law firms from various countries participating. They had argued that there was no bar on a company carrying on consultancy or support services.

**Unions to protest commercial mining**

Four trade unions have announced their decision to observe a day’s strike on April 16, 2018 to protest against commercial mining of coal. The notice was served by the Bharatiya Mazdoor Sangh, the All India Trade Union Congress, the Hind Mazdoor Sabha and the Centre of Indian Trade Unions.

The Indian National Trade Union Congress (INTUC) will not be part of the agitation, but would work on doubling production, although they are opposed to commercial mining.

**‘Notice served’**

Ramendra Kumar, general secretary of the AITUC-affiliated Indian Mine Workers Federation said that the strike notice had been served on the Coal Secretary on March 13. “As the government is unwilling to reconsider the decision of commercial coal mining, we have no other option except to go on strike,” the unions said in the notice. Public sector Coal India Ltd. (CIL) and the joint sector Singareni Collieries Company Ltd. (held by the Centre and the Andhra Pradesh government) would come under the strike purview. About 2.9 lakh workers of CIL and 50,000 workers of SCCL were likely to be covered by the strike, Mr. Kumar said.

The INTUC said it condemned the NDA government’s decision to allow commercial mining to private companies using the relevant clauses of the Coal Mines Special Provision Act, 2015. “This meant that the decision of coal nationalisation was being reversed as CIL and SCCL will die in due course if cheap coal is mined by private companies through slaughter-mining,” the INTUC-affiliated Indian National Mineworkers Federation said in a press release. R.K. Chib, vice-president of the Indian National Mine Workers Federation said that the INMF would not participate in strike, but its members would wear black badges to work.

**Lok Sabha passes Finance Bill without discussion**

The Lok Sabha passed the Finance Bill, 2018, with 21 amendments, some of which had to do with the controversial long-term capital gains tax on equity announced in the Budget speech by Finance Minister Arun Jaitley and tax exemptions for start-ups.

The Bill was passed without discussion amid ruckus, following which both Houses of Parliament were adjourned for the day.

**LTCG amendments**

Regarding the long-term capital gains (LTCG) tax, one of the major amendments made was that the grandfathering of gains till January 31, 2018 will now be incorporated in the computation of the gains itself, rather than for the purposes of computing tax at the rate of 10%.

“This resolves the ambiguity contained in the language of the Finance Bill, 2018, on the need for a duplicated computation, viz. first for computing LTCG without grandfathering and then for applying 10% tax rate with grandfathering,” Rajiv Chugh, Tax Partner at EY India, said in
The amended Finance Bill, 2018 clears the air on several ambiguities and anomalies on the new LTCG regime, cost base for depreciation allowance on stock in trade converted into capital asset, valuation of securities held as inventory by scheduled banks and public financial institutions, due date for CbCR (Country by country reporting) compliance by Indian constituent entity of non-resident parent entity and turnover cap for eligible start-ups. However, tax experts say that ambiguities on other proposals continue to exist, such as the deemed dividend taxation of accumulated profits of an amalgamating company, potential extension of SEP to physical transactions, applicability of prosecution for non-filing of returns of income to foreign companies whose incomes are fully covered by withholding tax, and restrictive relief from minimum alternate tax (MAT) for non-resident companies under presumptive basis of taxation.

No deferment
“Markets were expecting some relief from the government like deferment of new capital gains tax or increase in the threshold limit from Rs. 1 lakh to Rs. 2 lakh for levy of capital gains tax at the rate of 10%,” Naveen Wadhwa, DGM at Taxmann.com, said. “However, the Finance Bill, 2018, as passed by the Lok Sabha, didn’t make any significant change in the original proposal.”

“The only noteworthy change is that of allowing the indexation benefit to shares which were unlisted as on January 31, 2018 but are listed on the date of transfer which happens to be on or after April 1, 2018,” Mr. Wadhwa said. The amended Finance Act also made changes to the rules regarding how start-ups can avail of tax deductions on profits. Previously, start-ups were allowed 100% deduction of profits for any three out of seven years from the year of incorporation. To avail of this incentive, the start-ups were required to comply with a condition that stipulated that their turnover could not exceed Rs. 25 crore in those seven years.

“This was considered restrictive, as exceeding the turnover threshold in later years could have jeopardised the claim for earlier years (even though the conditions were met in those years),” JigerSaiya, Partner, Tax and Regulatory Services, at BDO India, said in a note.

“In an amendment to the Finance Bill as passed by the Lok Sabha today [Wednesday], the condition is relaxed largely to the effect that turnover should not exceed the prescribed limit for the year for which 100% deduction is claimed by the start-up. The linking of turnover limit directly to year of claim is welcome.”

10 Aadhaar questions answered for you
The Supreme Court has stepped in and pushed the Aadhaar linking deadline just a few days short of 31 March. Some respite, this. But how do you cope in an Aadhaar-prepped world? From hotels to healthcare to financial services, everyone seeks to authenticate you through Aadhaar. What do you need to do if it’s the only ID card they’ll accept? Mint steps back and looks at 10 questions you need to answer before you flash your Aadhaar card.

What is the new deadline?
The deadline for linking mobile phones, bank accounts, and other several financial services to Aadhaar has been extended. Once the Supreme Court has decided on Aadhaar-related matters, a new deadline may be announced. A constitution bench of the court is hearing cases challenging the constitutional validity of Aadhaar Act, as well as that of linking it to various services. On 15 December 2017, Supreme Court had extended the deadlines for linking it to government-subsidized welfare schemes and services and set 31 March 2018 as the new deadline. However, this time it has been extended indefinitely except for welfare schemes and subsidies. The Supreme Court had also said that Aadhaar should be purely voluntary and that it could not be made mandatory until the matter is finally decided by the court.

So I don’t need an Aadhaar for a new bank account?
No, you still need an Aadhaar or an Aadhaar enrolment ID to open a new bank account. While the 15 December order had extended the deadline to link existing bank accounts with Aadhaar, it did allow that the Aadhaar enrolment ID be submitted to banks to open a new bank account. However, other financial services like buying insurance and mutual funds can still be done without Aadhaar. The extension also applies to the linking of PAN with Aadhaar.

What must I link with Aadhaar?
The government had made it mandatory to link Aadhaar with several services including bank accounts, mutual funds, insurance policies and small savings schemes like the Public Provident Fund. This was done through amending the Prevention of Money Laundering (Maintenance of Records) Rules, 2005. Also, the permanent account number (PAN) had to be linked with Aadhaar in order to file income tax returns. Mobile phone connections were also to be linked with Aadhaar. In addition to these services, several state and central government welfare
schemes were to be linked with Aadhaar. This included schemes that involved getting a subsidy through direct benefit transfer like subsidy for LPG or scholarships, among others. The deadline extension is not for these welfare schemes and subsidies. For these, the deadline remains 31 March.

**What if I don't link?**

For now, you don't have to. However, if the Supreme Court finally decides that the services need to be linked to Aadhaar, you will have to do so. But what happens if you don’t link even after that? The financial institutions we spoke to are not clear what will happen if an individual fails to link Aadhaar with these services. However, according to the amended Prevention of Money Laundering rules, in case the bank account holder fails to do so, her access to the account will be blocked, and will be granted only after Aadhaar, or proof of enrolment in Aadhaar, have been submitted.

While it is clear as per rules that the access to bank accounts could get blocked, it is not clear yet if account holders will continue to earn interest on their deposits or savings in case of PPF, or servicing of insurance policies would stop altogether.

**Can I delink Aadhaar?**

As of now, there is no provision or mechanism to delink the Aadhaar that is already linked with some service or welfare scheme.

**I have been getting reminders from banks and telecom companies. Even though the deadline has been extended, should I link Aadhaar?**

As long as the Supreme Court does not give a final decision, no services, including bank accounts or mobile connections, can be discontinued by the service providers for the want of Aadhaar. If the linking systems are active, it is up to you to decide if you want to link it with the services.

**Will I lose out on something if I do not link the services?**

No, financial and telecom services will not be affected. Your accounts or phone connections cannot be discontinued. Moreover, the UIDAI has specifically insisted that no essential services like hospitalization, medical help, school admissions or ration through PDS, can be denied to a beneficiary if she does not have Aadhaar or Aadhaar authentication does not work. “Under no circumstance, anyone can be denied a service just because he/she doesn’t have an Aadhaar. If one does not have Aadhaar or if Aadhaar online verification is not successful due to some reason, the agency or department has to provide the service as per Section 7 of Aadhaar Act, 2016 and Office Memorandum dated 19 December 2017 by using alternate means of identification…” the UIDAI said in a press release in February.

**What happens if I don’t give Aadhaar for government schemes?**

The UIDAI has insisted that essential services like hospitalization and PDS will not be denied. Also, Section 7 of the Aadhaar Act provides some scope for other forms of authentication. However, direct benefit transfers, which means receiving money directly in bank account as a subsidy or government scholarship, could be discontinued if Aadhaar is not provided.

**Can private companies ask for Aadhaar number?**

The UIDAI provides authentication services to several service providers including private companies, which can be used to establish the KYC details of an individual. Service providers using this facility are to be registered with the UIDAI as Authentication User Agencies or e-KYC User Agency. The list of active AUAs or KUAs is available on the UIDAI website.

**What do I do if some private service provider asks me for my Aadhaar number?**

As long as the Supreme Court does not make a final decision, any commercial service-provider cannot insist on only Aadhaar. In case of hotels, an identity proof can be asked for and the hotel should accept any government approved identity proof. If a hotel or any other service provider denies services just for Aadhaar, you can ask them to give this in writing and threaten with legal action since there is no redress for you through the UIDAI.

**MoF declines 3% GDP allocation for defence**

The Finance Ministry has declined a recommendation from the Parliamentary Standing Committee on Defence to have a fixed allocation of 3% of GDP for the Defence Ministry, a report of the Committee has stated.

“The recommendation of the Standing Committee for keeping a definite percent of GDP was referred to MoF for their consideration, the same was not approved by MoF,” the Ministry of Defence (MoD) said in its reply to the Committee.

The Committee has on several occasions expressed favour for having a benchmark percentage of GDP earmarked for deciding on the allocation to the defence sector to continue modernisation.

**Definite cost**
The MoF in its reply to the MoD said: “Since government resources come with definite cost, resource allocation is made among various competing priorities. Thus, defence expenditure as definite percentage of total government expenditure/GDP cannot be ensured considering the fact the resource allocations are made on need basis.”

Finance Ministry further added that rationalisation of the expenditure is the prime objective of the government while finalising the revised estimates during mid-year review. The Vice Chief of Army Lt. Gen. Sarath Chand has deplored before the Committee that this year’s budgetary allocation has dashed their hopes, and the capital allocation does not even cater for the committee liabilities for the year.

**Pranab Mukherjee Foundation launched**

The Pranab Mukherjee Foundation was formally launched here evening, in the presence of former President Pranab Mukherjee and a host of dignitaries, including former Prime Minister Manmohan Singh, BJP veteran L.K. Advani and Congress president Rahul Gandhi. Union minister Piyush Goyal, former Finance Minister P Chidambaram and industrialists Ratan Tata were present. The foundation, its brochure says, “will initiate, support and execute projects that will create and use knowledge, creativity and innovation to improve the quality of life in rural, semi-urban and urban areas and contribute to the building of an inclusive India.”

Speaking on the occasion, Mr. Mukherjee said, “Preservation of papers of the public life of those who devoted decades in public life and their activities have both individual and historic value to understand the time and situation in which they served people,” he said.

“Some memorials have been raised but systematic analysis of the papers of Prime Ministers and Presidents has not been done systematically here as in other countries,” the former President said.

**‘India’s credibility eroded by PM’s foreign policy’**

The Congress accused Prime Minister Narendra Modi of exercising a personalised foreign policy which eroded India’s international credibility.

Party president Rahul Gandhi, in his speech at the Congress plenary session, underlined the growing Chinese presence in India’s neighbourhood and made a specific mention of the Doklam plateau near Bhutan where China has built military infrastructure.

**For third alternative**

“China is present everywhere. China is in Doklam, in Nepal, Sri Lanka, Maldives and Myanmar,” said Mr. Gandhi, highlighting the growing expansion of the Chinese sphere in the Asia-Pacific, and called for a third alternative apart from the American and the Chinese models in the global order.

Mr. Gandhi’s comments came at the end of the two-day plenary. The party released a document on the state of the country’s foreign affairs, and said the current government had moved away from the fundamental principles of the Indian foreign policy.

“The PM has pursued a personalised foreign policy. The foreign policy engagements and the PM’s visits abroad have been reduced to being purely transactional. The Prime Minister's tendency to disparage his predecessors and diminish India’s achievements since Independence, has undercut India’s own credibility abroad,” the foreign policy resolution said.

The plenary was attended by strong contingents from abroad. The Awami League of Bangladesh, African National Congress (ANC) of South Africa, and the UNP of Sri Lanka sent significant delegations. The Nepali Congress, which was defeated in last year’s general election, was represented by a large delegation led by former envoy of Kathmandu to Delhi, Deep Kumar Upadhay. The Chinese Communist Party sent a member delegate.

**Bangladesh concern**

Mr. Gandhi’s speech found strong support from Dr.Dipu Moni, former Foreign Minister of Bangladesh who argued that the Congress leader “very well-articulated” the vision of India.

“According to me, Mr. Gandhi’s vision of removing barriers inside India and his party through jobs and increased representation is relevant for our region. We should similarly, remove barriers and create a future based on peace and prosperity in South Asia,” said Dr. Moni at the end of the plenary. Dr. Moni and her delegation members met Mr. Gandhi. She described Mr. Gandhi’s speech as a message for entire South Asian region.

Reflecting Mr. Gandhi’s speech, Dr. Moni said India was expected to play an important role and provide a new alternative to the world: “Now we have two visions of the U.S. and China in the world. A third vision of peace and common development is possible, given India’s depth of culture.”

Centre to states, UTs: Comply with Supreme
Court order on national anthem
The Ministry of Home Affairs (MHA) has sought “compliance” and “necessary action” by the states and union territories on the Supreme Court’s recent order stating that “playing of national anthem prior to the screening of feature films in cinema halls is not mandatory, but optional or directory.”

The MHA, in its communication to states and union territories sent recently, has also quoted the Supreme Court’s order stating that “citizens or persons are bound to show respect as required under executive orders relating to the national anthem of India and the prevailing law, whenever it is played or sung on specified occasions.”

An inter-ministerial committee, set up to look into the issue, is expected to submit its report in six months. Till the report is submitted, the ministry’s earlier order making it mandatory for cinema halls to play the national anthem is suspended, said an official.

The MHA had earlier issued four separate orders to states and UTs on the issue. The first communication, sent on December 6, 2016, based on the Supreme Court’s directions, said: “All the cinema halls in India shall play the national anthem before the feature films starts and all present in the hall are obliged to stand up to show respect to the national anthem.”

Subsequently, directions were issued on December 21, 2016, March 23, 2017 and May 12, 2017, granting relief too physically and mentally challenged people.

On January 9 this year, a bench headed by Chief Justice of India Dipak Misra modified the November 30, 2016 order which had made the playing of national anthem in cinema halls mandatory. Under the modified order, it will now be up to cinema hall owners whether or not to play the national anthem.

The bench, also comprising Justices A M Khanwilkar and D Y Chandrachud, said the committee constituted by the Centre was “looking into all aspects of the matter” and should “make its recommendations uninfluenced by the interim directions of this court”.

Headed by Brij Raj Sharma, a Jammu and Kashmir cadre IAS officer, the panel has 11 other members — mostly joint secretary-level officers nominated by the Ministries of Defence, External Affairs, Women and Child Development, HRD, Culture, Parliamentary Affairs, Law, Minority Affairs, Information and Broadcasting and the Department of Empowerment of Persons with Disabilities.

The inter-ministerial committee is mandated “to frame the guidelines describing circumstances and occasion on which the national anthem is to be played or sung and observance of proper decorum when national anthem is played or sung.” It may also recommend amendments, if any, relating to the Prevention of Insults to National Honour Act 1971, officials said.

The Centre set up the committee after a bench of Justices A M Khanwilkar and D Y Chandrachud, in October last year, observed that people “cannot be forced to carry patriotism on their sleeves” and it cannot be assumed that if a person does not stand up for the national anthem, he or she is “less patriotic”.

Centre wants ‘humane’ AFSPA
In a first admission that Centre was keen to water down the Armed Forces (Special Powers) Act (AFSPA), 1958, Union Minister of State for Home Hansraj Gangaram Ahir informed the Lok Sabha that it was considering a proposal to make the Act more “operationally effective and humane.”

The AFSPA is in force in several northeastern States.

In a written reply in the Lok Sabha, Mr. Ahir said: “There is no proposal under consideration of the Government of India to withdraw the Armed Forces (Jammu and Kashmir) Special Powers Act, 1990. However, a proposal is under consideration to make the Armed Forces (Special Powers) Act, 1958 more operationally effective and humane.”

The decision came after the Home Ministry decided to reduce the number of Central Armed Police Force personnel deployed in the northeastern States.

Army opposed move
The Army had opposed any such move and several rounds of meetings had taken place with the Home Ministry. Home Minister Rajnath Singh had suggested that certain “tweaking” was required as far as deployment of Central forces was concerned. An official said the insurgency-related incidents in Northeast had come down to 308 in 2017, the lowest since 1997.

Another official said there was no final decision to repeal the AFSPA as of now, but the Jeevan Reddy Committee report, which recommended so, was taken into account. The Centre appointed a five-member committee headed by Justice B.P. Jeevan Reddy in November 2004 to review the AFSPA.

The committee recommended that the Unlawful Activities (Prevention) Act, 1967, should be modified to specify the powers of the armed forces and the Central forces. The Home Ministry was of the view that additional Central forces would be sent to the northeastern States and the respective State governments would deploy the State police for regular law and order and patrolling duties. In 2017, no insurgency-related incidents were reported in
Tripura and Mizoram and no security forces were killed in Arunachal Pradesh, Meghalaya and Mizoram.

SC/ST Act being used for blackmail, says top court
The anti-atrocities law, which protects Scheduled Castes and Scheduled Tribes from casteist slurs and discrimination, has become an instrument to “blackmail” innocent citizens and public servants, the Supreme Court observed in a judgment.

The past three decades have seen complainants — who belong to the marginalised sections of society — use the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act of 1989 to exact “vengeance” and satisfy vested interests, a Supreme Court Bench of Justices A.K. Goel and U.U. Lalit said in their 89-page judgment.

“ Innocent citizens are termed accused, which is not intended by the legislature. The legislature never intended to use the Atrocities Act as an instrument to blackmail or to wreak personal vengeance,” the Supreme Court observed.

False complaints
Instead of blurring caste lines, the Act has been misused to file false complaints to promote caste hatred, the apex court said. The current working of Atrocities Act may even “perpetuate casteism” if it is not brought in line and the court needs to intervene to check the “false implication of innocent citizens on caste lines.”

“The Act cannot be converted into a charter for exploitation or oppression by any unscrupulous person or by the police for extraneous reasons against other citizens. Any harassment of an innocent citizen, irrespective of caste or religion, is against the guarantee of the Constitution. This court must enforce such a guarantee. Law should not result in caste hatred,” the Supreme Court held.

The 1989 Act penalises casteist insults and even denies anticipatory bail to the suspected offenders. The law is therefore used to rob a person of his personal liberty merely on the unilateral word of the complainant, the court said. Justice Goel wrote that anticipatory bail should be allowed if the accused is able to prima facie prove that the complaint against him is malafide.

The court referred to how public administration has been threatened by the abuse of this Act. Public servants find it difficult to give adverse remarks against employees for fear that they may be charged under the Act.

Issues guidelines
Issuing a slew of guidelines to protect public servants and private employees from arbitrary arrests under the Atrocities Act, the Supreme Court directed that public servants can only be arrested with the written permission of their appointing authority. In the case of private employees, the Senior Superintendent of Police concerned should allow it.

Besides this precaution, a preliminary inquiry should be conducted before the FIR is registered to check whether the case falls within the parameters of the Atrocities Act and if it is frivolous or motivated.

Aadhaar is an enabler of citizen rights, govt tells Supreme Court
The state is using Aadhaar as an “enabler of the citizens’ right to life including their right to food, livelihood, pension and other social assistance benefits”, the centre told the Supreme Court.

In its opening argument in support of the 12-digit unique identification number, attorney general K.K. Venugopal said the main objective of Aadhaar was entrenched in Article 21 (right to life) and aimed at curbing rampant corruption and poverty in the country.

A Constitution bench headed by Chief Justice Dipak Misra and U.U. Lalit said the centre would have to pitch its arguments against those of the petitioners, broadly including the right to life, privacy, dignity, surveillance, exclusion etc.

Venugopal also sought the court’s permission to allow the chief executive officer (CEO) of the Unique Identification Authority of India (UIDAI), Ajay Bhushan Pandey to respond to the technical/security aspects of Aadhaar through a power point presentation. The court will take a decision on this.

Explaining the essence of the right to life, Venugopal said, “Right to life is not merely a right to live like an animal but a full right. If you have no food, shelter — where is the question of privacy of these people being affected?”

He added that the question was not of violation of fundamental rights but of balancing them. The court observed that the centre would have to meet its arguments on the right to life against the exclusion claims of petitioners where they said that people were being denied services due to lack of Aadhaar.

Venugopal said that a few NGOs had approached the court on the issue but no deprived individuals had come to court saying that he/she had been denied benefits for not having Aadhaar. This line of argument did not find favour with the court who said that a constitutional challenge could not be tested against whether a person comes to court or not.

Justice D.Y. Chandrachud added that economic and so-
cial guarantees were not antithesis to political guarantees. “It’s not as if privacy is for one segment of the population and not for another,” he said.

On the question of people enrolling for Aadhaar before the Act was in place, the centre said that between 2009 and 2016, people had voluntarily opted for it and so, there was no violation of fundamental rights. At this point, justice Chandrachud pointed out that when people volunteered, they did not accept surrendering or commercialization of their personal data. They did not know that there were no safeguards at that time.

The court further questioned the centre over a likely case of financial exclusion in case of a pensioner living abroad and having to personally be present in the country to claim pension under the Aadhaar scheme.

“The question of financial exclusion is undeniable. The fact that it was in consideration by the cabinet secretary in December 2017 is indicative of it being a serious issue. We want the government to tell us what steps it is taking in this regard,” Chandrachud said.

The attorney general said that he would submit the same to the court and that the government would not leave anyone in the lurch.

As part of the petitioners’ arguments against Aadhaar, its architecture has been criticized on grounds of it leading to a surveillance state by tracking people or using their personal data if not curtailed, being destructive of a limited Constitution and violating an individual’s fundamental right to privacy. Issues with UIDAI’s enrolment procedure that raised concerns about data breaches have also put been forth.

MPs seek review of SC/ST Act

The recent judgment of the Supreme Court amending Section 18 of the Scheduled Caste and Scheduled Tribe (Prevention of Atrocities) Act, 1989, seeking to protect public servants from complaints, has stirred emotions across political lines.

A group of BJP MPs, belonging to these communities, met Union Law Minister Ravi Shankar Prasad and urged that the government file a review petition. These MPs have also sought an appointment from BJP president Amit Shah to make the demand. “The Law Minister said all aspects of the judgment are being examined,” said Vinod Sonkar, chief of the BJP’s Scheduled Caste Morcha. Mr. Prasad said at a press conference later that the government was examining the judgment and would give a structured response to it in the coming days.

Some MPs said, on condition of anonymity, that the only way out for the government was to file a review petition as the issue had the potential to embarrass the BJP, which has been wooing the Dalits.

Voicing concern over the misuse of the Act, the court introduced the provision of anticipatory bail and ruled against automatic arrest of anyone booked under the law. Several BJP leaders said the ruling would work against the interests of the Dalits. One of them said several laws were misused, but they should not be diluted, and the atrocities against the Dalits remained a serious issue in vast parts of the country. “Not to allow the filing of an FIR is against the principles of natural justice,” an MP said.

Fewer acquittals

BizaySonkarShastri, a BJP Dalit leader, said it was a serious issue, more so because 90% of the criminal cases resulted in the acquittal of the accused, and the order would further weaken the law. He said the then Uttar Pradesh Chief Minister, Mayawati, passed an order, in 2002, asking the police to invoke the Act only in serious cases and as the then Chairperson of the SC and ST Commission, he played a role in pressuring the Act only in serious cases and as the then Chairperson of the SC and ST Commission, he played a role in pressuring the

Is euthanasia verdict tough to implement?

What does the judgment say?

In a judgment on March 9, the Supreme Court said people suffering from a terminal illness had a right to a dignified death, as part of the right to life enshrined in Article 21 of the Constitution. The judgment restricts itself to the withdrawal or withholding of life-support, which it refers to as “passive euthanasia.”

But this phrase is obsolete in medical circles. A 2018 document from the Indian Council of Medical Research says ‘passive euthanasia’ is an inappropriate term because it suggests that the doctor is actively shortening the patient’s life with lethal drugs.

Why will it be hard to follow?

Experts say the procedure laid down by the court for withdrawing life support is unduly complicated. “The procedure is frankly half-baked and confused,” says RoopkumarGursahani, a neurologist at Mumbai’s PD Hinduja Hospital and a member of the team that framed the 2006 draft Bill on medical treatment of terminally ill patients.

The court’s guidelines talk of an advance directive, a document in which a patient can specify conditions under which life-prolonging interventions should not be given. Such interventions could mean feeding tubes, ventila-
tors, cardiopulmonary resuscitation (CPR) or even antibiotics. The family of a terminally ill person can also refuse such treatment if an advance directive is not available. But the judgment makes the execution of advance directives too complicated for patients, says Dr. Gursahani. For example, the judgment requires the directive to be countersigned by a Judicial Magistrate of First Class, and copies to be given to the jurisdictional district court, the district judge and the local government. Dr. Gursahani worries that these authorities may drag their feet, leading to needless delays. “You are asking them to take on an additional responsibility, which they are not going to be willing to do,” he told The Hindu. Also, if a patient wants to execute the advance directive, two medical boards — one in the treating hospital and the other headed by the district medical officer — have to give the go-ahead. While safeguards are necessary to protect patients against vested interests, like illegal organ traders, a balance must be struck between the safety and usability of the law, says Dr. Gursahani. Instead of two medical boards, he suggests, it is enough if one team of medical consultants confirms the treating physician’s decision to withdraw life support. The decision must be well-documented, however, so that an ethics committee can study it later to confirm that due process was followed. “In principle, we accept the judgment,” he adds. “But the procedure they have suggested has to be fine-tuned by experts.”

To avoid hiccups, Indian doctors will also need training to communicate end-of-life options better. Studies from the U.S. show that even patients who have made a Do Not Resuscitate (DNR) request are sometimes given CPR because the emergency physician is not aware of the DNR. “This happens in a lot of cases and is painful for the patient,” says Ashish Goel, an associate professor at the University College of Medical Sciences, New Delhi. Communication training is vital to avoid such misunderstandings.

Who may opt for it?

Few estimates exist today for the number of Indians who seek withdrawal of life-support. A 2009 study in a Delhi hospital found that over half of the ICU patients who died during a period of 19 months sought withdrawal or withholding of life support. Dr. Gursahani says that in large tertiary hospitals like Hinduja, doctors receive 2-3 requests each week. For such patients, the judgment brings welcome legal clarity on a course of action. But the worry is that unless patients are counselled by palliative-care experts about how their illness will progress, they may not prepare advance directives to reject futile medical interventions. Anwar Husain, director of Kerala's Institute of Palliative Medicine, says over 80% of palliative-care recipients die in homes or hospices, while those who do not receive palliative care end up in ICUs. As on today, India has poor palliative care systems. A 2015 Quality of Death Index by the Economist Intelligence Unit, which looked at palliative-care systems across 80 countries, rated India among the 15 worst.

SC to examine polygamy in Muslim marriage

Seven months after it declared instant triple talaq unconstitutional, the Supreme Court decided to look into the constitutional validity of the prevalent practices of polygamy, ‘nikahhalala’, ‘nikahmutah’ and ‘nikahmisyar’ in the Muslim community. A Bench, headed by Chief Justice Dipak Misra and D.Y. Chandrachud, agreed to set up a five-judge Constitution Bench that will decide whether certain sections of the Muslim Personal Law (Shariat) Application Act go against the Constitution. In its landmark verdict of August last, which had struck down instant triple talaq, the court had kept open the issue of polygamy, ‘nikahhalala’, and ‘nikahmutah and nihaksyr’. Status reduced

The petition said the Muslim Personal Law allows a man to marry up to four wives, which it said “treats women as men’s chattel, and reduces their status to an object of desire to be possessed by men.” “Offensive to equality”

Contending that the practice “offends the core ideal of equality of status,” the petition filed by Hyderabad-based social activist MoulimMohsin Bin Hussain Bin Abdad Al Kathiri sought to quash polygamy. Another plea was made by a Delhi woman against the Muslim Personal Law. It has contended that the prevalent Muslim Personal Law rendered Section 494 of IPC (which prescribes punishment for marrying again during lifetime of husband or wife) as inapplicable. Her plea also claimed that the Muslim wife does not have avenue to complain against her husband for the offence of bigamy.
Delhi BJP leader Aswini Kumar Upadhyay has also filed a plea seeking to ban polygamy and ‘nikahhalala.’

Talks revived to consider impeachment of CJI
Some Opposition parties have revived the process of discussing the moving of an impeachment motion against Chief Justice of India Dipak Misra.
With just a few days remaining for the Budget session to get over, there is talk of moving such a motion before the Chairman of the Rajya Sabha.
The Congress, which is learnt to be divided on the issue, is not opposed to such a move. “We hope the situation will be clear by Wednesday morning but there were hectic consultations today,” said a senior leader who did not wish to be identified.
Officially though, the Congress played down talks of an impeachment motion. “As of now, there isn’t much substance in these reports,” said Randeep Singh Surjewala, chief spokesperson for the Congress party.
‘Let others decide’
However, West Bengal CM and Trinamool Chief Mamata Banerjee said she would back such a move if this was supported by other parties. “I cannot ignore what the four judges said at the press conference. But let other parties decide, Trinamool Congress will go with what others decide,” Ms. Banerjee said in a response to a question if her party would back such a motion.
Interestingly, her comments came on a day when Supreme Court lawyer Prashant Bhushan met her in Parliament.
To move an impeachment motion in the Rajya Sabha, the petition has to be signed by 50 MPs and Congress alone has 54 MPs. Trinamool too has 12 MPs in the Upper House. Although the Congress was ambivalent, senior lawyer and NCP Rajya Sabha MP MajeedMemon claimed it had taken the lead.

SC appoints acting head for NGT
The Supreme Court appointed Justice Jawad Rahim, judicial member of the National Green Tribunal (NGT), as its acting chairperson. A bench comprising Chief Justice Dipak Misra and justices A.M. Khanwilkar and D.Y. Chandrachud said that the new acting chairperson will discharge his duties until a regular appointment is made.

Opposition unites to support farmers’ Bills
Major Opposition parties have united in provisional support of two Bills drafted by farmers’ organisations, demanding comprehensive farm loan waivers and proposing legal backing to enforce minimum support prices (MSP).
While expressing support for the proposed legislation and the need to pressure the government into taking farmers' woes seriously, Mallikarjun Kharge, Congress leader in the Lok Sabha, said there was a need to examine the Bills more closely and hold further consultations with all parties.
He was speaking at a round table session organised by the All India KisanSangharsh Committee, which drafted the Bills in partnership with 193 farmers’ organisations.

Call for a committee
Nationalist Congress Party (NCP) president Sharad Pawar suggested that a committee be set up to go through the proposed Bills, clause by clause. He said that if all non-NDA parties in the Rajya Sabha came together, they would have the numbers to pass the legislation and pressure the Lok Sabha to take up them up as well.
“There is no question of pleading. I demand a special session of Parliament where you discuss only this and nothing else,” said Trinamool Congress MP Dinesh Trivedi, pledging Mamata Banerjee’s support.
“This should not be called karzamaafi [loan waiver], but karzamukti [loan free]. If the M.S. Swaminathan Commission’s recommendations had been implemented, there would not be any need for this [loan waiver] at all,” said Sitaram Yechury, general secretary of the CPI(M).

Strong support
The parties which expressed support include the Shiv Sena, DravidaMunnetraKazhagam, YSR Congress Party, Rashtriya Janata Dal, AamAadmi Party, National Conference, Janata Dal(S), Biju Janata Dal, Jharkhand VikasMorcha, RashtriyaLok Dal and Swaraj India and former Janata Dal(U) leader Sharad Yadav.
The proposed Farmers’ Freedom from Indebtedness Bill, 2018 provides for a one-time settlement of all farmers’ loans, both from banks and private moneylenders. It also gives farmers the right to access institutional credit and proposes that quasi-judicial distress and disaster relief commissions be set up at State and national levels to deal with regional or crop-specific distress situations.

The proposed Farmers’ Right to Guaranteed Remunerative Minimum Support Prices for Agricultural Commodities Bill, 2018, wants the MSP to guarantee a 50% profit margin over the comprehensive cost of production a legal right for every farmer, and bar the option of any price below MSP being offered in the market.

**SC/ST Act diluted: Opposition**

Congress president Rahul Gandhi led a delegation of Opposition parties to President Ram Nath Kovind to express their concerns about the “dilution” of the Scheduled Caste and Scheduled Tribe (SC/ST) Act, and sought his “immediate intervention to help Dalits tide over the crisis”.

Speaking to presspersons after the meeting, Mr. Gandhi said, “We went to meet the President on the dilution of the SC/ST Act. We gave a representation. The atrocities are increasing and the Act is being weakened. The President was quite positive and supportive.”

Mr. Gandhi said the President assured the delegation that “he would assess and take relevant action”.


“We requested the President to file a review petition in the Supreme Court as the case was not well argued earlier in the top court,” Mr. Misra said.

In a memorandum, the delegation said: “At the time of hearing of the case before the SC, the Centre stated that anticipatory bail could be allowed in cases of atrocities against Dalits, if no prima facie case was made out. This shows the double-faced character of the government.”

**Govt. to file review plea in SC against ruling on SC/ST Act**

Union Law Minister Ravi Shankar Prasad said the government is “preparing” to file a review petition against the top court’s ruling on the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 that puts a stop to immediate arrests in complaints filed under its provisions.

“I have already instructed my Ministry to consider the desirability of filing a review. Appropriate follow-up actions are being taken,” Mr. Prasad told reporters.

Officials in the Law Ministry said the government will approach the Supreme Court as early as next week after preparing a “water tight case” in consultation with the Ministry of Social Justice, the nodal Ministry to enforce the Act.

The government has been under pressure from the Opposition as well from its allies and Ministers from the Dalit community to seek a review or bring an amendment to undo the Supreme Court’s ruling.

In a recent order, the Supreme Court had banned automatic arrests and registration of criminal cases under the Act.

Arguing that such a ruling made the law “ineffective”, Congress president Rahul Gandhi led a delegation to President Ram Nath Kovind seeking “his immediate intervention.”

**‘Remedial measures’**

Worried about the fallout, Lok Janshakti Party (LJP) chief Ram Vilas Paswan led a delegation of NDA’s SC and ST MPs including Social Justice Minister Thawarchand Gehlot to meet Prime Minister Narendra Modi.

The Prime Minister is understood to have assured the delegation that the government would initiate ‘remedial measures’ to ensure that the Act retains its effectiveness in ensuring justice to Dalits and tribal people.

For the past one week, the Opposition parties have been alleging that the Central government didn’t argue the case well in the Supreme Court.

“We requested the President to file a review petition in the Supreme Court as the case was not well argued earlier in the top court,” said senior Bahujan Samaj Party (BSP) leader Satish Misra.
Skipper inks JV pact with Israeli firm to set up micro irrigation unit

Skipper Ltd., a listed company, has signed an equal joint venture agreement with Israel-based Metzerplas, to set up a unit to make micro irrigation equipment in India. The first unit under this JV will come up near Hyderabad.

50:50 venture

The company, which is into the business of transmission towers, poles and PVC pipes, said that it had entered into an agreement to form Skipper–Metzer India LLP as a 50-50 joint venture. The initial investment would be $8 million. The JV will leverage Metzerplas's global portfolio of brands and expertise in advanced plastic and irrigation technologies. Skipper will offer its manufacturing capabilities to help the JV tap India and other SAARC countries.

“We hope to set up the first unit under this JV near Hyderabad with an annual capacity of 100 million metres. The unit will be ready by September,” said Devesh Bansal, director, Skipper Ltd. The first unit with three production lines was being set up in the south where States were investing in drip irrigation segment.

The Israeli company brings to the JV its technology know-how in drip irrigation equipment. Company CEO Shmuel Schumak said in a statement that Metzerplas had been looking for a partner to tap the Indian market. It had been supporting the irrigation sector in India as a supplier of drippers and machinery.

“The key agenda of the association is to become a key player and bring in new technologies in the growing irrigation market in India and the region,” he said.

State-run banks start to rationalise overseas units

State-owned lenders have started rationalising the overseas operations by consolidating 35 operations and closing down non-viable branches as part of the clean and responsible banking initiative.

As per the banking sector agenda approved at the PSB Manthan in November last year, public sector banks (PSBs) have to examine all 216 overseas operations.

PNB fallout

The rationalisation of overseas operations of banks is significant as jewellery designer Nirav Modi allegedly cheated Punjab National Bank (PNB) of Rs. 12,700 crore in connivance with PNB staff and officials of overseas branches of other State-owned banks. Presently, public sector banks have about 165 overseas branches, besides subsidiaries, joint ventures and representative offices. State Bank of India has the largest number of overseas branches (52), followed by Bank of Baroda (50) and Bank of India (29).

The State-owned banks have largest number of branches in United Kingdom (32), followed by Hong Kong and UAE (13 each) and Singapore (12).

“No expenditure cut in FY’18 to meet fiscal deficit target’

The government will not go for an expenditure cut in 2017-18 to meet fiscal deficit target of 3.5% of GDP even as it has breached the level of 113.7% of the target, Expenditure Secretary Ajay Narayan Jha said.

“There is no expenditure cut. There has been a policy, there will not be any expenditure cut,” Mr. Jha said. When asked how the government will meet the revised fiscal deficit target of 3.5%, he said indirect tax collections have already been factored into the revised target.

The government has accounted for only 11 months of GST against 12 months of expenses as March GST numbers would come in April. Fiscal deficit has touched Rs. 6.77 lakh crore at the end of January 2018, 113.7% of the target for the year, on account of higher expenditure.

Upward revision

The government had revised upwards the fiscal deficit at Rs. 5.95 lakh crore or 3.5% of GDP in the Union Budget 2018-19.

Earlier, the fiscal deficit target was 3.2%. Mr. Jha said the economy is looking up as the key sectors are showing buoyancy and growth.

“We expect that it will grow further and as per expectations. As far as fiscal deficit is concerned... a lot of adjustments will take place through recoveries which means that there is a net budgeting aspect,” he said.

He said buoyancy in revenue also comes in the last two months of the financial year and the fiscal deficit number will remain well within the revised target.
responsible banking,’ the tweet said the overseas operations of the State-owned banks will be rationalised. As part of the rationalisation of overseas operations, the graphic that accompanied the tweet said, “PSBs to consolidate 35 operations, 69 operations identified for possible consolidation. Includes bank branches, remittance centres and representative offices.” If further said: “All 216 PSB operations to be examined. Non-viable operations in overseas market to be closed for cost efficiency and synergy. Operations in some geography to be consolidated.”

U.S. to impose tariffs on metal imports
U.S. President Donald Trump said Thursday he will sign off “next week” on tariffs on cheap steel and aluminum imports, especially from China, which he said are harming U.S. producers. Mr. Trump made the announcement during a meeting at the White House with producers of the two metals, who would be among the principal beneficiaries of any new barriers to competing imports.

25% tariff on steel
He said a 25% tariff would be placed on steel products, and a 10% tariff would be imposed on aluminum. Earlier, Mr. Trump lashed out at “unfair trade” practices followed by other countries. “Our Steel and Aluminum industries (and many others) have been decimated by decades of unfair trade and bad policy with countries from around the world,” he tweeted. “We must not let our country, companies and workers be taken advantage of any longer. We want free, fair and SMART TRADE!” And while Mr. Trump did not mention China in this latest tweet, it came on a day one of his top economic advisers, Gary Cohn, was due to meet with Chinese economic adviser Liu He at the White House.

How is the adviser-distributor community divided in these places?
Each country has its own dynamics, but for the most part in developed markets, advisers will be multi-licenced in investments and insurance and they use financial planning or advice to provide a holistic ability to meet multiple needs. In Canada, there are about 1,00,000 advisers and about 24,000 are financial planners. Of the 1,00,000 seiners, Gary Cohn, was due to meet with Chinese economic adviser Liu He at the White House. Any U.S. action is likely to be challenged by the exporting countries in the World Trade Organization. Meanwhile, industries in the U.S. have urged the administration to exercise care since high import tariffs would raise the cost of supplies.

Sebi’s concept—to differentiate sales and advice—is innovative and good
It has been more than 5 years since the Securities and Exchange Board of India (Sebi) has wanted to regulate distributors and financial advisers, one way or another. The Sebi Investment Adviser Regulations, 2013, too has been followed up by three consultation papers to strengthen it. As the regulator and participant’s debate over how investors should pay for advice and how sellers should get compensated, often trends in developed countries give us clues to which way the wind is blowing. Shawn Brayman, president and chief executive officer, PlanPlus Inc., a Canadian company that specialises in making financial planning, risk profiling and robo advisory tools for financial advisers, spoke to Mint about some trends in advanced markets.

Do many investors go to financial planners and advisers in countries such as the US, the UK and Australia? Or do they prefer to go direct?
In developed markets, most investment solutions have been and continue to be delivered by advisers or intermediaries, although the trend is that the percentage of the overall market managed by advisers is declining. In Canada, for example, according to Investor Economics, in 2006, 46% of wealth was “advised” and about 8% was direct. The rest of the market was group segregated funds (not individuals). By 2016, 42% was adviser driven and 12% was direct, and the expectation is this trend will continue. Most figures show that the growth in wealth is in direct investment but that clients with advisers are not abandoning that channel. Although there is big media hype on robos (robo advisors), only $130 billion of $50 trillion of retail wealth in North America sits in these vehicles.

In India, Sebi wants to separate investment advisers from distributors. Its third white paper on investment adviser guidelines aims to bifurcate the two activities. Is the same trend
visible abroad?
I would not describe this as the same trend abroad. In many countries, the regulators’ approach is much more dramatic—ban all embedded commissions. We have seen this enacted in countries like the UK and Australia, and proposed in Canada. We are also seeing proposal for fiduciary or client-best interest standards of care. In many of these markets, the percentage of investment in equities may be relatively stable—25-40% of all wealth in equities markets.
India has very different set of dynamics as this is one of the fastest growing middle classes in the world and there is less than 5% participation in equity markets. This means India still has a “Blue Ocean” for sales of investments as opposed to the need for more sophisticated financial advice. I believe Sebi’s concept—to differentiate sales and advice—is actually innovative and a good one.

The UK banned commissions on financial products starting 2013. What has been the experience? Are investors better off?
The Retail Distribution Review (RDR) in the UK was more than simply banning commissions; it required higher education standards and was a broad-based attempt to move what was sales culture to a profession. Initially, industry fear mongering would have you believe that advisers would be out of jobs, consumers would no longer have access to financial advice, and more. According to Keith Richards, the chief executive officer of the Personal Finance Society in the UK (which represents more than 37,000 advisers), over the 3-4 year period that the commissions were banned, the demand for financial advisers has increased and most financial intermediaries are seeing revenues increase.
The Financial Conduct Authority in the UK acknowledged that there was a decline in the number of advisers post-RDR, but it is hard to know if this was because of commission bans, or the fact that older advisers closer to retirement were not prepared to “go back to school” to meet higher education standards, or due to natural attrition as product margins reduced because of exchange-traded funds. Most of the advisers who left the market were from large institutional players (bank wealth management groups), where the infrastructure to manage direct client billing was not present. Most forecasts are that we will see a 30% or higher decline in advisers in countries like Canada and the US over the next several years, regardless of demographics, technology and regulation. The hope is that Do-It-Yourself or fintech offerings will help fill some of the advice gap, especially for low-income families that traditional advisers could not afford to service.
So the bottom line is, yes, both investors and advisers are better off since the change in the UK.

Do people in developed countries pay, or like to pay, for advice?
We need to be careful with questions like this. People always pay—with embedded commissions or fees. The question is do they know what they are paying and is the method of payment convenient? We also know from the field of behavioural finance that people often attribute different “values” to the same Rs1,000 depending on where they perceive the money came from—did they earn it, win it, inherit it and so forth. In the end, willingness to pay is a function of perceived value.
In every country I have ever visited, advisers argue consumers are not prepared to pay fees that clients think they can get the same service “for free” when they buy a product. In 2013, as RDR was being implemented in the UK, J.P. Morgan Asset Management did a survey of consumers in the UK and asked consumers: “The cost of investment advice must be agreed (upon) solely by the adviser and you, and product providers must not influence what you pay. Do you approve?” Of the consumers, 59% approved or strongly approved, 10% disapproved and the rest did not know. In short, the issue is more about advisers framing the cost and value that consumers will pay.

If Sebi does prohibit distributors from offering investment advice and advisers from distributing products, do you think registered investment advisers (RIAs) will go back to being distributors, or vice versa?
Again, I think there is a framing issue here. My understanding is that Sebi is not stopping investment advisers from distributing products; rather it is stopping them from being compensated for distributing products. In the US and Canada, where advisers are paid directly by clients, the products to implement have low or no embedded cost of distribution. If the client must pay for the advice and then pay someone else to implement on their behalf, it will not help the consumer. Sebi needs to let investment advisers “distribute products” on behalf of clients but not be paid by those product manufacturers. The reality in most developed markets is that consumers are moving to ETFs with costs of about 30 basis points.

Globally, product margins are declining and technology and robos are providing much lower cost of delivery. Markets are never all one way or the other. I believe smart advisers will want to be ahead of the curve and develop proper advisory practices with clear-value propositions. Some may still go back to old models for as long as they will last. An analogy might be if you were starting a new car manufacturer today in India, would you decide to...
build an electric car or a new combustion engine? We know the trend will be to electric, but the cars on the road today are mostly gas. Elon Musk looks to the future while others look to the past. Both roads will work (no pun intended). Advisers have the same choice: milk the existing system until it dries up or look to the future.

**Sebi’s third white paper on RIA guidelines said that distributors should advise products that are “appropriate” to investors. Is “appropriateness” possible without giving advice?**

Recommending suitable or appropriate products requires the adviser know the client, so I do not sell to a low-risk client a 100% aggressive equity product that will backfire later. Yes, I believe distributors can do this job and need to do it better than they do today. A good adviser might help a client understand if she should even buy an investment or should she pay down debt instead? Should they delay their retirement or save more of their income today? Someone who is compensated to sell products has no motivation to have clients pay down debt, whereas a good adviser looking after the client’s best interest should look at many factors in advising the client. I believe clients are better served by a good adviser than they are by a product salesperson, but there is nothing wrong to expect the salesperson to have some reasonable standards of care beyond ‘buyer beware’.

**Brokers resist SEBI move to tighten oversight**

The move by the Securities and Exchange Board of India (SEBI) to enhance the supervision of market participants is facing fresh resistance from stock brokers who are trying to stall the regulator’s attempts to monitor any possible misuse of client funds by the broking community. Brokers are currently required to upload information related to client funds lying with them on a monthly basis. SEBI wants this to be done weekly, from April 1. This includes a wide array of important information such as the aggregate value of client fund balance, collateral, credit & debit balances in all the client accounts and value of margins utilised, among other data.

The Association of National Exchanges Members of India (ANMI), which is the umbrella body of brokers, has written to SEBI to continue with the existing system.

“ANMI is of the strong view that current system of uploading data by monthly is [running] smoothly to the satisfaction of exchanges and also the regulator,” stated the ANMI letter addressed to SEBI chairman Ajay Tyagi. “This monthly uploading is sufficient for monitoring purposes by the authorities concerned... we submit that weekly uploading, that too within [three] days of the closing of the week will lead to frequent uploading and the main purpose of monitoring will become more difficult,” it added.

**Instances of misuse**

The regulator is in favour of enhanced oversight of market participants as it wants to minimise possible misuse of client funds by brokers as there have been instances in the past, where client money had allegedly been used by the stock broker for his own proprietary purposes.

“... uploading of that data by the stock broker to the stock exchanges shall be on weekly basis i.e. stock brokers shall submit the data as on last trading day of every week on or before the next three trading days,” said a SEBI circular issued in September last year.

“While it would certainly add to the compliance requirements, which are already quite stringent, the move will make it difficult for brokers to misuse client money,” said a domestic broker on conditions of anonymity as a final decision on the matter is yet to be taken.

“The arbitration and investor grievance redressal mechanism set by the exchanges regularly sees cases wherein clients say that the money lying in their account was allegedly misused by brokers,” he added.

**Aujas working to shield Aadhaar from cyberattacks**

Srinivas Rao is obsessive about data security. He carries two cell phones, an iPhone for official work and an Android handset for personal use. It is this kind of obsession among many mobile owners that keeps the 54-year-old CEO of cybersecurity start-up Aujas Networks on his toes and successfully manages information security risks for his clients.

These customers range from Japan’s largest lender Mitsubishi UFJ Financial Group to Aadhaar, the world’s largest domestic biometric identification system.

“You have to be paranoid and you have to be aware because clients are trusting you,” said Mr. Rao, co-founder of Aujas, in an interview.

**IoT platform**

The Bengaluru-based firm is betting big on managing the cybersecurity programme for Aadhaar. This includes software-as-a-service based Internet of Things (IoT) platform for the Unique Identification Authority of India (UIDAI), the issuer of the unique identity number. Given the ubiquity of Aadhaar and various use cases requiring authentication, Aujas built the platform for ‘registered device management.’ It said the platform manages every
device that is registered under a unique ID resulting in prevention and protection of the device from any “alien invasion” or hacking.

“This (platform) is for managing devices used by banks and telcos to authenticate Aadhaar,” explained Mr. Rao. Though Aadhaar got embroiled in data privacy security concerns, Mr. Rao said the issue is more about the privacy policy. He said the unique identification project is very mature from a security perspective. “Is the core [of Aadhaar] secure? I would absolutely say it is secure,” said Mr. Rao. “We must all be proud that a programme of this size and magnitude, probably [the] largest IT project of its kind in the world, has been done [from India],” said Mr. Rao, who co-founded Aujas in 2008. The firm, which was incubated by venture capital firm IDG Ventures India as part of its Entrepreneur-in-Residence programme, now provides services such as security intelligence, data protection, identity and access and application security in markets such as the United States, South Asia and the Middle East. The firm, which counts Aadhaar among its biggest clients in India, said it is targeting to achieve a revenue of $50 million in the next three years.

**Talent crunch**

At a time when there has been a spike in hacking incidents as an increasing number of Indians are going digital and doing transactions online, companies like Aujas would play a key role in thwarting cyberattacks. More than 53,000 cybersecurity incidents were observed in the country during 2017, according to a report by Indian Computer Emergency Response Team (CERT-In). These included phishing, website intrusions and defacements, ransomware and denial of service attacks. But the country would need one million cybersecurity professionals by 2020, according to Nasscom. And that is the one of the biggest challenges for cybersecurity firms like Aujas. “Attracting and retaining talent is going to be a big challenge in this space,” said Mr. Rao. “Unlike traditional software [industry] where you have huge [talent] pool... there is a scarcity here.”

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**Post NFRA formation, what is ICAI’s role?**

*What is the proposal?*

The Centre last week approved the proposal to set up the National Financial Reporting Authority (NFRA), intended to serve as an independent regulator for the auditing profession.

*The basis for the move*

Section 132 of the Companies Act, 2013 gives the Centre the power to set up such an authority. A Parliamentary Standing Committee had also recommended that the National Advisory Committee on Accounting Standards proposed in the Companies Bill, 2009 be institutionalised.

*What does Section 132 say?*

It says the NFRA can do, among other things, the following: recommend to the Centre formulation of accounting and auditing standards and policies to be adopted by companies and auditors; monitor and enforce such standards and policies; and oversee quality of services of the professions associated with the compliance of these standards and policies.

*What are NFRA’s powers?*

It can investigate into professional matters or misconduct of any member or a firm of chartered accountants; it can issue summons and examine on oath; it can also inspect any book, registers and documents of any professional/ firms probed; it may impose penalties and even powers to debar a member of a firm.

*Who is on the NFRA?*

It will comprise a chairperson, three full-time members and a secretary.

*What is ICAI’s role now?*

ICAI’s role will continue in respect of its members, in general, and, specifically, with respect to audits pertaining to private limited companies and public unlisted companies below the threshold limit to be notified in the rules.

*Why bring in NFRA now?*

The discovery of the multi-crore fraud allegedly committed at the Punjab National Bank appears to be a trigger. Add to it earlier shenanigans reported in the system — Satyam, Enron, Ketan Parikh et al. What does the setting up of the Authority imply?

In a way, it indicates a certain lack of trust in ICAI to effectively address malpractices indulged in by recalcitrant members.

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A regulator to oversee the CA institute is necessary

The Union Cabinet has at last approved the proposal for establishment of the National Financial Reporting Authority as envisaged under section 132 of the Companies Act, 2013. For well over five years, the section has neither been notified nor implemented. Since 1948, India’s finances and
audit have been left to the care of the The Institute of Chartered Accountants of India. The JPC indicted chartered accountants for their role in the stock market scam of 1992. Fourteen leading firms were to have been proceeded against. The profession was not brought to book and the very same firms continued to get the patronage of the CAG, RBI and the Ministry of Finance.

Responsibility of CAs
Harshad Mehta, Ketan Parikh, the Satyam imbroglio and the latest scam involving our second-largest public sector bank — all exploded in public view, proving that all was not well with the way audits were being conducted. The Companies Act casts a responsibility on auditors to see that corporate accounts are in order. Auditors can choose not to sign the accounts if their concerns are not addressed by the management.

This is what happened in the case of Fortis Healthcare. That is rare. The Companies Act also allows auditors to report to the Centre if they believe an offence involving fraud is being committed by the company, by its officers or employees.

The Audit Committee of PNB included not only chartered accountants but also an IAS officer. Despite ICAI Guidelines, the CAs did not tally entries made in the Swift (Society for Worldwide Interbank Financial Telecommunications) software with those made in the core banking solution. The Institute’s Guidelines specifically required auditors to check the records independently.

However, chartered accountants can turn out to be a charming lot. The Economist once referred to them as the “party with the deepest pockets.” On occasion, a dastardly CA can come up with ingenious devices to circumvent the law. He or she can help window-dress numbers and camouflage it as creative accounting. Under his or her watch, debt can be disguised as equity.

Off balance sheet financing can come in handy. Double accounting is now well known — one for the shareholder and one for the Income Tax Officer, which practice had led to the introduction of the minimum alternate tax (MAT).

It may be recalled that Dr. Raja Chelliah had held the profession responsible for the failure of the presumptive tax scheme.

The National Financial Reporting Authority (NFRA) was brought into the Companies Act on the specific recommendations of the Standing Committee on Finance. It will oversee the functioning of the ICAI and ensure credibility in financial reporting.

Its jurisdiction will cover investigation of chartered accountants and their firms covering both listed and unlisted public companies. The inherent regulatory role of the ICAI as provided for in the Chartered Accountants Act, 1969 will continue. Threshold limits will be modified.

Oversight provisions
Enron exploded onto the international financial scene and this led to the creation of the Public Companies Accounting Oversight Board (PCOAB) under the Sarbenes-Oxley Act, 2002.

American auditors are subject to external and independent oversight in order to protect investors and public interests by promoting informative, accurate and independent audit reports.

After the Enron and the Worldcom scandals, the U.K. used an independent regulator, the Financial Reporting Council (FRC), transforming a system of self-regulation into a mixed system in which FRC and professional bodies have major responsibilities.

The setting up of the NFRA has been delayed beyond time. The government is answerable for not having notified the law since 2013. The Bourbons, it is said, learnt nothing and forgot nothing. Will this maxim apply to the situation prevailing in India?

India to join multilateral lender EBRD
India has got the go-ahead to join the European Bank of Reconstruction and Development (EBRD), after shareholders of the London-based multilateral lender agreed to the country becoming its 69th member, enabling Indian companies to undertake joint investments in regions in which the EBRD operates.

“This is an important step in the relationship between the EBRD and India, allowing us to build further on already very close ties,” said the development finance institution’s President Suma Chakrabarti.

Set up in 1991, based on a proposal by former French President Francois Mitterrand, the bank’s initial focus was helping central and Eastern European nations reconstruct their economies in the post-Cold War era.

It remains committed to furthering the development of “market-orientated economies and the promotion of private and entrepreneurial initiative.” Other members who receive investments include Mongolia, Turkey, Egypt, Cyprus, Greece and Lebanon, among a total of 38 member states. Others including China, Russia, the U.S., U.K., and France are stakeholders, whose companies are able to invest in EBRD projects, but do not receive financing for domestic projects.

While Indian businesses have already cooperated on
EBRD projects worth some €982 million, the hope is that the membership, which will see India take up a small stake in the bank, would spur further investment by Indian firms in a range of sectors from solar to utilities, providing them access to fast growing markets. It will also enable Indian citizens to work for the organisation.

India’s stake will also give it a say in the direction of the EBRD’s future work. The EBRD’s largest shareholder is currently the U.S., while other G7 nations also hold significant stakes.

Following the approval of Indian membership, India is expected to join EBRD within the first half of the year.

Quick processing
The process for India’s approval moved swiftly: from its formal application on December 18, to the decision going to the board of directors in late January. The EBRD works with the private sector and also local governments in the provision of services and infrastructure across 38 nations – with projects ranging from transport provision to agribusiness, heating, waste management, to renewable energy.

In 2017, the EBRD signed a pact with the International Solar Alliance, which was unveiled in 2015 in Paris.

RBI may pay interim dividend of Rs. 10,000 cr.
The government is likely to receive an interim dividend of Rs. 10,000 crore from Reserve Bank of India (RBI) this month, sources said.

According to the sources, the government expects the RBI to pay a total dividend of about Rs. 45,000 crore for financial year 2017-18.

‘Discussions on’
Talks between the RBI and the government over the payment of dividend were still on, sources said, adding that the final call was yet to be taken.

Under the RBI Act, 1934, the central bank is required to pay the government its surplus, after making provisions for bad and doubtful debts, depreciation in assets, and contribution to staff and superannuation fund, among others.

In August 2017, the RBI had paid a dividend of Rs. 30,659 crore for its fiscal year ended June 2017. It was less than half the Rs. 65,876 crore it had paid for 2015-16.

The government has budgeted for a Rs. 58,000-crore dividend from RBI for the current fiscal year.

Cabinet approves easing spectrum cap
The Union Cabinet, headed by Prime Minister Narendra Modi, approved relaxing the cap on spectrum holding by telcos, a move that is expected to aid mergers and acquisitions in the sector.

The Cabinet has also given telcos the option to extend the time period for payment of spectrum bought in auction to 16 years from the present 10 years. This is likely to help with the cash flow in the short to medium term, while adding Rs. 74,446 crore till 2034-35 to the government’s kitty due to no reduction in interest rates.

The relief measures, based on the recommendations by the Inter Ministerial Group on stressed assets in the telecom sector, will facilitate investments, consolidation and enhance ease of doing business, said an official release. The cap on overall spectrum that can be held by an operator in a circle has been raised to 35% from the current 25%. In line with earlier recommendations of TRAI, the current cap of 50% on intra-band spectrum holding has also been removed.

Instead, there will be a cap of 50% on the combined spectrum holding in the sub-1 GHz bands (700 MHz, 800 MHz and 900 MHz bands). There will be no cap on individual or combined spectrum holding in the above 1 GHz band.

The government is hopeful that this move would encour-
age participation in future spectrum auctions.

**Facilitate consolidation**
Rajan Mathews, director general, COAI said, “The new spectrum caps will facilitate consolidation in the industry – Reliance Jio-Reiance Communications and Idea-Vodafone.” However, the debt payment extension will have only minimal benefit unless the interest rate is also reduced, Mr. Mathews said.

He added that the systemic issues of the industry such as excessive taxes and levies of 30% or more remained unaddressed.

“With the restructuring of the deferred payment liability, the cash flow for the telecom service providers will increase in the immediate timeframe providing them some relief. Revising the limit for the spectrum cap holding will facilitate consolidation of telecom licensees and may encourage the participation in the future auction,” the government said.

“The telecom operators will now be able to trade in excess [subject to the prescribed time limit] as well as the current spectrum held by them with other telecom operators depending upon their current spectrum holdings,” said Niren Patel, partner, Khaitan& Co.

‘India can bridge IT staff shortage in Japan’
Japan is facing a shortage of 200,000 information technology professionals due to an ageing population and falling birth rate and India can fill the gap with its huge talent pool, a Japanese trade official said. “There are about 920,000 IT professionals in Japan,” Shigeki Maeda, executive vice-president of Japan External Trade Organization (JETRO), said in an interview.

“There is an immediate demand for more than 200,000 professionals and the shortage is likely to touch 800,000 by 2030.”

“India can bridge that gap. If a company in Japan has an immediate demand for say 5,000 engineers, only India can come to their aid. All sectors are facing the crunch as they are interlinked and connected... whether it is healthcare, agriculture, research and development or services or finance.”

**Easing of rules**
Japan eased rules for issuance of green card and permanent residency status for highly skilled professionals in April last year. The new norms shortened the required period for permanent residency to one year from five years earlier.

In 2016, there were 5,549 certified highly skilled foreign professionals registered in Japan. Of this 3,621 professionals were from China, 290 from the U.S. and 266 from India.

“All the top Indian professionals are eager to go to the U.S.,” Mr. Maeda said. “Competition is tough in U.S. When you compare that to Japan, life is much easier. China is the most populous nation and it is easier for a Chinese to learn the Japanese language. It is also closer to Japan.”

Also, about 30,000 Japanese firms operate in China, much more than in U.S. In India 1,369 companies from Japan have set up base while only 71 Indian companies operate in Japan.”

Of the total number of Japanese companies operating in India, 220 are out of Maharashtra, 197 in Tamil Nadu and 162 in the National Capital Region.

Mr. Maeda’s pitch comes at a time when the U.S. administration last month imposed curbs on H-1B visas affecting companies such as TCS, Infosys and Wipro, which rely on the visas to do work for American firms.

As per the new U.S. policy, companies will have to prove that its H-1B employee at a third-party site has specific and non-qualifying speculative assignments in a speciality occupation. Now on, H-1B visas would be valid only for the period for which the employee has work at a third-party site. Earlier, it was valid for three years at a time and the move came ahead of H-1B visa filing which starts on April 2.

Japan has set an inward foreign investment target of $330 billion by 2020, Mr. Maeda said.

“Japan has become the third-largest investor for India after Mauritius and Singapore. Companies such as Panasonic, Toshiba, Hitachi have already initiated the process of establishing an R&D centre in India.”

Japan also eased rules for Indian travellers and from January this year, applicants do not require to submit their employment certificate and letters of explanation for multiple-entry visas. The number of documents to be submitted has been cut to three, he said.

**SEBI returns NSE’s consent plea in co-location matter**
Markets regulator SEBI has returned the consent application filed by the National Stock Exchange (NSE) in the co-location matter wherein it has been alleged that certain brokers got preferential access to market data.

“NSE is in receipt of a letter from SEBI returning the consent application filed by NSE in the co-location matter, on account of ongoing investigations relating to the same matter,” the NSE said in a statement.
“NSE can file the consent application after the completion of the investigations. NSE intends to do the same.” The exchange had filed its consent application in July to settle the matter that had been under regulatory probe for more than three years with top current and former officials of the bourse also getting showcase notices from SEBI. Consent mechanism refers to a settlement procedure wherein entities are directed to pay an amount without admission or denial of any wrongdoing.

Microfinance has potential, but is yet to bounce back on delinquency ratios
Microfinance business has faced challenges in the aftermath of demonetisation. However, it is a key driver of financial inclusion and an integral part of the overall banking business, said R. BaskarBabu, MD and CEO of Maharashtra-based Suryoday Small Finance Bank Ltd. In an interview, he said that microfinance institutions are on a comeback trail.

With interest rates firming up, how do Small Finance Banks intend to cope, as against established banks?
Rates offered by SFBs are at a 150-200 bps premium to those offered by other players, even on savings accounts. So this has led to a high proportion of savings deposits forming part of retail deposits in the first year itself. Further, we do not expect rates to go up significantly in the near term post March 2018. The key differentiator will be quality of service offering and customer experience which will drive customer acquisition.

How did demonetisation impact banks like yours that primarily had a microfinance book?
Demonetisation had impacted all the players in the microfinance industry alike. In November 2016, we had a collection efficiency of 94% and today that portfolio runs with an efficiency of 97%, and on the new JLG (joint liability groups) portfolio acquired post April 2017, the collection efficiency has been restored to 99.8%.

How has your cost of funds been changing?
The cost of funds has [declined] by 240 basis points from the beginning of the year primarily because of low-cost deposits and borrowing from money markets post receiving the scheduled status from the RBI.

What are your plans for third-party products?
We are actively working on adding third-party products. Currently we distribute life, general and health insurance products, and social security schemes like Jeevan Pradhan Mantri Jeevan YojtiBimaYojana and Pradhan Mantri Suraksha BimaYojana.

Soon we will be launching a mutual funds platform. Work for offering the Atal pension Yojana is also underway. How are you placed on deposits and loans now?
We are positioned well both in terms of assets and liabilities. Currently (end of Q3 FY18), we have a deposit base of more than Rs. 500 crore a gross loan portfolio of around Rs. 1,352 crore, with a year-on-year growth of 37%.

While the microfinance industry holds tremendous potential, it is yet to bounce back to normalcy in terms of delinquency ratios. Hence, our attempt is to balance the two by continuing to lend to businesses with a more intense risk control framework.

What will small finance banks achieve that traditional banks couldn’t?
Established banks are yet to fully foray deep into the microfinance segment, and their size and scale may not allow them to recognise the needs of the micro segment of the society, which is as ambitious and as much in need of regular banking services.

This gap is what the SFBs can easily cater to since SFBs have strong relationships with these customers as most of the transactions are at the client’s place.

Further, the branch network of SFBs is vast, and this can be leveraged to bring in financial inclusion much faster and in a more effective manner.

What deposit rates do you offer?
On the liabilities side, we offer CASA, FD, Tax saver FD and RD products on which we offer one of the most competitive deposit rates in the industry.

A savings account can get an interest rate of up to 7.25%, whereas for an FD, the customer can earn up to 8.75% interest. For senior citizens, the interest rate offered is 9%.

How is the transition taking place for you and your older microfinance customers?
Our strategy has been to take small, but firm steps so that we move ahead with conviction. The first year has been about getting things right.

In the next financial year, we will be focussing on conversion of our 216 microfinance branches to banking outlets, to bring doorstep banking for our microfinance customers.

We want to deepen the relationship with our customers and move from being lenders to wealth creators for them; hence we are developing customised products and working towards bringing in more social security schemes.

How do you compete with other institutions that have a lot more resources to garner busi-
ness?
Resources are not a constraint for a good business model based on sound processes.
Even for us, it is not a constraint, which is why we have been successful in delivering banking services and building a healthy book. For that matter, even on the digitisation front we are preceding one step at a time, not because of any resource constraints but because of our calibrated approach to growth.

U.S. tariffs: ‘India must raise dispute at WTO’
India should drag the United States into the World Trade Organisation’s (WTO) dispute mechanism against the latter’s move to hike import duties on steel and aluminium, as the decision will impact exports and is not in compliance with the global trade norms, experts said.
The decision of the U.S. would not only impact India’s export of these goods to America but also affect global trade, Biswajit Dhar, a professor of economics at Jawaharlal Nehru University, said.

‘India must raise duties’
“Such decisions are protectionist in nature. India needs to approach the WTO against this move as it would severely hit global trade,” Mr. Dhar said.
Former Commerce Secretary G. K. Pillai said the country should take action against America and also raise duties on products like almonds, pistachio and Harley-Davidson motorcycles.

RBI fixes cap of 1 year for trade finance instruments
The Reserve Bank of India tightened the guidelines for hedging commodity price risks and freight risks in overseas markets, which will come into effect next financial year, by limiting the tenor of all bank instruments in trade finance areas.

Accordingly, a central bank circular said, “banks can issue standby letters of credit (SBLCs)/guarantees, for a maximum period of one year, in lieu of making a remittance of margin money for commodity hedging transactions. Banks should ensure that these SBLCs/guarantees are used by their clients for the intended purposes only.”
The guidelines come within a month of the nation’s largest banking fraud coming out in the open involving such instruments issued by a Punjab National Bank branch in the megapolis to diamond trader Nirav Modi and his uncle Mehul Choksi and their companies during the past many years by getting letters of undertaking without proper records or guarantees.

Banks need better governance: IMF
The recent instance of fraud in the banking sector has brought to the fore the issue related to governance in banks, especially public sector entities that need to put in place tighter controls and improve their balance sheets, according to a top official of the International Monetary Fund (IMF).

“While the asset size is increasing in India, there is a deteriorating trend in terms of asset quality,” said Tao Zhang, deputy managing director, IMF. “It is not good compared to other countries.” “The efficiency of the sector can be made better and risk management and culture strengthened,” he added while highlighting some of the recent reforms related to bankruptcy regulations, asset quality review and the resolution framework for stressed assets.

A challenge
Speaking at a fintech event organised jointly by the IMF and the National Stock Exchange (NSE), he stressed on the fact that even while India had been a leader in terms of growth rates, financial inclusion was a challenge as access to finance had been low compared with other developing countries.

“The Financial Sector Assessment Program (FSAP) has highlighted the need to boost the efficiency of India’s financial system as the return on assets has been low when compared to its peer group,” he said.

EIB cautions India against levy of import duties on solar parts
European Investment Bank (EIB) President Werner Hoyer cautioned India against slapping import and safeguard duties on solar components, saying the country’s best interests still remained in multilateralism and free trade.

“There might be a situation for these kinds of retaliations (import duties) and it could be very tempting to try, but I think the basic idea is simply wrong,” Mr. Hoyer said in
an interview. 

‘Lose-lose situations’
“What we have learnt from the great economists 200 years ago still holds true — this leads us into lose-lose situations.
“If we are to go for win-win situations then we should open up markets, make sure we are fair in these relationships.”
“Everything that looks like tit for tat or protectionism undermines multilateralism, undermines cooperation and at the end of the day, it might even undermine the development of peaceful cooperation which we have seen after the Second World War,” he added.
In January this year, the Directorate General of Safeguards had recommended the implementation of a 70% safeguard duty on solar cells imported from China and Malaysia for a period of 200 days. The government had not taken a decision on this yet, but the issue had come under considerable debate in the domestic solar sector.
“Over the last 10 years, Europe has lost ground in terms of R&D and innovation by at least 1% of GDP per year in comparison to East Asia, South East Asia and North America,” he said.
“There is also a gap between East Asia and South Asia, and therefore one piece of advice to India would be to open up to the world. Don’t believe that because your exports are relatively low, the entire issue of free trade and multilateralism is less important for you.
“It is important for your producers and your consumers,” he added. “And, at the same time, don’t overlook the need to do much, much more in science, technology and innovation and education,” he added.

What was the 20:80 gold import scheme?
The Centre announced its intention to probe the circumstances behind the extension of the 20:80 gold import scheme, previously restricted to banks and PSUs, to private parties in the final days of the previous government’s term in 2014.

What prompted the scheme?
In response to a stressed current account deficit in 2012-13 due to a surge in gold imports, the government at the time introduced an import scheme in 2013, which mandated that 20% of all gold imports would have to be exported.
“The scheme was designed to restrict the import of gold, conserve foreign exchange by imposing export obligations, and ensure that the premium from purchase and sale of gold resided in the hands of public agencies,” according to the Commerce Ministry.

Who could import gold under the scheme?
At the time of its implementation, the 20:80 schemes were open only to banks and to public sector companies such as the Metals and Minerals Trading Corporation and the State Trading Corporation of India. In May 2014, the RBI in consultation with the government widened the scheme to also allow Premium Trading Houses (PTH) and Star Trading Houses (STH), both private sector entities, to import gold.

How did the scheme fare?
According to the Commerce Ministry, a review of the scheme found that since liberalisation in May 2014, gold imports had increased substantially, averaging about 140-150 tonnes a month. Within this, the government found that gold imported by STHs and PTHs increased 320% following the May 2014 decision compared with the earlier period.
The share of these entities in the total gold imported into the country also increased from 20% before May to 60% after, according to the government.
The government on November 28, 2014 scrapped the 20:80 schemes and removed all restrictions on gold imports.

What was the impact of the abolition?
The Centre, citing the Comptroller and Auditor General of India, said that the average monthly import of gold fell to 71.5 million tonnes in the months following the abolition of the 20:80 scheme [December 2014 to March 2015] from the monthly average of 92.16 million tonnes in the period following the widening of the policy [June 2014 to November 2014].
Gold imports averaged 33.6 million tonnes per month before STHs and PTHs were allowed to import under the 20:80 scheme [from August 2013 to May 2014], according to the government.

‘RBI’s ban on LoUs may push up the cost of imports’
The Reserve Bank of India’s decision to ban Letters of Undertaking (LoUs) will raise costs for importers and will hurt export competitiveness, says SBI chairman Rajnish Kumar, in an exclusive interview. Edited excerpts:

What will be the impact of RBI’s ban on Letters of Undertaking (LoU)?
The cost of imports will go up. What was happening was importers, through the route of LoU they were availing dollar funding which was cheaper than rupee funding. So now, the importer will have an option of either opening a letter of credit, but for that they will need suppliers’ agree-
ment - the supplier should be willing to extend the credit. Or otherwise, they have to fund it through rupee borrowing. So, that will increase the cost. And if they are exporting, then it will impact your export competitiveness also. So, the impact overall will be that the dollar borrowing of many of the importers will get either replaced by the letter of credit.

**PNB had said it will pay the bonafide dues to the banks. When are you expecting payments from PNB?**
We have given our claim and all the supporting documents. Hopefully some repayment will happen this month.

**What has been the response from the banking regulator for improving checks and balance after the PNB scam?**
RBI has asked all the banks to integrate SWIFT with the core banking solution. All banks are now linking SWIFT with CBS. RBI has given a circular to do it by April 30. We will do it by that time.

**What are the steps SBI has taken?**
We thoroughly reviewed our LoU portfolio. Risk management in the bank is a continuous process and not a one-day process. Period review, see to it that checks and balances are working, you have to on a continuous basis.

**RBI came out with circular tightening NPA norms. What is your view?**
There are two ways to look at it. One is there are definitely bring more discipline on the borrowing. Borrowers will be more careful on how they manage their cash flow and the intent will be to repay bank dues in time. However, on certain things probably some relief is required. The Indian Banks’ Association has represented to RBI on these issues. So let RBI examine it and see what comes out.

**What are the issues?**
One of the things that the circular says is that before an account is upgraded, 20% has to be paid. I think that is a bit tough requirement. Similarly, if the account is under restructuring and even if there is a delay of one day and then the account has to be referred to NCLT within 15 days.

**Bond yields have further increased in Q4. How difficult is Q4 going to be?**
It is going to be difficult for banks on account of both these reasons. But thereafter, things will start returning to normal. By April-May, all the NCLT cases of the first RBI list will have resolution. The impact will be that banks’ gross and net NPAs will start coming down. And certain portion of these assets will get a new management, so that will start become performing. You normally see a negative credit growth in first quarter, but I have a feeling that credit growth will be positive in first quarter. For SBI, our pipeline of stressed assets looks very normal. Our fresh slippages in the next financial year will not exceed 2%.

**So, do you see credit demand to pick up in the next financial year?**
There are certain sectors which are doing well. Like if infrastructure grows, then naturally cement will do well. In steel sector we have seen revival. I am told, housing sector demand is much better starting from January. Automobile sector is doing well. There are many sectors where activity is happening, but what is probably missing is large size projects by the private sector which is because of the overcapacity that has been created. Going ahead, we see revival in credit growth. Also, now NCLT resolution will start happening. In many cases, we are at advanced stages of resolution. If that starts happening, then there will be working capital, investment requirements will revive demand.

**PNB seeks information from peer banks to rule out any deficiency**
Punjab National Bank has asked for certain information from peer banks, but no condition has been set for payouts related to LoUs in the Rs. 12,968 crore scam involving Nirav Modi and his firms, sources said.
Bankers aware of the development said as the matter was under investigation by the CBI, no final call on LoU-payouts could be taken as of now.
“PNB has been calling for certain information from other banks to ascertain if there were any deficiency or laxity on the part of those other banks, if they also had some system lacunae or might have compromised on their system, things like that,” a bank official said on the condition of anonymity.

On what had been derived among the banks on the liability of PNB towards other banks to pay against the Letters of Undertaking (LOUs) on the basis of which peer lenders made import credit payments to Nirav Modi and his firms, the official said, “As the investigations are going on, there is no final call on LOUs payouts.”
As the investigation process was normally a long-drawn affair, the bankers fear they would be compelled to declare the portion of their exposure in the LoU fraud as non-performing.
To plug the loopholes, PNB has started the process of urgently integrating SWIFT, with its core banking solution...
UPI emerges as top pick for Bitcoin exchanges in India

The increasing popularity of Unified Payments Interface (UPI) has prompted bitcoin exchanges to adopt and promote this payment option for buying and selling cryptocurrencies. Bitcoin exchange Zebpay Thursday informed its customers in an email that the UPI option is now open on its platform. “We have now started INR deposits via UPI. You can send money to our registered banks using any of the UPI supported apps like BHIM, GoogleTez, PayTM and PhonePe,” the email said.

Though UPI was always available, it wasn’t promoted on bitcoin exchanges on the assumption that it wouldn’t pick up. “We didn’t really think that UPI would become big... We didn’t promote NEFT and similarly, we didn’t promote UPI. UPI is an option provided by default by your bank or the UPI-enabled app. Whether it is Paytm or GoogleTez, it provides the UPI outgoing transaction option and, hence, you can send it to any bank account and buy anything you want,” said SathvikVishwanath, chief executive and co-founder, Unocoin, a cryptocurrency exchange.

Another cryptocurrency exchange Zebpay has a similar story to tell. “Earlier, we were having some issues around the (UPI) functionalities; so it never showed as a payment option on the app. Now, we have the functionality to identify which customer comes from where. In our system, you will see it under IMPS. It can work with all bank apps that are UPI-enabled,” said NischintSanghavi, head of exchange at Zebpay, a cryptocurrency exchange.

Though the exchanges have payment gateways, national electronic funds transfer (NEFT) and real time gross settlement (RTGS) options, they expect UPI to soar. “UPI is actually one of the most favoured methods of deposits on our platform as it is seamless. Since it is tied up with bank account and mobile number, and all crypto asset exchanges want deposits to come from linked bank accounts, it works for us. UPI is also a free method of deposit since there is no inherent charge for making a deposit. In all senses, it is convenient for the consumers considering both bitcoin exchange and UPI are mostly mobile only,” said Rahul Raj, co-founder of Koinex, which opened the UPI option about a month ago.

The increased interest in UPI comes at a time when major banks including Citibank and HDFC Bank Ltd have prohibited use of debit, credit and prepaid cards for cryptocurrency transactions.

“Some people were using credit and debit cards to buy bitcoin, and Ethereum internationally using credit card and debit cards. Now, that has been stopped. The move affects only the customers who are trying to buy from exchanges abroad through credit card and debit cards,” said Vishwanath.

Currently, what payment options are available to buy bitcoins? “For a lot of us, NEFT, RTGS and IMPS work fine. It depends on the bank of the customer. Bitcoin exchanges can get money from all bank accounts,” said Vishwanath.

In January, major banks including HDFC Bank Ltd and ICICI Bank Ltd suspended current accounts of bitcoin exchanges. Since then, bitcoin exchanges have opened accounts with smaller banks such as Bandhan Bank Ltd and RBL Bank Ltd to accept deposits. Coinsecure said that due to some problems in its HDFC Bank account, it has permanently removed it permanently, and asked customers to deposit money in their current account held with RBL Bank and Bandhan Bank.

U.S. challenges India’s export subsidies at WTO

Turning the heat further on India on trade issues, the United States has challenged India’s export subsidy programmes at the World Trade Organisation (WTO). The move comes close on the heels of a string of statements accusing India of “unfair” trade practices, by President Donald Trump.

U.S. Trade Representative (USTR) Robert Lighthizer said Washington had requested dispute settlement consultations with the Government of India at WTO on the issue. Mr. Trump had threatened to raise duties on products from India.

Unlike the many trade disputes between India and America that are sector specific or product specific, the new move by Mr. Lighthizer — a trade hawk closely in alignment with Mr. Trump’s nationalist economic policies — is broad and sweeping in targeting the whole range of Indian export subsidy programmes.

‘Distorting trade’

A statement from the USTR listed the Merchandise Exports from India Scheme; Export Oriented Units Scheme and sector specific schemes, including Electronics Hardware Technology Parks Scheme; Special Economic

(CBS) system. A new software, Financle 10, had been installed and was in the testing phase. “It is a superior system and would enable the bank at mid office and head office to view transactions of all branches through one administration,” PNB said.

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Zones; Export Promotion Capital Goods Scheme, and a duty free imports for exporters programme as distorting trade in a way that allows Indian exporters “to sell their goods more cheaply to the detriment of American workers and manufacturers.”

“These export subsidy programmes harm American workers by creating an uneven playing field on which they must compete,” said Mr. Lighthizer. “USTR will continue to hold our trading partners accountable by vigorously enforcing U.S. rights under our trade agreements and by promoting fair and reciprocal trade through all available tools, including the WTO.”

MukeshAghi, president of the United States-India Strategic Partnership Forum (USISPF), said the case would not alter the long-term trajectory of bilateral trade partnership. “As the relationship deepens, and volumes increase, disputes are natural. This is a normal dispute redressal mechanism that will run its course.” Mr. Aghi said.

“The U.S has been imposing countervailing duties in response to all these Indian programmes already. The decision to take this to the WTO is a political move and qualitatively different from countervailing duties,” said Moushami P. Joshi, trade lawyer at Washington law firm Pillsbury, where she advises sovereign governments on WTO disputes.

India likely to push for dropping ‘Asian premium’ on oil prices

India is likely to lobby heavily for an end to the discriminatory “Asian premium” on oil prices and a “responsible” price mechanism, as it prepares to host a major conference for oil producing and consuming countries. Addressing a curtain raiser for diplomats of countries that are expected to send delegations for the International Energy Forum (IEF) April 10-12, Petroleum Minister Dharmendra Pradhan said India would become a “happening point” for energy after the conference, which would be close on the heels of the International Solar Alliance (ISA). Mr. Pradhan promised a “new roadmap” for the world during the IEF, especially given the oil price fluctuations.

“We are all concerned about having a responsible price mechanism. We don’t expect low oil prices anymore, and we know what are the limitations and challenges for the long-run: a decrease in exploration and production activities, low capital expenditure environment,” Mr. Pradhan said.

‘Affordable prices’

He added it was inevitable that low oil prices, as seen in recent years, would cause a “crisis”. “Simultaneously we must take care of the interests and aspirations of consumers in India and we need affordable energy prices,” he said. Key Oil Producing and Exporting Countries (OPEC) including Saudi Arabia, and Iran’s petroleum ministers, will attend the conference said officials handling the programme. The IEF represents 90% of world consumption and production of oil and gas. All 92 member countries of the IEF are expected to send delegations, with about 40 participating at a ministerial level.

Since 2015, Mr. Pradhan has made repeated demands to the IEF countries to remove what is called the “Asian premium” on prices that was pioneered by Saudi Arabia, which distinguished consumers in Asia from the U.S. and European countries. However, the demands have met with little success and the issue is expected to be raised on the sidelines of the event, if not during the conference with Saudi Arabia and others.

‘RBI norms may push power projects worth Rs. 2.5 lakh crore into bankruptcy’

More than 50,000 MW of stressed power projects, worth more than Rs. 2.5 lakh crore, with bank exposure of more than Rs. 1.75 lakh crore, are likely to face bankruptcy proceedings as, among others, the Reserve Bank of India (RBI) had scrapped all loan restructuring programmes in February, according to industry sources.

“About 50GW of operational capacity in private sector with total capex of about Rs. 2.5 lakh crore, having bank exposure of about Rs. 1.75 lakh crore may have to face bankruptcy proceedings if the underlying stress factors — resolution of change in law cases, coal supply and its restrictive usage policy and absence of power offtake agreements are not resolved quickly,” Ashok Khurana director general, Association of Power producers, told The Hindu.

The government has called for a high-level meeting of
all the stakeholders, including public and private sector power firms, lenders, coal suppliers and railways to discuss the gravity of the situation. "RBI guidelines will be one of the most important issues under consideration as it may lead to most of the power firms to file for bankruptcy," said the CEO of private power firm who would be attending the meeting.

**Payment by discoms**
"Discoms are owned by the government and they are not paying us in time," Sanjay Sagar, MD, Jindal Power, told The Hindu.
"Coal India, again owned by the government, is not supplying the required amount of coal. With the latest RBI notification, power firms will be classified as defaulters for no fault of theirs," Mr. Sagar said.
Of the 50,000 MW, about 12,000 MW have no power purchase agreements (PPAs) or coal linkages while 20,000 MW have coal linkages but don’t have long term PPAs. Another 11,000 MW of gas-based power plants are stranded for the want of gas while 9,800 MW coastal power plants of Tata Power, Adani Power and Essar Power are stranded due to lack of imported coal.
The RBI had recently scrapped all loan restructuring programmes and it's recent guidelines on ‘Resolution of Stressed Assets — Revised Framework’ mandates the banks to classify even a day’s delay in debt servicing as default.

**CETC India starts work on solar unit**
CETC (India), an ancillary of China Electronics Technology Group Corporation (CETC), is setting up a solar photovoltaic cell (PVC) manufacturing park at Sri City, near here, according to a top official.
The first phase of the project would go on stream in 18 to 20 months. The civil work for the construction of the facility had already commenced.
According to Liu Liehong, general manager, CEO, CETC, the firm chose Sri City for the project after surveying various sites in India. The plant, which would be built on a plot of 18 acres in the domestic tariff zone at an initial investment of about Rs. 320 crore, would be commissioned by the last quarter of 2019.

**Rugs and shawls: global buyers flock to Kashmir**
Over 120 delegates from 16 countries converged in Srinagar to have a first-hand experience of exquisite products handmade by Valley artisans, providing a ray of hope to the otherwise-declining handicraft industry in the wake of growing instability in Jammu and Kashmir. "We are showcasing world-famous carpets, shawls, chain-stitch work, rugs, copper wares and papier-mache to our visitors. We are hopeful it will go a long way to boost the handicraft sector here," Kashmir Chamber of Commerce and Industry president Javed Ahmad Tenga told The Hindu.
Prospective buyers have come all the way from countries including Kazakhstan, Kyrgyzstan, Turkmenistan, Tunisia, Egypt, Turkey, Australia, Mexico and Lebanon. The biggest group has come from Turkey.
“My sister is launching a new line of products in Egypt. Pashmina is what had attracted us to Kashmir as brides would prefer it there. The material is light, fine and warm. Designs are equally exquisite," Abdelrahman M. Abdou, an Egyptian carpet seller, said. “The weather is also an attraction to come to Kashmir.”
The government failed to hold the seventh international buyer-seller meet in Srinagar for the past two years due to the ongoing instability and violence. The government sees the event as a good omen for the tourism industry too. "The presence of foreign buyers conveys a message to the outside world. Kashmir is a victim of deliberate vilification campaign in the country. This should dispel the myth globally that Kashmir is not just about conflict," said J&K Public Works Minister Naeem Akhtar.

‘Open J&K to Silk Route’
Chief Minister Mehbooba Mufti used the occasion to pitch for the opening up of Kashmir to the outside world. “I hope J&K opens up to the world as an international trading destination through land routes, realising its geopolitcal situation, as part of a peaceful region,” said Ms. Mufti. She said Kashmir’s re-introduction to the influences of the Silk Route, as in the past, “would help in making the state a hub of economic activity.”

No ‘power’ of choice for consumers
Last month, six energy producing companies won rights to set up wind power projects in Gujarat and sell power to the State’s utility firm. In the auctions, where those who offer to sell electricity at the least prices are the winners, four companies quoted Rs. 2.44 a unit of electricity, and two others quoted a paisa more. Similarly, in the previous auctions, several wind and solar
companies have come forward to sell electricity at prices well under Rs. 3. However, you and I are buying power at upwards of Rs. 6; factories pay even more, even as high as Rs. 12. It should be a simple matter for the company that owns the factory to tell the wind energy company in Gujarat, “Hey, you are selling power at Rs. 2.44; I’ll pay you (say) Rs. 6, why don’t you sell it to me?” Simple, right? **Then, why isn’t it happening?**

**Electricity Act, 2003**

The push to make such deals possible came in the form of the Electricity Act in 2003. The central idea of the Act, which is still hailed as a ‘landmark legislation’ for the power sector, was the creation of an open market for electricity, where anyone could produce power anywhere and sell it to anyone else at mutually agreed prices. In developed countries, consumers can switch suppliers over the laptop. But in India, a decade and half after the legislative framework came into being, a free and open market for power, as it exists for instance, for telecom, is still elusive.

The reason is that State governments, through the electricity distribution companies (discoms) owned by them, are still a monopoly, and exhibit monopolistic tendencies — their instinct is to make their customers pay for their inefficiencies.

There again, only some customers pay, while the others have to be subsidised and what better strategy than to make the paying customers pay more to defray the costs of the subsidies?

In an open market, the customers who are thus made to pay more would go to other suppliers if they find them economical. But in a monopoly, the monopolist would not let the customer deal directly with the supplier. While on paper, there is scope for a large consumer of power to directly purchase power from a supplier, by-passing over the State discom, in practice this has proved to be difficult because the owner of the discom, viz., the State government, has control over such direct transactions.

“State governments use the respective State Load Dispatch Centre (which routes the power) as the instrument of control,” observes Daljit Singh, visiting scholar at Brookings India, who studied the issue for a paper titled ‘Newer Challenges for Open Access’, in April 2017. Mr. Singh counted at least 239 orders passed by the Central Electricity Regulatory Commission, the federal electricity regulator, pertaining to ‘denial of open access’. Pretty often, the load dispatch centre was not sport. State governments have often seized upon a certain provision (Section 11) in the Electricity Act, which allows them to force a power producer in that State not to supply outside the borders. The provision was meant for use in rare circumstances of emergency-like power shortage, but many States (Tamil Nadu, Odisha, Andhra Pradesh and Rajasthan, for example) have taken liberties with the interpretation.

Perhaps the clearest case of States putting the kibosh on free market is that of the ‘cross-subsidy surcharge’ (CSS). This is a surcharge that a discom levies on a customer for defraying costs of free or subsidised power to some sections of the society. Ideally, the costs of such subsidies should come from the State government’s own funds, but other customers are made to pay for it.

**‘Subsidy must decrease’**

The Electricity Act allows CSS, but the idea clearly was that the charge “shall be progressively reduced and eliminated”. Instead, the CSS is only increasing. Assam, for example, saw CSS rise from 54 paise in 2016-17 to Rs. 1.31 in 2017-18; Bihar 79 paise to Rs. 1.79 and A.P. Rs. 1.61 to Rs. 1.65.

A ‘consultation paper’ on open access produced by the Ministry of Power in August last year sums up the position of the State government, seeking a rise in CSS. This is happening even when there is recognition that CSS is not quite the way to provide free or subsidised power to some sections of society — incidentally, some of whom, such as rich farmers, do not at all deserve the freebie. The National Tariff Policy of 2016 is clear on that point. In Section 8.3, it says “direct subsidy is a better way to support the poorer categories of consumers than the mechanism of cross subsidising the tariff across the board.”

Add to this the ‘additional surcharge’ which is meant to compensate discoms for the fixed cost of their long-term contracted capacity, which is stranded as a result of consumers moving to Open Access (OA). For this, the discoms have to “conclusively demonstrate” that the assets are stranded due to consumers moving out, but often this is not done. In some States, additional surcharge has is as high as Rs. 1.60.

These charges, collectively known as ‘open access charges’ have made a free market economically unviable. In several of its presentations, the Indian Energy Exchange, which is one of the two energy exchanges in the country, speaks of “open access charges being set high in order to restrict open access.” “With the rise of renewables, increased market dynamics and tighter grid operation rules, utilities (discoms) have started restricting or tightening rules around open access,” says Vishal
Pandya, an energy markets experts and co-founder and director, REConnect, a consultancy. For their part, the discoms have their own defence for why they frown at open access. Customers' leaving them has adverse financial implications, at a time when they are hard up on cash. On the flip side, whether they do enough to improve their efficiencies and keep their house in order, is moot. There are structural issues in improving discom efficiencies. A case in point is the instance in Karnataka, where the unions stopped substation automation because it would render staff surplus, requiring them to be transferred.

‘Centre-State mismatch’
At the heart of the absence of a free market for electricity is the mismatch of perception of the central and State governments. While the Centre wants a vibrant, 24-by-7 market, the States are more concerned about their immediate finances and electoral issues.

“Development of a shared perspective or vision for the sector by the Centre and the States is highly desirable,” says Mr. Singh. “However, that would be difficult to achieve in the current political climate.”

On top of all this is the proposed New Electricity Act which proposes to separate “carrier and content”, meaning the transmission lines will be like tolled highways for use by anybody, while the power itself could be supplied by anybody, so that the consumer will have a choice to switch seamlessly between suppliers. The draft of the legislation is gathering dust in the Parliament.

A cure for body and mind
Nestled in a lane in a posh suburb of southeast Bengaluru and surrounded by fast-food outlets and hospitals is a small bungalow that houses the office of health start-up CureFit. Inside, the workspace is decorated with drawings such as Leonardo da Vinci’s Vitruvian Man and motivational quotes. One can find many teams busy working on improving the mental and physical health of customers through technology, diet and exercise.

“We want to have one million [customers] engaged in 15 activities a day by 2020. I think we can do that. We are right on that path,” said Ankit Nagori, co-founder of CureFit, in an interview. He said the company planned to raise $75 million in debt financing in the next two years to expand across India. The firm, which operates in Bengaluru, Delhi and Gurugram, aims to set up about 500 centres for its services across the country. This year, it raised $10 million in debt from Axis Bank and HDFC Bank.

A former chief business officer at e-commerce giant Flipkart, Mr. Nagori, 32, founded the start-up in 2016 along with his colleague Mukesh Bansal who had sold his online fashion retail firm Myntra to Flipkart in a deal estimated at $370 million.

Mental health
The company differentiates itself by addressing preventive healthcare through a combination of engagement, coaching and delivery through online and offline channels.

For example, its vertical Cult. Fit which focuses on physical strength and fitness provides a non-conventional facility and a mix of exercises through group workouts without any mainstream gym equipment. Another arm Mind.fit which concentrates on mental well-being combines yoga, meditation and breathing exercises as well as psychology. The aim is to help reduce stress, improve focus and better sleep quality of the customers. CureFit also has a health food vertical Eat.fit that offers calorie counted balanced meals created by a panel of nutritionists and chefs. The model involves delivering these meals to offices and homes.

India’s healthcare market may see a more than threefold rise in value terms to reach $372 billion by 2022 from $110 billion as of 2016 thereby clocking a compounded annual growth rate of 22%, according to an Assocham-Rnocos joint paper.

Artificial intelligence
The paper said this would be driven by factors such as growing incidence of lifestyle diseases and rising demand for affordable healthcare delivery systems. These are the opportunities that companies such as CureFit as well as investors backing such ventures are eyeing. Till now, CureFit has raised $45 million in equity funding from venture capital firms Accel Partners, IDG Ventures, Kalaari Capital and UC-RNT Fund.

It is investing this money in branding and technology. This includes using artificial intelligence to track the progress made by the customers, nudge them to exercise and also recommend classes based on their body types.

In the last two years, the firm has been acquiring small, health-focused brands like Cult, The Tribe, Kristy’s Kitchen and a1000yoga. It said it has now got more than 40,000 paying customers who are using one or more services. It is now planning to unveil a fourth vertical, Care.fit, which would focus on primary healthcare.

The firm also plans to provide a telemedicine service for patients to consult doctors. An alumnus of IIT-Guwahati, Mr. Nagori said the digital offering is the true way to reach the masses. “That is what Paytm and WhatsApp have
done.” he said.

CureFit is not the only firm betting on the country’s fitness and wellness market. For instance, Bengaluru-based 2mpower Health Management Services (GetActive) provides a unique employee wellness and engagement platform for enterprises such as Cisco, GE, IBM and Accenture.

It aims to improve the health of employees through gamification of various aspects of wellness and via competitions and peer-to-peer challenges.

Another young firm, HealthifyMe, which, in February raised $12 million from investors including Sistema Asia Fund and Samsung NEXT, plans to use the funds to deepen its presence in India. It would do this through offering health foods, diagnostics and insurance products beyond its digital nutrition and fitness services portfolio. The company also said that it planned to use the funds to further improve its artificial intelligence and data science capabilities.

‘U.S. supports WTO, wants some reforms in functioning’

Against the backdrop of U.S. President Donald Trump calling the World Trade Organisation a “disaster” for the U.S., WTO Director General Roberto Azevedo has said that the U.S. has been very clear on its support to organization, but wanted some upgrades and reforms in its functioning.

Mr. Azevedo is in India for a two-day informal ministerial meeting of WTO members over Monday and Tuesday. The meeting assumes significance following the increase in duty on steel and aluminium by the U.S., and the U.S. taking India to the WTO on export incentive programmes.

“The U.S. has been very clear that it supports the WTO,” Mr. Azevedo said, while briefing the media following a CII event. “The U.S. sees some conversations that are happening at the WTO now as very welcome and they support that.”

‘World has changed’

“At the same time, the U.S. has been saying that they have some concerns with the way the WTO functions,” Mr. Azevedo added. “The U.S. maintains that the world has changed significantly since the WTO’s inception in 1995, and it wants some upgrades and reforms in the WTO.”

“The WTO has been a disaster for this country, for our country,” Mr. Trump said on March 1, while speaking at an interaction with steel and aluminium industry representatives. “It has been great for China and terrible for the United States, and great for other countries. But terrible for the United States.”

Mr. Azevedo added that the trade environment globally was very risky at the moment and that the WTO was facing challenges from both within and outside. “We have very significant challenges before us,” he said, adding that one example was the “compromised” state of the dispute settlement system of the WTO due to a blockage in the appointment of appellate body members.

SEBI for phased roll-out of governance norms

The Securities and Exchange Board of India (SEBI) plans to introduce new corporate governance norms as proposed by the Kotak Committee, in a phased manner for listed entities, with only the bigger companies required to comply in the initial phase as opposed to all the listed companies.

The board of the capital market regulator, which is scheduled to meet on March 28, will discuss the committee’s proposals before giving it the go-ahead for implementation for listed companies.

"The aim is to implement the new norms with minimum disruption and so the top 200 or 500 companies would be initially mandated to comply with the new rules," said a person familiar with the development.

"There are proposals that, if implemented for the complete market at one go, would create genuine hurdles and so the view is that a phased implementation would work better," he added.

He declined to be identified as the proposals were yet to be approved.

The 23-member committee under the chairmanship of Uday Kotak had submitted its 177-page report to SEBI in October.

Among other things, the panel proposed that audit committees should monitor the flow of funds to unlisted subsidiaries, including those established overseas, and that listed entities should put in place proper regulatory frame-
work while sharing unpublished price-sensitive information with promoters or any other significant shareholders. The committee also proposed that listed companies should be required to have at least six directors on the board with a minimum of 50% representation of independent directors, including one woman director.

“Effecting a change in a phased manner ensures that the change is not disruptive and the experience gained in the first phase helps to iron out issues, if any, in the complete roll-out,” said J.N. Gupta, managing director, Stakeholders Empowerment Services (SES), a proxy advisory firm. Compliance conditions

Meanwhile, the board of the regulator, which has representation from the government and the Reserve Bank of India (RBI), will also review the compliance requirements for investors wanting to trade in the derivatives market. This is part of the regulator’s attempts to ensure that only well-informed investors with the required risk appetite trade in derivatives.

Accoding to the person quoted above, the regulator is likely to make it compulsory for brokers to insist on the net worth certificates of investors who want to trade in the derivatives segment beyond a certain threshold limit, so as to ensure that the exposure is well within the risk taking capacities of the individual.

Incidentally, the market regulator had released a discussion paper in July last year for the ‘growth and development of equity derivative market in India’, which, among other things, highlighted the rapid growth in the derivatives turnover over the years, along with the kind of participation trading in the segment.

An e-mail query sent to SEBI seeking comments on the board meet remained unanswered till the time of going to press.

India to take up U.S. tariffs bilaterally

India will take up the issue of the U.S. imposing tariffs on steel and aluminium imports on a bilateral level, Commerce Minister Suresh Prabhu said.

“We are obviously not the largest exporter of steel or aluminium to the U.S.,” Mr. Prabhu said at a press conference following the conclusion of an informal mini-ministerial meeting of the WTO, which was attended by 53 countries.

“But still, as far as we are affected, we will definitely take it up with the U.S. with whom we have a huge trade surplus and we have a very good political relationship. We will take up this matter with them bilaterally.”

U.S. President Donald Trump recently announced a 25% import tariff on steel and a 10% tariff on aluminium.

“What the U.S. has risen, whether it is WTO compatible or not, whether it is violating some rules or not, is something the country will have to individually look into,” Mr. Prabhu added. “This is a unilateral action [by] the U.S., and any trade related action is subjected to scrutiny on whether it is WTO compatible or not.”

WTO Director General Roberto Azevedo also expressed his concerns about the actions taken by the US, warning that this could lead to escalation and retaliatory tariffs being imposed by other countries.

‘Potential for escalation’

“The WTO does not as an institution take a stance, but I have said publicly that I am very concerned [about the U.S.’ decision],” Mr. Azevedo said. “And I think the institution itself could say the same because such measures, for whatever reason, have a very real potential for escalation because of the possibility of responses from other partners with trade restrictive measures as well, and that is something we should avoid.”

“This is what we heard today, with many countries saying they are concerned by this and highlighting the potential for escalation,” he added. “We have to proceed very carefully and try to work within the framework of the WTO.” He also urged member countries to follow up verbal commitments to multilateral trade through action.

“Members committed to continuing negotiations on various issues including on the ones where we made no progress under the Doha round,” Mr. Azevedo said. “But… just pledging support for the system is not enough. We need to match words with deeds.”

Govt. scraps export duty on sugar

The government scrapped export duty on raw and refined sugar to boost shipments, as the country is all set to produce record 29.5 million tonnes (MT) of the sweetener in the current 2017-18 marketing season. Export duty on sugar was 20%.

A notification issued by the Central Board of Excise and Customs said that it had been decided to reduce export duty on raw sugar, white or refined sugar from 20% to nil. Earlier, the government had doubled import duty on sugar to 100% to check shipments. Sugar output is estimated to rise sharply to 29.5 MT in the 2017-18 marketing year (October-September) from 20.3 MT in the previous year.

Thanks to renewables, thermal power sector may remain distressed for a long time
The law of unintended consequences is taking its toll on the thermal power sector. A report by a government committee on the optimal energy mix in power generation says the thermal power sector may continue to bear the brunt of the thrust on renewable energy. This is especially if the renewables sector has to achieve its targeted capacity additions by 2022.

Simply put, the report says coal-based power plants will have to be underutilized if the committed renewable capacities have to be added by 2021-22. The utilization levels or the plant load factor is estimated to fall to 56.5% by 2021-22.

For perspective, with utilization levels at 60% so far this fiscal year, lenders are worried about the bankability of the projects. Depending on the capital cost, fuel mix, offtake agreements and fixed cost recovery clauses, a power plant will have to operate at a minimum utilization level of 50% to meet debt covenants, say experts. As envisaged in the report, if plants operate at about 56% utilization levels, that leaves very little margin of safety and meagre returns for owners.

The utilization level estimate takes into account the coal-based capacity of 47,855 megawatts at various stages of construction, which are likely to be commissioned during 2017-22. Much of the capacity is being built by government-owned entities. So power offtake may not be a major issue for them. But they will restrict the opportunities available for the projects that are currently stalled, which are operating at sub-optimal utilization levels and without enough power offtake agreements.

“Given their must-run status and growing size, renewables will constrain the utilization levels of the thermal power sector,” says Girishkumar Kadam, sector head and vice president at ratings firm Icra Ltd. What is required is demand growth. A sustained improvement in demand will ease the pressure, he adds.

The government report also says that in an alternative scenario of higher demand, the overall utilization of coal-based power plants could see a noticeable improvement. But the current subdued trends provide limited confidence about achieving higher demand.

Also adding to the uncertainty are the indirect costs of renewable energy integration. As renewables gain prominence, thermal power plants will have to become flexible in terms of generation to balance grid demand. This involves substantial costs and investments.

While the government seems aware of the challenges, if demand does not see noticeable improvement, the pain in the thermal power sector may last for a long while.

BHEL taps ISRO tech for Li-ion cells
State-run power equipment maker BHEL entered into a technology transfer agreement with Indian Space Research Organisation (ISRO) for the manufacture of space-grade lithium-ion cells of various capacities. BHEL will utilise technology developed by ISRO at its Vikram Sarabhai Space Centre (VSSC), BHEL said in a statement.

ISRO has so far been sourcing space-grade lithium-ion cells from foreign vendors. And BHEL has been assembling and testing space-grade lithium-ion batteries with such imported cells, for satellites and launch vehicles of ISRO.

Power minister urges battery producers to ‘Make in India’
The Centre urged battery manufacturers to set up units in India as demand in the country was expected to grow rapidly following its push for e-vehicles.

Power and Renewable Energy Minister R.K. Singh made the appeal during a meeting with battery manufacturers.

Tenders for e-vehicles
“Tenders for procuring e-vehicles have already been issued and we have started procuring the vehicles,” Mr. Singh said. “This is going to increase.”

The Minister also said that future bids for solar and wind projects would be coupled with storage, adding that the Centre would soon come out with a policy in this regard with a focus on ‘Make in India.’

Mr. Singh also said that the Centre had already initiated interactions with resource-rich countries such as Bolivia to ensure an adequate supply of raw materials for energy storage sector.

“The industry representatives raised the issue of high GST (Goods and Services Tax) rates on batteries,” the Centre said in a statement after the meeting. “They demanded that to promote Make in India, preference should be given to Indian-made batteries in government procurement. They also stressed upon the need for creating Indian standards for batteries and setting up of field testing facilities for both stationary and mobile sectors.”

Why do farmers go marching?
Why are Indian farmers perpetually in revolt? The question has been raised by many after the recent farmers’ march to Mumbai and simmering rebellions across the States in recent years.

No doubt, agriculture is one segment of the economy on
which vote-conscious governments haven’t skimmed on outlays. Over the years, Central governments have allocated ever-rising sums towards procurement, input subsidies and rural employment schemes, while States have periodically announced loan waivers. But that farmer protests have persisted, and even intensified, perhaps shows that many of these schemes aren’t addressing the right set of problems. The reasons for agricultural distress have changed quite dramatically in recent years.

From shortage to plenty
A few years ago, farmers seeking to register their protest used to do so beside wilted crops and parched farmlands. But in the last couple of years, farmers from Mandsaur to Salem have given vent to their angst by dumping vast quantities of unsold produce — tomatoes, grapes, onions and milk — on lakebeds and national highways. Historically, agricultural distress in India has been linked to truant monsoons, input shortages and lacklustre yields which frequently put growers on the road to penury. In recent years though, it is surplus output and unremunerated prices that have decimated farm incomes more often.

Trends in India’s agricultural output over the last twenty years present an eye-opener to this problem of plenty. For an extended period from 1998-99 to 2009-10, India’s rice output stayed stuck at 85 million tonnes to 95 million tonnes, with drought years such as 2002 and 2004 seeing sharp downward blips. As consumption hovered at 80 to 90 million tonnes in this period, shortages were more frequent than surpluses. But after climbing to 105 million tonnes in 2011-12, India’s rice production has stayed well above the 100 million-tonne mark for the last six years, even scaling 110 million tonnes in 2016-17. With offtake still stuck at about 90 million tonnes, there’s been persisting excess stock in the market. As a result, in the last five years, wholesale prices of paddy have crept up at a 2.4% annual rate. The wheat story is similar. From a yearly average of about 75 million tonnes in the decade to 2010-11, wheat output leapfrogged to average 94 million tonnes in the last six years. Output, now at 97-98 million tonnes, is now neck-and-neck with domestic demand (about 100 million tonnes) and it may only be a matter of time before it overshoots it. With rising supplies, wholesale wheat prices have inched up at a 2% yearly rate in the last five years. Not too long ago, India was facing a severe shortage of pulses, with output struggling to keep up with the rising protein intake of the masses. But farmers have dramatically ramped up pulses production too. From an annual average of 14 million tonnes in the decade to 2010-11, it has averaged 18 lakh tonnes in the last six years. India harvested a record pulses crop of 23 million tonnes in 2017, matching the official demand estimate, thus dampening once-high market prices for a range of dals. This script of galloping surpluses dampening prices has played out in commercial crops such as sugarcane and tea too.

If unremunerative prices have dogged other crops, fruit and vegetable farmers have been up against the high perishability of their produce. In the last fifteen years, India has doubled its potato output, trebled its tomato harvest and managed a fourfold increase in onion output. But poor storage facilities and State laws that keep farmers bound to their local mandis, have exposed farmers to wild swings in prices.

Driving the output
It is noteworthy that agricultural output has held up at relatively high levels in recent years, despite erratic monsoons. This could be because the droughts in 2014 and 2015 have been far less severe than those in 2009 or 2002. In 2014, a drought year, the country still harvested 105 million tonnes of rice, 86 million tonnes of wheat and 17 million tonnes of pulses. Hefty hikes in the Centre’s Minimum Support Prices (MSPs) have also had a big role to play in farmers ratcheting up output. In the last ten years, the support prices for wheat and paddy have risen 73% and 108% and those on pulses have trebled. In recent years, State governments have also competed furiously with the Centre, announcing bonuses and their own support prices for crops such as onions, tomatoes, potatoes and even green chillies.

Illusory profits
It is early days yet to say if recent improvements in India’s farm output are here to stay. But after responding enthusiastically to signals from MSPs for many years, farmers have lately found the mechanism failing them. Market prices for many crops have tended to plunge and stay below their official MSPs for extended periods. For one, though the Centre announces MSPs for 24 crops, the bulk of its procurement operations (via FCI) are restricted to just two — rice and wheat, with NAFED chipping in on pulses. State-level procurement operations are even more ad hoc, lacking both direction and funding. Therefore, while a farmer may plant mustard, grapes or onions in any given year based on the MSP promise, there’s really no guarantee that he will get that price when he visits the mandi.

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Two, even in crops where the Centre or State agencies are active, their market interventions tend to be too selective and sporadic to make any real difference to a majority of farmers. Despite the Centre doubling down on procurement in 2017-18, it will mop up only about a third of India’s rice and wheat output and a tenth of the pulses harvest. So, if good monsoons result in more crops moving into surplus zone, market forces will continue to prevail over MSPs.

Three, given that the Centre’s market interventions on rice and wheat have proved so ineffectual despite large outlays, it is unclear how the Centre or copycat States will fund MSPs in a host of other crops.

**New fixes**

To be fair, the NDA has been trying out new policy fixes to address such problems. It is piloting ‘price deficiency payments’ in place of MSPs to compensate farmers for price-related losses.

It plans to replace input subsidies with direct cash transfers. It has kick-started a national electronic market for produce and is nudging States to repeal their APMC Acts, which prevent farmers from selling in markets of their choice.

But its aggressive inflation-fighting efforts and on-off trade policies still work to the detriment of farmers. In the last couple of years, despite supply gluts, the Centre has continued with sizeable imports of wheat and pulses at low tariffs.

**Handling of spikes**

Seasonal spikes in prices of sugar, atta or rice are often met with export taxes, minimum export prices or even outright export bans.

States, on their part, continue to be quite adamant about levying high taxes and hanging on to the draconian mandis, which force farmers to rely heavily on middlemen. This puts the Indian farmer in a ‘Heads I win, tails you lose’ situation. If market prices of crops hit rock-bottom, the government is helpless to rescue them. But if prices soar, the government prevents them from making hay by clamping down.

All this makes it clear why Indian farmers are seething. It’s for the same reason that salaried employees are often unhappy. Who would like being rewarded peanuts, after being highly productive?

**OFB developing new mine-protected vehicle**

The Vehicle Factory in Jabalpur is developing a new mine-protected vehicle (MPV) that can withstand a blast of 20 kg TNT, a senior Ordnance Factory Board (OFB) official said.

The MPVs in service now can withstand a blast of 10 kg TNT in the underbelly and up to 14 kg under tyres, OFB member (weapons, vehicles and equipment) Hari Mohan said.

**New telco rules may whet M&A appetite**

Prospects for consolidation in telecom sector received a major boost with the recent Cabinet approval for capping of spectrum per operator at 35% of total spectrum compared with the 25% earlier. This was accompanied by the removal of a cap for intra-circle bands, and the 50% cap will now apply to combined spectrum holdings in the sub-1GHz.

It has also permitted stretching out spectrum payments over 18 years (including a two-year moratorium) instead of the earlier 12 years on equal net present value basis. “Industry is headed towards further consolidation,” said investor and entrepreneur, C. Sivasankaran who is also a minority shareholder in Tata Teleservices Ltd (TTSL). “And, now spectrum will be more valuable,” he said.

**‘Spectrum purchase’**

“These relaxations mean that Jio can buy outright the crucial 850MHz from RCom instead of having to only use [spectrum] on a sharing basis to stay under the earlier cap,” said G.V. Giri of IIFL Capi. Vodafone and Idea can now retain their 900MHz in all circles, besides getting some cash flow relief on spectrum, according to him. Bharti Airtel can also add more spectrum in a few circles in future auctions without breaching the cap.

Mr. Giri said the change in band-wise cap rules was apt. “These relaxations mean that Jio can buy outright the crucial 850MHz from RCom instead of having to only use [spectrum] on a sharing basis to stay under the earlier cap,” said G.V. Giri of IIFL Cap. Vodafone and Idea can now retain their 900MHz in all circles, besides getting some cash flow relief on spectrum, according to him. Bharti Airtel can also add more spectrum in a few circles in future auctions without breaching the cap.

Mr. Giri said the change in band-wise cap rules was apt as the number of bands had been increasing. But, when the higher 5G bands arrive, this could again become an issue, he warned.

Vodafone-Idea will no longer be required to sell spectrum in the 900MHz band in five circles — the value of their excess 900 Mhz under old rules was a significant Rs. 6,200 crore. This was one of the issues preventing them from applying to DoT for the final merger approval of the two telcos. “Now we expect them to move fast, and merge by our original timeline of the second quarter of 2018-19,” he said.

Bharti Airtel and Tata each with 22%-26% share of aggregate spectrum in five circles can now add spectrum in these circles. Jio’s overall spectrum share is well below the 25% mark in all circles. The Cabinet had also allowed stretching out of spectrum payments over 18 years compared with 12 years earlier, which will see a Rs. 1,500 crore-Rs. 3,000 crore drop in annual spectrum payouts for most telcos. According to Mr. Giri, Vodafone-Idea will benefit from having extra cash for capital expenditure at
a time when their financials are stretched. However, Mr. Giri ruled out aggressive acquisition of spectrum in the sector. “All major telcos have adequate spectrum in most circles and we don’t see any appetite for more spectrums for now.” The key issue would be whether Jio continues with aggressive pricing, following its price cuts in early January, which may have already had an impact going by subdued subscriber additions in that month reported by Bharti, Vodafone and Idea, according to Mr. Giri.

“The total mobile data traffic per month in India is expected to grow 11 times during 2017-2023 from 1.3 EB [exabytes] to 14 EB by 2023,” according to the Ericsson Mobility Report of November. “India jumped to top spot in data usage in a period of one year after Reliance Jio launched its 4G services,” added Mr. Giri. Also, as spectrum becomes more valuable, shareholder value may also rise. However one proposal that has grown contentious is that between Bharti Airtel and Tata Tele.

**Questions over value**

In a debt-free, cash-free deal in October last, Bharti Airtel acquired the consumer mobile businesses of Tata Teleservices Ltd. (TTSL) and Tata Teleservices Maharashtra Ltd. Bharti had agreed to pay only a part of Tata Teleservices’ unpaid spectrum payment liability to DoT over the next 10 years. Now, this time period has also been extended with the Cabinet decision.

TTSL had sought to exit the mobile telecom business due to heavy losses and debt. But it will continue to operate its enterprise, fixed-line and broadband businesses and retain stake in tower firm Viom Networks. However, this deal has disappointed minority shareholders who had hoped the enterprise would have been profitable in the future. Said Mr. Sivasankaran, “all shareholders should be treated equally and fairly and there is no reason to believe that valuable assets can be given away free.” He is a minority shareholder with significant shareholding in TTSL.

“They (TTSL/TTML) have agreed to sell assets at zero value to Bharti while repayment of Tata Tele’s loans for around Rs. 30,000 crore will remain a Tata group headache and that too with not one single paisa haircut,” he said. The move invited criticism from several investors, especially minority shareholders, who are planning to take up this issue with regulators. “We will take it up, once we get the representation from investors,” said Kirit Somaiya, Member of Parliament and President of Mumbai-based Investors’ Grievances Forum.

On February 23, the Bharti Airtel market cap reflected a rise of about Rs. 40,000 crore from October, before the proposal was announced. Said a telecom industry specialist, “[Tata Tele’s] spectrum across multiple banks, 40 million subscribers, fibre assets... all put together have a combined value estimated [at between] Rs. 25,000 crore and Rs. 30,000 crore. It is therefore a matter of the Tata group structuring the transaction so that [it does] not lose out, as seems to be the case today.”

**P&W begins replacing faulty A320neo engines in India**

Engine manufacturer Pratt and Whitney (P&W) has started supplying new Airbus320neo engines to both IndiGo and GoAir, whose planes were grounded by the Directorate General of Civil Aviation (DGCA) on March 12, following repeated instances of in-flight engine stalling.

Joint directorate general, DGCA, Lalit Gupta confirmed that both IndiGo and GoAir had started getting pre-450 serial number engines from P&W.

“DGCA will continue to be in touch with the stakeholders and review the situation in due course as and when the issue is addressed by European Aviation Safety Agency (EASA) and P&W,” Mr. Gupta said.

**Delivered periodically**

Senior officials at IndiGo said that P&W had supplied them with four new A320neos starting March 21. “To begin with, only those aircraft with single engine failures are being re-fitted with the new engines. Aircraft grounded with double engine faults will remain on ground for now. Replacement engines will be delivered periodically,” the official said. GoAir was unavailable for comment.

Before DGCA grounded the aircraft, P&W had proposed replacing the faulty engines by June, which would require some planes to fly with one faulty engine for close to three months. The US-based aircraft engine maker had also suggested a temporary fix of swapping engines between affected planes to allow five of the grounded planes to re-commence flying. The DGCA, however, turned down this option.

Airline sources said that P&W had informed that all the grounded aircrafts will be fitted with replacement engines by April-end. “I can tell you that by April-end the fleet will be up in the air flying,” P&W president Robert F. Leduc informed United Technologies Corporation’s (UTC) investors recently.

**Universal Robots focuses on SMEs in India**

Universal Robots, the world’s largest manufacturer and supplier of collaborative robot, or cobot, arms, is focusing on small and medium enterprises (SMEs) to grow its business in India, the company’s top executives said.

Over two years, the robotics firm has supplied 400 cobots to companies in India, of which 10% have been sold to...
SMEs.

‘100% growth’

“We are growing 100% in India year-on-year and this will continue for the foreseeable future,” said Pradeep David, general manager, South Asia, Universal Robots.

“There is huge demand from the SME sector which we had not seen earlier. So, we are changing our approach to cater to them,” Mr. David added. “Big companies are installing cobots but what is exciting over the last two years is that small companies are also [able to] afford cobots which are paying back in one or two years,” he added.

“The SME sector in India is massive... the sky is the limit,” Mr. David said.

Jürgen von Hollen, president, Universal Robot, added that he saw greater potential in Asia and India than before.

‘Awareness will rise’

“Here, there is [the] least amount of awareness on cobots. If 10% of people in the world know about cobots, it is 1% in India. If one can move to 5% in three years, then I will not worry too much about the volume. It can come from India,” Mr. Hollen said.

He said the company global revenue for 2017 soared 72% to $170 million.

Mr. Hollen said that towards the end of calendar 2019, the company’s current facility in Denmark would become saturated, making it necessary to set up another factory which is expected to be in Asia.

RBI restarts pre-policy talks

After a gap of about one-and-a-half years, the Reserve Bank of India (RBI) has resumed the process of holding consultative meetings with industry groups and banks in the run-up to the monetary policy.

RBI Governor Urjit Patel and the deputy governors met representatives of the Confederation of Indian Industry (CII) and are scheduled to meet bankers in the coming days.

The RBI’s six member monetary policy committee (MPC) will hold its first bimonthly policy review of the new fiscal year on April 4-5.

Addressing perceptions

Bankers said the RBI had faced a lot of criticism for a perceived lack of communication since Dr. Patel assumed charge in September 2016. The aim of restarting the consultative process could be to address such perceptions, bankers said on condition of anonymity.

Earlier, the consultative meetings used to take place before the April and October monetary policy reviews.

“There are enough indications that the green shoots of recovery are gathering traction in the economy and a policy action by the RBI which could refurbish business sentiment, support domestic demand and trigger the turn of investment cycle is very much needed,” CII president ShobanaKamineni said after the meeting.

‘Lift ban on LoUs’

CII has ‘strongly’ recommended reintroduction of the letters of undertaking (LoUs), which were banned by the RBI in the wake of the $2 billion scam at Punjab National Bank.

CII said the ban on LoUs — used in trade finance — was hurting genuine importers as their borrowing costs had increased.

The industry lobby group also called for maintaining the ‘status quo’ on policy interest rates.

SEBI tightens rules on corporate governance

The Securities and Exchange Board of India (SEBI) has tightened the corporate governance norms for listed companies by accepting most of the recommendations of the Kotak Committee while also strengthening the regulations for derivatives and algorithmic trading.

At a board meeting held, the capital markets regulator decided to reduce the maximum number of directorships to seven from 10 in a phased manner while expanding the eligibility criteria for directors.

The regulator has also enhanced the roles of the audit committee along with those of the nomination and remuneration committee and the risk management committee at companies.

“We have accepted 40 recommendations of the committee while another 15 have been accepted with modifications,” SEBI Chairman Ajay Tyagi told the media. While eight of the panel’s recommendations had been referred to the Centre and other regulators, 18 had not been accepted, he added.

Further, the new norms relating to the number of independent directors, appointment of at least one independent woman director and time limit for holding annual general meetings would be rolled out in a phased manner with the bigger firms being mandated in the initial phase.

Listed companies would also be required to make enhanced disclosures related to related party transactions and subsidiaries.

For equity derivatives, the regulator has decided to move towards physical settlement for all stock derivatives in a phased manner to “facilitate greater alignment of cash and derivative market.”

SEBI has also amended the eligibility criteria for stocks to be included in the derivatives segment since the last such amendment was done six years ago.

Meanwhile, a framework for ascertaining the exposure lim-
its for investors based on their income tax returns has been approved to ensure that investors do not take undue risks and also miss-selling of products is curbed.

“For exposure beyond the computed exposure, the intermediary would be required to undertake rigorous due diligence and take appropriate documentation from the investor,” SEBI said in a statement.

**Co-location services**
SEBI also announced steps to strengthen the guidelines for algorithmic trading, including stock exchanges providing tick-by-tick data feed free-of-cost to trading members, tweaking the penalty framework to minimise orders that are way off the mark and enhancing certain disclosure requirements for stock exchanges. Exchanges have also been directed to offer shared co-location services that would reduce the cost for trading members.

**Lower cost for MFs**
For mutual funds (MFs), the regulator has reduced the cap for expenses charged for each scheme. The maximum limit has been reduced from 20 basis points of the daily net asset value of the schemes to 5 basis points, which would benefit the investors in the form of marginally higher net asset value (NAV) of the scheme.

Among other things, SEBI amended the enforcement framework for non-compliance of the listing regulations. This would allow exchanges to freeze the shareholding of the promoter and promoter group for non-compliance. SEBI also decided to initiate a public consultation process for a framework for listed companies that are in the midst of insolvency resolution process.

**LoU ban: govt. wants RBI to help**
The Finance Ministry has asked the RBI to look into the problems being faced by industry and banks following the abrupt ban on LoUs and provide some breathing space to them, sources said.

The Reserve Bank of India (RBI) this month banned the issuance of letters of undertaking (LoUs) and letters of comfort (LoC), used extensively for trade finance, following the unearthing of Nirav Modi fraud case.

Nirav Modi and associates, in connivance with some officials of the Punjab National Bank (PNB), used the LoUs to defraud the lender of more than Rs. 13,000 crore.
International

‘Emergency will improve security’
The emergency imposed marks the first time in seven years Sri Lanka has resorted to such a measure. The island nation was under a state of emergency for nearly three decades during the civil war. The war-time emergency ended in August 2011.
The current emergency measures give authorities sweeping powers to arrest and detain suspects for long periods, and deploy forces where needed.
President Maithripala Sirisena said the measures would “redress the unsatisfactory security situation prevailing in certain parts of the country”. “The police and armed forces have been suitably empowered to deal with criminal elements in the society and urgently restore normalcy,” he said.
Earlier, the Sri Lankan government came under severe attack in Parliament for “pandering to extremist forces” in the Sinhala majority community.
Leader of Opposition and senior Tamil politician R. Sampanthan said that the anti-Muslim attacks were indicative of a sense of impunity. “People seem to have the confidence that they can engage in such acts and that the arm of the law would not reach them,” he said.
Tamil National Alliance Jaffna district parliamentarian M.A. Sumanthiran said: “the fundamental belief that one must pander to the extremists within the majority community must change. Until then other communities that are numerically inferior will never feel like equal citizens.”
According to M.A. Nuhman, senior academic in Kandy, “the first major incident of riots in Sri Lanka was in 1915, targeting Muslims. The anti-Muslim sentiment among Sinhalese subsided a bit when Tamil militancy emerged. And after the war ended in 2009, it seems to have resurfaced,” he said.

North, South Koreas to hold landmark summit
The leaders of North and South Korea will hold a historic summit in the Demilitarized Zone (DMZ) next month after Pyongyang expressed willingness to give up its nuclear weapons in exchange for security guarantees, Seoul said.
The meeting, to take place in Panmunjom, the truce village in the DMZ, will be the third between the leaders of North and South, but the first to take place in the DMZ after summits in Pyongyang in 2000 and 2007.
The North is open to “frank” talks with the U.S. on de-nuclearisation, South Korea’s national security adviser Chung Eui-yong said after returning from a meeting in Pyongyang with leader Kim Jong-un.

Joint military exercises
Mr. Kim also reportedly said that he would “understand” if the South goes ahead with delayed joint military exercises with the U.S. that usually infuriate Pyongyang, a senior official at the South’s presidential office added.

Tuesday’s developments are the latest steps in a rapid Olympics-driven rapprochement on the peninsula.
U.S. President Donald Trump hailed “possible progress” on the North Korea nuclear impasse. “For the first time in many years, a serious effort is being made by all parties concerned,” he tweeted.
"The world is watching and waiting! May be false hope, but the U.S. is ready to go hard in either direction!” he said, keeping options open.

Later, the United Nations welcomed plans for a summit and said it was ready to help advance talks. “Obviously, we are encouraged by these discussions,” said UN spokesman Stephane Dujarric. “Anything that can further reduce military tensions is welcome.”
China’s foray into the Arctic region

China’s 360-degree hunt for resources and new trade routes has become unrelenting, undeterred by obstacles posed by geography, politics or technology. Its sharp focus on the Arctic — a vast area of unending snow, which is pitch dark for half a year and is known for its surreal ‘white nights’ for the rest — reveals Beijing’s unbending spirit to prevail against all odds.

The unintended consequences of climate change have reinforced Beijing’s interest in the Arctic. Rising temperatures are melting some of the thick sheets of ice of the Arctic Ocean. That, in turn, is opening channels through which ice-breaking ships can pass. Once it becomes navigable, commercial ships will be able to plough through the Arctic, opening shorter shipping routes. The ‘northeast passage’ will open up towards Europe, while the ‘northwest passage’ will head towards the U.S. and Canada.

China’s obsession with becoming a leading, and advanced, industrial heavyweight is also motoring Beijing towards the Arctic. It is estimated that beneath the wind-swept layers of ice, highly prized reservoirs of minerals exist — necessary for fuelling China’s long game towards global pre-eminence.

Geologists say the Arctic possesses 30% of the world’s undiscovered natural gas and 13% of its undiscovered oil reserves. But no one can really quantify how much the global “undiscovered” reserves are. That makes it hard to fathom with exactitude the size of the energy deposits of the Arctic.

In a white paper released in January, China announced that it will develop a Polar Silk Road (PSR). This would be another spur of its ever-mutating Belt and Road Initiative (BRI) — an ambitious undertaking of industrialising Eurasia through massive development of infrastructure and the provisioning of a dense network of trans-continental connectivity. Displaying its warm embrace of the digital economy, demonstrated by the rise of the global e-commerce giant Alibaba, or Wechat, China is focusing on cyber-connectivity while putting together its PSR.

China’s Ministry of Industry and Information Technology and state-owned China Telecom are participating in talks to build a 10,500 km fibre-optic undersea link across the Arctic Circle. The proposal also involves Finland, Japan, Russia and Norway as partners in this undertaking. The enterprise, called the Northeast Passage Cable Project, will provide China a new high-speed digital traffic link with European financial and data hubs.

Russia’s role

Russia is key to China’s success in the Arctic. Among its littoral countries, Russia claims the largest slice of the Arctic Ocean. Coupled with its massive mineral reserves in Siberia, Russia is fast becoming China’s chief natural-resource ally. Unsurprisingly, the state-owned behemoth China Development Bank is set to invest in the Russian energy company Novatek, which is heading the Arctic LNG II project. The deal would provide China access to the Arctic’s liquefied natural gas.

Significantly, the agreement would open up areas within Russia’s Exclusive Economic Zone in the Arctic, where the Chinese can carry out explorations, South China Morning Post reported. Beijing’s forays in the Arctic are a result of its long-term planning. China has invested in Iceland following the 2008 financial crisis. Eight years later, Chinese company Shenghe Resources purchased 12.5% of Greenland Minerals and Energy. China has also signalled its interest in two Iceland ports, as well as Norway’s Arctic Kirkenes port, as part of its deeper engagement with the Arctic.

Spy incident: 4 nations slam Russia

Tensions between Russia and the West continued to ramp up as France, Germany, Britain and the U.S. jointly accused Russia of involvement in the attack on Sergei Skripal and his daughter in Salisbury in early March, which they said involved the first “offensive use” of a nerve agent in Europe since the Second World War.

“It is an assault on U.K. sovereignty and any such use by a state party is a clear violation of the Chemical Weapons Convention and a breach of international law. It threatens the security of all of us,” they said in a joint statement.

All four shared Britain’s assessment that it was “highly likely” that Russia was responsible for the attack, and condemned Russia’s failure to address the “legitimate” request by the U.K. government to explain whether and how a nerve agent developed under a Russian programme could have gotten into third party control. That’s the only alternative to the Russian state’s direct involvement, they said.

The joint statement will be seen as a diplomatic victory for Prime Minister Theresa May who has been under pressure to show her diplomatic clout both across the Atlantic and within Europe. France had initially avoided blaming Russia directly, saying it awaited evidence first, before joining in the wider response.

European Commission President Donald Tusk also
joined in, expressing “full solidarity” with the British position “in the face of the brutal attack inspired, most likely, by Moscow”.

**Lowest point**

Relations between Britain and Russia have fallen to their lowest point since the Cold War, following the poisonings. Britain retaliated by announcing the expulsion of 23 Russian diplomats (the largest expulsion since 1985 when Britain expelled 25), and the revocation of an invitation to Russian Foreign Minister Sergey Lavrov to visit the country. It accused Russia of the “unlawful use of force”. At an urgent meeting of the Security Council in New York, the U.S. joined Britain in condemning Russia, pleading to stand in “absolute solidarity with Great Britain”. The U.S.’ Nikey Haley warned that if immediate action were not taken, Salisbury would not be the last time that a chemical attack happened on Western soil. Novichok, the type of nerve agent, which Britain says was used in the attack could not have been manufactured by “non-state actors”, Britain’s Representative Jonathan Allen said. He attacked Russia’s initial response that Britain was not following the protocol of the Organisation for the Prohibition of Chemical Weapons.

Under the OPCW’s Convention, Britain has “the right to lead our response… we have not jumped to conclusions,” he said. Speaking on the BBC earlier, Foreign Secretary Boris Johnson said a sample of the nerve agent would be sent to the OPCW.

Russia’s UN envoy VissalyNebenzia accused Britain of attempting to tarnish Russia with falsehoods, “irresponsible statements,” and “threats to a sovereign state”. “We do not speak the language of ultimatums and we will not allow us to be spoken to in that way,” he added, accusing Britain of being “afraid of having a genuine professional discussion on the topic,” by choosing the Security Council rather than the OPCW to level its accusations.

**Objective probe**

China also declined to condemn Russia. “We hope that a comprehensive objective and impartial investigation could be conducted based on facts in accordance with evidence…,” said the Chinese envoy, who added conclusions reached had to stand the test of ‘facts and history’. Britain has updated its travel advice to its nationals, ahead of this summer’s World Cup in Russia, warning of possible “anti-British sentiment or harassment”.

**Ethiopia’s ‘colour revolution’**

Unrest in some parts of Ethiopia has been taking the form of a “colour revolution”, with a clear intent to seize power. Defence Minister SirajFegessa declared earlier this month as former U.S. Secretary of State Rex Tillerson arrived in Addis Ababa. A strike in Oromia, a hotbed of anti-government protests for over two years, was choking the capital. A state of emergency was declared in February after Prime Minister HailemariamDesalegn resigned in the wake of continued protests.

Musa Ali, the chief elder responsible for an over 30,000 sq. km portion of north-eastern Oromia, told this reporter that federal forces arrested the deputy commander of the regional police heading a riot squad. The deputy head of the western Oromia’s KelemWolega zone’s administration and security office was also arrested, the zone’s vice administrator NebiyuNabsu said, after the dismissal of his boss, held out as instrumental in forging police-community relations.

Since Ethiopia suspended its Constitution on February 16, federal forces have arrested a swathe of Oromo police officials, Mayors, and high-profile administrators. BekenTadesse, a lecturer at Addis Ababa University, says hardliners are using the emergency to take retaliatory action against the Oromia administration over its measures against ‘controbandists’ — figures in the army and the federal government said to control checkpoints and illicit businesses on the internal boundary between Oromia and Ethiopia’s Somali region. The conflict between the Oromo administration and the contrabandists is estimated to have displaced a million people.

In East Hararghe at the upper extreme of the boundary, the Ethiopian National Defense Forces shot dead five Oromo and wounded 13 on February 11 at Hamaresa, a site that sheltered about 5,000 Oromo who fled their homes, Karim Bashir, a doctor, said. “Half the population fled into the forests.”

**On alert**

After Mr. Tillerson left, the army announced that it “mistakenly” killed nine civilians and injured 12 at the southern extreme of the boundary in Moyale, a town divided between Kenya and Ethiopia. Oromia’s Justice Bureau spokesperson was reportedly arrested this week after disputing that the killings were a “mistake”. Once a military post to control the border of Ethiopian monarchy’s empire against the British in Kenya, Moyale has become a theatre of shifting allegiances between the military wing of the banned Oromo Liberation Front, local security personnel, the Ethiopian National Defense Forces, clan interests and local militias.

State-owned Ethiopian Broadcasting Corp. has put the numbers who have fled Moyale at 40,000, while the Mayor of the city has given a figure of 8,200. “People in the
border villages along the stretch of Moyale are moving into Kenya at different entry points,” said Halkano Halake, the spokesperson for the Governor of Marsabit County on the Kenyan side of Moyale. Over 800 asylum seekers are now hosted in eight temporary camps in Marsabit County, its Governor, Mohammed Mohamoud Ali, said in a statement. “The emergency situation is worsening”, the food security situation has “reached a crisis phase”, and some of the camps are “not secure due to proximity to the border”, the statement said.
In the southern borderlands, the local Borana, Gabra, Gari, and Somalis are armed. The current state of heightened tensions could convert a small event into a bigger conflagration. “Everyone is on the alert,” said Mr. Halake.

N. Korea agrees to talks with South
North Korea agreed to hold high-level talks with South Korea next week to discuss logistics for a rare inter-Korean summit, the South’s Unification Ministry said. The two sides will each send a three-member delegation to the border truce village of Panmunjom for talks aimed at paving the way for a summit due in late April, it said. South Korea had proposed holding high-level talks with the North to discuss details including the summit’s dates and agenda.
The talks will take place at the Unification Pavilion building on the northern side of Panmunjom, which sits on the border, with Seoul’s delegation led by Unification Minister Cho Myoung-gyon and his counterpart Ri Son Gwon heading Pyongyang’s.

The decision by President Moon Jae-in and North Korean leader Kim Jong-un to meet came amid a rapid rapprochement kicked off with the recent Winter Olympics in the South.
The U.S. and South Korea had announced that their annual joint military drills would go ahead next month, but the main exercise will be shortened by a month.

The exercises have caused tensions for years, with Pyongyang condemning them as preparations for an invasion of the North.

Rapid rapprochement
The inter-Korean summit is due to be followed by a face-to-face meeting between U.S. President Donald Trump and Mr. Kim by the end of May. Following a period of heightened tensions stoked by the North’s nuclear and missile tests last year, a rapid rapprochement has been under way on the Korean peninsula.
The North broke its silence on the diplomatic thaw with Washington and Seoul, with its official KCNA news agency saying Pyongyang was driving the peace initiative and rejecting suggestions that sanctions forced it to dialogue table.

As diplomats scurry to arrange the North-South talks as well as the proposed Trump-Kim meeting, the North’s silence has raised concerns over its intentions.

North’s media silent
North Korean State media have not yet directly mentioned the summits. Analysts say the North is carefully watching to see how events — including the U.S.-South Korea military drills — play out before making them public to its people.

RodongSinmun, the official daily of the North’s ruling Workers Party, attacked the U.S. for continued sanctions and pressure on Pyongyang despite diplomatic progress. “The United States has miscalculated. The stronger the U.S. pressure, the stronger the DPRK [North Korea]... If the U.S. fails to draw a lesson and continues acting recklessly, it would surely be in for a greater humiliation and defeat,” it said.

A tour across London’s ’Red Square’, tracing roots of dirty money
“Welcome to Red Square,” says Mark Hollingsworth, the author of Londongrad: From Russia with Cash; the Inside story of the Oligarchs, as the coach, packed with journalists, passes through Eaton Square, a smart garden in the London neighbourhood of Belgravia. A 2016 report by Lloyds Bank named Belgravia as the most expensive street in Britain, with the average home costing £17 million.
The street earned the ‘Red’ nickname because of the high density of Russian money that had unobtrusively gone into the square in recent years. “[The people who bought them] don’t actually live there... they launder it via Cyprus, the British Virgin Islands... an offshore company owned by an offshore trust and it ends up in London,” he said. “It’s not about making more money... it’s about preserving it.”
Mr. Hollingsworth is one of the transparency campaigners who take part in regular “Kleptocracy” tours of London, that focus on the way dirty money from across the world has wended its way to the city’s hot property market.
It’s run by the Campaign for Legislation Against Money-laundering in Property by Kleptocrats (ClampK), formed in 2015 by Roman Borisovich and Arthur Doohan, both bankers turned activists, and supported by a host of anti-corruption organisations.

Skripal attack
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Skripal attack
Past tours have largely adopted a more general theme, but the most recent one on Russia felt particularly relevant in the context of the poisoning of the former double agent, Sergei Skripal, and his daughter in Salisbury in early March. “We must... expose the flows of ill-gotten cash between the Russian state and billionaires who become stupendously rich by looting their country and subsequently use London to protect their wealth,” Labour leader Jeremy Corbyn told the House of Commons earlier this month.

“London has become the home of dodgy money and we need to change that,” says Chris Bryant, the Labour MP who heads the all-party parliamentary group on Russia, on board the bus. Transparency International estimates that of around £4.4 billion of property in the U.K. is owned with suspicious wealth — that is to say from individuals either with existing charges of corruption against them or face suspicions of it. Around £940 million comes from Russian investors, making Russia the second largest source of such funds after the UAE. However, with the group relying on data from openly accessible records and occasional leaks such as the Panama Papers, “we believe these figures are just the tip of the iceberg...the real figure is probably a lot higher,” says Rachel Davies Teka, the head of advocacy at Transparency International.

“You may be asking yourself: Why is London such a magnet for this money,” she asks, pointing to a host of factors, including Britain’s close ties to key secrecy jurisdiction as across the world, the “blanket” range of services to corrupt individuals — from PR to estate agents that “may be complicity or unwittingly” help them launder their cash, and holes in its anti-money laundering system.

“Let’s pretend... I’m a health minister for a foreign government... siphoning money from the health budget — unfortunately London makes it pretty easy to get that money in anonymously. All I have to do is open a couple of shell companies where my true identity is obscured, and I can come and buy some London property is and the crazy thing is I wouldn’t even have to tell the Land Registry who owns that property upon purchase.”

**Tighter rules**

Transparency is crucial to this: under the current system, properties can be registered to offshore companies, with nominee shareholders acting on behalf of the actual owners — making the money almost impossible to trace. Moreover, TI believes that for the first few years after the government brought in a new “investor” visa scheme in 2008, tying the speed at which residency was accorded to large investments into the U.K., a low threshold of checks enabled dodgy money to flood in to the city. Of £3 billion that entered Britain between 2008 and 2015, just under a quarter came from Russia, before rules were tightened, and once the tougher checks regime came in, appetite for the visa dwindled.

Vladimir Ashurkov, a Russian political activist granted asylum in Britain three years ago, who joined the tour, argued that London’s ‘permissiveness’ when it came to illicit money had been a factor in enabling Russia to be more aggressive outside its border.

Recent changes have offered campaigners some hope: last year, a watered down version of the U.S. Magnitsky Act, which allows individuals suspected of human rights abuses to be denied entry and have their assets frozen, was passed. The measures could be toughened in the wake of the Skripal poisoning.

At the end of January, a new investigative tool became available to U.K. enforcement authorities as Unexplained Wealth Orders came into force, which requires individuals, in certain specific circumstances, to explain how assets were lawfully acquired, or face the loss of their property.

Even more important could be legislation further down the pipeline: laws that would require the ultimate owners of properties to be disclosed.

“We need to deal with the money,” says Labour Minister Helen Goodman, who briefly joined the tour, highlighting the over 86,000 properties identified by Global Witness that are owned by anonymous companies. “It’s often assumed that there are no votes on the issue... but it is a domestic issue too,” Mr. Doohan, argues, as the group strolls through Kensington Palace Gardens, a leafy avenue by Hyde Park that is home to embassies as well as some of the city’s grandest privately owned properties.

With the high prices paid by often dodgy-money at the top end impacting the London’s property market, it has helped push the city to become among the most unaffordable cities to live in globally. It also poses an “existential” threat to governance in Britain, in the long run, he warns. “Dirty money has no scruples abroad or at home...
India and The World

India to help build nuclear plant in Bangladesh

India, Bangladesh and Russia have signed a tripartite memorandum of understanding (MoU) for cooperation in the construction of the Rooppur nuclear power plant in Bangladesh.

"Today [Thursday] was a landmark event for both our countries — and the industry as a whole. We are confident that this is the first step towards the formation of a new, forward-looking cooperation agenda in the region," said Nikolay Spassky, Deputy Director-General for international relations of Rosatom, the Russian State Atomic Energy Corporation.

The MoU was signed in Moscow by the Department of Atomic Energy of India, the Ministry of Science and Technology of Bangladesh and Rosatom.

Russia is building the nuclear power plant in Bangladesh on a turnkey basis.

Indian companies can be involved in construction and installation works and in the supply of equipment of a non-critical category.

Tarini reaches Cape Town in the last leg of its journey

An all-women crew leading the Indian Navy Sailing Vessel (INSV) Tarini docked at a port in Cape Town in South Africa, in the last phase of its maiden voyage to circumnavigate the globe.

The expedition is being covered in five legs, with stopovers at Fremantle in Australia, Lyttleton in New Zealand, Port Stanley in Falklands, and Cape Town.

The crew encountered rough seas and extremely cold temperatures, coupled with stormy weather conditions, making the circumnavigation highly daunting, the Navy said in a statement. The vessel's passage through the Indian, Pacific and Atlantic oceans so far has witnessed winds in excess of 60 knots and waves up to 7 metres high.

This is the first-ever Indian circumnavigation of the globe by an all-women crew. The vessel is skippered by Lieutenant Commander Vartika Joshi and the crew comprises Lieutenant Commanders Pratibha Jamwal, P. Swathi and Lieutenants S. Vijaya Devi, B. Aishwarya and Payal Gupta.

Defence Minister Nirmala Sitharaman had flagged-off the expedition from Goa on September 10.

The vessel has covered 1, 75,00 nautical miles from Goa. The indigenously-built INSV Tarini, a 56-foot sailing vessel, was inducted into the Navy earlier this year.

Pakistan summons Indian envoy

Pakistan summoned India’s Deputy High Commissioner J.P. Singh for the second consecutive day over “unprovoked firing” by Indian troops across the Line of Control.

The Foreign Office said Director-General (South Asia & SAARC) Mohammad Faisal summoned Mr. Singh, and condemned the “unprovoked ceasefire violations” by the Indian forces along the LoC in the Bhimber/Samahinisectors.

The firing killed a civilian and injured his wife and son, it said, adding that Indian troops were using “heavy mortar”.

Mr. Faisal said that despite calls for restraint, India continued to violate the ceasefire.

415 ceasefire violations

India carried out more than 415 ceasefire violations along the Line of Control and the Working Boundary so far in 2018, resulting in the killings of 20 civilians and injuries to 71 others, he said.

He said this “unprecedented escalation in ceasefire violations by India is continuing from the year 2017 when the Indian forces committed 1970 ceasefire violations”.

“The deliberate targeting of civilian populated areas is indeed deplorable and contrary to human dignity, international human rights and humanitarian laws. The ceasefire violations by India are a threat to regional peace and security and may lead to a strategic miscalculation,” Mr. Faisal said.

Pakistan urged the Indian side to respect the 2003 ceasefire arrangement; investigate this and other incidents of ceasefire violations; instruct the Indian forces to respect the ceasefire, in letter and spirit; and maintain peace on the LoC and the Working Boundary.

‘Gwadar, Chabahar not comparable’

The development of the Chabahar port in Iran is a commercial enterprise, whereas that of the Gwadar port in Pakistan by China is a strategic venture with long-term implications on the region, former Union Minister Manish
How to make sense of a China-India encounter

Differing Indian interpretations of a brief May Day exchange between China’s Chairman Mao Zedong and India’s charge d’affaires Brajesh Mishra in 1970 delayed the return of an Ambassador to Beijing by six years. The diplomatic opening to India from the Chinese came after years of non-contact and has been the subject of much analysis in both countries.

In a note for Prime Minister Indira Gandhi, Natwar Singh — posted in the PMO at the time — said the encounter was “not an earth shattering event”. Mr. Singh, who went on to become India’s External Affairs Minister, felt it would be wrong to dismiss the meeting as a “casual encounter”, but at the same time one should not “read too much into it”.

This note is among hundreds of documents collated by Avtar Singh Bhasin, formerly with the Ministry of External Affairs (MEA), in a five-volume documentary study of India-China relations, published in association with the policy planning division of the Ministry.

After his encounter at the Tiananmen Square, Mr. Mishra sent a “most immediate” cable to Mrs. Gandhi and External Affairs Minister Dinesh Singh, the same day quoting Mao: “We cannot keep quarrelling like this. We should be friends again. India is a great country … we will be friends again someday.’ I replied ‘We are ready to do it today.’”

“In anything connected with Chinese leaders it is difficult to say whether it [the conversation] was premeditated or not. My judgment is that Mao was fully briefed before arriving on the [Tiananmen] rostrum [where other diplomats were also present]. In any case, expression as above of friendship by Mao himself should be given the weightiest consideration,” Mr. Mishra informed New Delhi in a four-paragraph cable.

Guiding principle

On May 6, a Chinese Foreign Ministry official, Yang Kung Su, told Mr. Mishra after repeated queries, “Our great leader, Chairman Mao, has talked to you personally. That I think is the greatest concrete action on our side and it is the principle guiding the relations between China and India.”

During the meeting, Mr. Mishra lamented the fact that there had hardly been any contact between the two countries in the past 11-12 years and suggested “concrete action” to improve relations. “There is no trade between us. Even our Embassies are not full-fledged.”

In June 1970, Mr. Mishra came to Delhi and met Mrs. Gandhi and her trusted officials including P.N. Haksar and T.N. Kaul. He suggested that India should send an Ambassador to Beijing since G. Parthasarathy had completed his term and Delhi did not appoint a replacement. In a 2006 interview to the Indian Foreign Affairs Journal, Mr. Mishra, who went on to become Prime Minister A.B. Vajpayee’s Principal Secretary, said Mrs. Gandhi was inclined to support sending an Ambassador but Mr. Haksar “turned the meeting around”. Mr. Mishra suggests in the interview that negotiations for an Indo-Soviet friendship treaty were at an advanced stage at the time.

The late diplomat also said in the interview that in early 1971, Chinese Premier Zhou Enlai conveyed his congratulations through him in Beijing to Mrs. Gandhi for her election victory, suggesting continuity in Chinese policy of making up with India from the May 1 conversation.

It would be further five years before External Affairs Minister Y.B. Chavan announced in the Lok Sabha on April 15, 1976, that K.R. Narayanan, who rose to be President, would be India’s new ambassador to China.

India, China step up engagement

India and China are seeking to step up the pace in improving ties, with two high-level ministerial meetings this month leading to a summit meeting between Prime Minister Narendra Modi and Chinese President Xi Jinping,
and a slew of engagements through the year, officials in Delhi and Beijing confirmed to The Hindu.

“The leaders had decided during their [post-Doklam] Xiaomen meeting in August last year that they must heighten the frequency and level of meetings, and we hope to see many more engagements in 2018 than before,” a senior diplomat told The Hindu.

He referred to 2017 as a “difficult year” for ties, with the 73-day Doklam standoff and differences over Masood Azhar and the Nuclear Suppliers Group membership raising temperatures.

**Official olive branch**

In signs that the two sides are also setting the stage for more harmonious dealings ahead, China agreed to Pakistan’s nomination to the FATF grey list on terror finance last month, while New Delhi has reportedly asked officials to be careful of China’s sensitivities.

Sources said the Defence Ministry had put off its Institute of Defence Strategic Analysis (IDSA) Asian Security Conference scheduled for March 6 to 8, which was expected to take a more hawkish line on Chinese security policy and the Belt and Road initiative (BRI). “It appears India doesn’t want hard opinions on China aired from the government’s most prominent defence think-tank,” a source privy to the decision said.

Later this month, the government will host GuoYezhou, Vice-Minister of the International Department of the Communist Party of China (CPC), a key figure in the party overseen foreign policy formulation.

The dates of Mr. Guo’s visit, who will be part of a high-level delegation, have not been confirmed yet, primarily because of the ongoing session of the National People’s Congress (NPC), China’s parliament, which will continue till March 20.

**Trump’s trade threat**

Meanwhile, Chinese Commerce Minister Zhong Shan or his deputy are expected to visit for talks with Commerce Minister Suresh Prabhu aimed at improving trade imbalances.

Officials hope they will attend an informal ministerial meeting of the World Trade Organisation (WTO) organised by the Commerce Ministry on March 19 and 20.

The WTO ministerial meeting is being seen as a significant platform of countries worried by the U.S.’s tough position on tariffs and President Donald Trump’s threats of a “trade war”, even as he called the WTO a “disaster for America”.

The next important engagement will be the India-China strategic economic dialogue, held between officials of the NITI Aayog and China’s top planning body, the National Development and Reform Commission (NDRC). “This is a highly important dialogue where the nuts and bolts of specific projects in five different areas will be discussed threadbare,” a diplomatic source said.

Five working groups will hold detailed discussions on infrastructure, energy, hi-technology, investments and resource conservation.

Mr. Modi is expected to meet President Xi in June at the Shanghai Cooperation Organisation (SCO) summit in Qingdao.

But at least two officials did not rule out the possibility of an “informal summit” before that.

All eyes are also on India’s participation at the Boao Forum for Asia (BFA) meeting in Beijing from April 8 to 11, which is China’s equivalent of the World Economic Forum. In November, India has agreed in principle to participate in the high-profile import exhibition in Shanghai, despite reservations about China’s Belt and Road Initiative (BRI).

**Indian, US officials in Pokhran to test fire howitzer**

A group of officials from India and the United States were at the Pokhran firing range to test-fire M777 ultra-light howitzers in the wake of an accident during its trial in September last year.

In May 2017, the Army took delivery of two M777 ultra-light howitzers made by the BAE Systems US under a contract signed in 2016.

During trial firing, a projectile had burst in the barrel. After the accident, the two sides formed a joint team to examine the issue. The team will review Monday’s results.

**India, France joins hands for Indian Ocean security**

India and France joined hands in ensuring freedom of navigation in the Indo-Pacific region. Both sides also announced a new phase of cooperation in space security focussed on the maritime domain and a fresh logistics agreement that will allow their defence forces to closely cooperate on mutually agreed operations.

“Whether it is the environment, or maritime security, or marine resources, or the freedom of navigation and over flight, we are committed to strengthening our cooperation in all these areas. And therefore, today, we are releasing a Joint Strategic Vision for our cooperation in the Indian Ocean area,” said Prime Minister Narendra Modi, announcing the initiative that will open up vast French
maritime domain in the Indian Ocean region to India.

**Common concerns**
The Joint Strategic Vision of India-France Cooperation in the Indian Ocean Region stated that India and France share common concerns on freedom of navigation in the region and will tackle challenges to over-flight and threat of weapons of mass destruction. The agreement has a vast scope stretching from “countering maritime terrorism and piracy” to “building maritime domain awareness” said a joint statement issued at the end of the official talks. The statement also said it would support “greater coordination in regional/international fora in the region.”

This is the second major maritime agreement India has signed in the last six months following the Quadrilateral agreement with Australia, Japan and the U.S. in October 2017.

Presenting the French perspective on maritime and military cooperation, President Emmanuel Macron said, “The Pacific and the Indian Oceans cannot become zones for hegemonic power and we are, therefore, building a strategic partnership. The same is true for our defence cooperation signed a while ago.”

The logistics support agreement is likely to “extend” both Indian and French ability to respond to common challenges. The agreement “seeks to extend logistical support on reciprocal access to respective facilities for Indian and French armed forces,” said the statement. Sources indicate that while reviewing the ongoing military contracts and discussing the commissioning of INS Kalvari, the first Scorpene submarine made in India, Mr. Macron suggested extending the bilateral contract for the supply of more of these conventional submarines.

**IAF to embark on a long shopping sortie for a jet**
Almost two decades after it began a search for a fighter aircraft, the Indian Air Force is back to square one. The IAF will begin the search again to arrest its falling squadron strength, as the Union government had scrapped the medium multi-role combat aircraft (MMRCA) tender after ordering 36 Rafale fighters from France in flyaway condition.

“The Request for Information (RFI) for selecting a new fighter aircraft is expected to be issued before the DefExpo in April. It will be an open tender and not limited to single-engine aircraft,” a defence official told The Hindu. Earlier, the IAF was looking for a single-engine jet to replace the MiG-21s and MiG-27s. The new jets were to be manufactured in India by the private industry under the Strategic Partnership model. However, the contest is now being opened up.

**Contest renews**
“The contest for single-engine jets has only two contenders and it would end up being a single-vendor situation on technical evaluation. So it has been decided to widen the contest to avoid issues later,” the official said.

While the Lockheed Martin F-16 and SAAB Gripen are single-engine fighters, the contest will be now open to Boeing F-18, Dassault Rafale, Eurofighter Typhoon and Russian MiG-35, all of which were part of the earlier MMRCA contest. The open tender will essentially be MMRCA all over again.

“The IAF has already evaluated all the aircraft in the MMRCA contest. So once the technical evaluation process starts, selection of one aircraft can be completed in two years. After that, it is the contract negotiations. Concluding the contract depends on how fast we can close it,” an IAF source said.

In 2000, the government decided to procure 126 fighter jets, but it was only in 2007 that the RFI, the first step in the long procurement process, was issued for 126 aircraft under the MMRCA deal expected to cost around $12 billion.

However, with contract negotiations reaching a deadlock, in 2015, Prime Minister Narendra Modi scrapped the deal and announced an Inter-Governmental Agreement with France for 36 Rafales at a cost of €7.87 billion, including aircraft, spares, weapons and a maintenance and performance guarantee for five years.

**Final choice**
Under the new deal, the IAF is looking for over 100 aircraft, and the official said that whether single-engine or twin-engine, the aircraft were equally competent and the final choice would depend on the extent of technology transfer and price.

Another reason for widening the tender is for the selection of a competent Indian partner. In anticipation of a single-engine tender, Lockheed and SAAB had tied up with prospective Indian partners.

“The Indian SP partner has to be selected by the government through a competitive evaluation. So it is good to have a wider pool of both OEMs [original equipment manufacturer] and Indian partners to choose from,” the official said.

**Additional Rafales**
One defence official observed that procuring at least two more squadrons of Rafale jets would make economic, operational and logistical sense as India is spending €2
In response to positive remarks by China’s Foreign Ministry, Raveesh Kumar, the spokesperson for the External Affairs Ministry, said that China had noted “positive remarks by the Indian side”. To a question during his routine briefing, Foreign Ministry spokesperson Lu Kang said that China had noted “positive remarks by the Indian side”.

S-400 deal may be finalised by March 31

India and Russia could be just weeks away from signing one of the biggest defence deals between the two sides in recent history, said two senior defence sources this week.

The contract negotiations for the purchase of the S-400 Triumph long range air defence systems are in the final stages, and are expected to be closed by March 31. India is planning to buy five systems that is expected to cost about Rs. 39,000 crore and is considered one of the most potent Surface to Air missile systems in the world. It can track and shoot down a range of incoming airborne targets at ranges of up to 400km.

“We expect to conclude the S-400 contract within this financial year,” a defence source said.

In 2016, the two countries had concluded the Inter-Governmental Agreements for five S-400 systems and four stealth frigates after which the contract negotiations began to conclude a commercial contract.

Officials termed the negotiations as “very complex” as there were thousands of pages of documentation to be discussed. Russia has already conveyed to India that the deal should not have any offset clause as it is a strategic system.

Noted positive remarks by India, says China

China stepped up the ongoing messaging between Beijing and New Delhi, highlighting a steady improvement in their post-Doklam ties.

To a question during his routine briefing, Foreign Ministry spokesperson Lu Kang said that China had noted “positive remarks by the Indian side”.

Mr. Lu was apparently referring to observations by Raveesh Kumar, the spokesperson for the External Affairs Ministry.

In response to positive remarks by China’s Foreign Minister Wang Yi regarding the prospects of Beijing-New Delhi ties, Mr. Kumar said that India was “willing to work with the Chinese side to develop our relations based on commonalities while dealing with differences on the basis of mutual respect and sensitivity to each other’s interests, concerns and aspirations”. He said that as “two major countries and large economies, relations between India and China are not just important bilaterally, but also have regional and global significance”.

Guided by consensus

Mr. Lu said that the Chinese Foreign Minister, at his annual press conference, “elaborated on China’s basic position on its relations with India”.

“We wish to work with the Indian side to take the important consensus between the two leaderships as our guidance to improve our mutual trust, enhance mutual beneficial cooperation, manage our differences and ensure the correct track of our relations’ development,” Mr. Lu observed.

During his media conference, Mr. Wang had said in response to a question on the flurry of visits by the Chinese and Indian officials after the 73-day Doklam standoff: “The Chinese dragon and the Indian elephant must not fight each other but dance with each other. If China and India are united, one plus one will not only include two, but also 11.”

Mr. Wang and Chinese State Councillor Yang Jiechi visited India in December, in the backdrop of the post-Doklam meeting between Prime Minister Narendra Modi and Chinese President Xi Jinping at Xiamen in September.

India hails Maldives decision

India welcomed the Maldives’ decision to lift the state of emergency.

A statement from the Ministry of External Affairs urged Male to bring about a genuine political process that would meet the aspirations of the people. "We welcome the revocation of the state of emergency in the Maldives. While this is one step towards addressing the issues related to the prevailing political situation, a number of concerns expressed by the international community remain to be addressed," it said.

The statement came hours after Male lifted the state of emergency, which was declared on February 5 after the Supreme Court ordered the government of President Abdulla Yameen to free political prisoners and rivals.

India urged all institutions of Maldives to work smoothly within the constitutional parameters, saying: "It is important to ensure credible restoration of the political process,
as well as the rule of law, before the elections.

**India-China ties see a ‘Xiamen reboot’**
Prime Minister Narendra Modi’s telephone call to Chinese President Xi Jinping after his election for a second term was part of the ‘Xiamen process’ — a calibrated effort to rebuild ties that had been jolted last year by the Doklam military stand-off.

“It would be correct to call the energetic efforts to re-enable ties between India and China as the ‘Xiamen processes. After all it was at the sidelines of the Xiamen BRICS summit that Prime Minister Modi and President Xi decided to give a firm direction on re-building post-Doklam ties,” a highly placed source told The Hindu.

The source said a decision had been taken to congratulate Mr. Xi after he was elected for a second presidential term.

“Ultimately, it was the Prime Minister who decided to call President Xi on the phone to congratulate him personally.”

Sources said the call by Mr. Modi has set the tone for his meeting with Mr. Xi at Qingdao — the venue of the Shanghai Cooperation Organisation (SCO) in June. No other “informal” meeting between the two leaders is planned so far ahead of the SCO conclave.

It is anticipated that the Qingdao meeting would further “change the narrative for the better”, and set the stage for a bilateral summit, possibly later in the year.

**More high-level visits**
The step-by-step rebuilding of the post-Doklam ties began soon after the Xiamen summit, with the back-to-back visits to India in December by the Chinese Foreign Minister Wang Yi and of State Councillor and politician member Yang Jiechi.

Several high-level visits are now in the pipeline. China’s Commerce Minister Zhong Shan is to participate in the India-China Joint Economic Group meeting that Commerce Minister Suresh Prabhu would host. It is likely that the larger fallout of the ongoing trade tensions between China and the U.S. would be part of the conversation.

Other high-level engagements between the two governments include a visit by External Affairs Minister Sushma Swaraj beginning April 23. A visit by Defence Minister Nirmala Sitharaman is also in the pipeline.

The India-China strategic economic dialogue would be held in Beijing on April 13-14, between the NITI Ayog and the China’s top planning body, the National Development and Reform Commission.

**U.S., India holds naval training**
Indian Navy’s Talwar class frigate INS Tarkash carried out a “greeting and training” exercise with the U.S. Navy’s Theodore Roosevelt Carrier Strike Group (TRCSG) which was until now involved in operations against the Islamic State in the Arabian Gulf.

INS Tarkash sailed in formation with aircraft carrier USS Theodore Roosevelt, guided-missile destroyer USS Preble (DDG 88) and other ships on March 25 as part of the exercise, the U.S. Embassy said here in a statement. During the exercise, personnel from both sides “practised working together and strengthened their crew’s ship handling,” the embassy said.

“Exercises included drills in communications and navigating in several close formations,” it said.

“This exercise offered a unique opportunity to further our capabilities to operate with and learn from one another,” Commander Allen Maxwell Jr., Commanding Officer of USS Preble, which is part of the TRCGS, was quoted as saying.

Ten Indian sailors toured spaces aboard Preble such as a combat information centre, a central control station and the bridge, while 10 Preble sailors visited Tarkash, the statement said.

USS Preble is currently deployed to the U.S. 7th Fleet area of operations with the aircraft carrier USS Theodore Roosevelt, the flagship of Carrier Strike Group 9, along with the guided-missile cruiser USS Bunker Hill, and guided-missile destroyers USS Halsey, USS Higgins and USS Sampson.

The TRCSG will now be in the U.S. 7th Fleet area responsible for counter-piracy, freedom of navigation operations and training.

**India, China plan FTA breakthrough**
Commerce Minister Suresh Prabhu and his Chinese counterpart, Zhong Shan, met here for the first high-level contact between both sides that decided to “reset” their ties this year in the run-up to a Xi-Modi summit meeting in China.

In exclusive written replies to The Hindu, Mr. Zhong, who co-chaired the 11th meeting of the India-China Joint Group on Economic Relations, Trade, Science and Technology with Mr. Prabhu, said a free trade agreement (FTA) between India and China would be negotiated in due course, which would be a breakthrough in ties.

**On economic ties**
Since 2014, President Xi Jinping and Prime Minister Narendra Modi have met on several occasions. Mr. Zhong
said they had decided that the two countries would build a closer partnership in development and deepen cooperation in all areas. With the care and personal support of the Chinese and Indian leaders, the trade and economic ties between the two countries had kept a fast-growing momentum.

In 2017, the bilateral trade reached $84.4 billion, registering a growth of 20.3% from the year before and a record high. In particular, China’s import from India soared by 40%, helping ease the bilateral trade imbalance. China remained India’s largest trading partner. India had become one of the most important overseas investment destinations for Chinese companies.

**Talks with Prabhu**

Mr. Zhong said that at the 11th session JEG meeting, he and Mr. Prabhu had in-depth discussions and the two sides had reached a series of important consensus. First, the two sides would jointly promote the synergy between China’s Belt and Road initiative and India’s development strategies, including the “15-year Development Agenda”, “Make in India” and “Digital India” to deepen mutually-beneficial cooperation and share development experience. Second, the two sides would promote India’s exports to China so as to address the trade imbalance between the two countries.

China welcomed the participation of Indian businesses in the agricultural, pharmaceutical and IT sectors, and the participation of producers of manufactured goods. China would provide Indian participants with preferential arrangements. Third, the two sides agreed to set up a special working group to draw a road map for developing two-way trade ... The two sides supported the multilateral trading system and safeguard the interests of developing members. Both sides would demonstrate flexibility to reach at an early date a modern, comprehensive and mutually beneficial RCEP agreement of high standards. The two sides are also considering positively launching in due course negotiations on a regional trade arrangement or free trade agreement between China and India.

**India and Japan commit to Indo-Pacific strategy**

India is Japan’s “most important” partner in its “Free and Open Indo-Pacific Strategy,” said Japanese Foreign Minister Taro Kono, as both countries agreed to step up cooperation in their “Special Strategic and Global Partnership” during annual consultations and exchanged yen loan agreements for $1.4 billion.

“Our Free and Open Indo-Pacific Strategy and India’s Act East Policy should be further merged,” said Mr. Kono, in remarks that appeared to target China’s actions in the South China Sea.

“Our growing convergence on economic and strategic issues is important for peace, stability and prosperity in the Indo-Pacific region,” said External Affairs Minister Sushma Swaraj.

Ms. Swaraj and Mr. Kono discussed a wide range of bilateral issues during the 9th India-Japan Strategic dialogue in Tokyo, while setting the agenda for the visit of Prime Minister Narendra Modi to Japan for the annual summit with PM Shinzo Abe.

They also witnessed the exchange of documents for loans from Japan to India for projects including the Mumbai metro line from Cuffe Parade, a sea water desalination plant and a intelligent transport system to reduce traffic congestion in Chennai, tree-planting schemes in...

**Indus Commission talks today**

India and Pakistan will go ahead with talks on the Indus Waters Treaty despite an upsurge in tensions over the LoC crossfire and allegations of harassment of diplomats in Delhi and Islamabad, External Affairs Ministry sources confirmed.

According to the treaty provisions, the 114th meeting of the Permanent Indus Commission (PIC) will take place in India on March 29 and 30 in New Delhi to hold technical deliberations on various issues, they said.

India’s Indus Water Commissioner P.K. Saxena, technical experts and a representative of the Ministry will meet a six-member delegation from Pakistan, led by Syed Muhammad Mehar Ali Shah.

The last meeting was held in Islamabad in March 2017, a significant move at the time as it came after the “surgical strikes” by India across the Line of Control, and the government’s announcement that it would reconsider its position on the 1960 treaty with Pakistan after terrorist attacks in Uri. While the government kept its treaty commitments to meet, it has been exploring ways to utilise its share of the Indus waters more efficiently and to the maximum permissible.

**Project reports**

Ahead of the PIC meeting, Water Resources Minister Nitin Gadkari announced that three dams would be built in Uttarakhand to further that effort. “Water from our [share of] rivers was going into Pakistan. We are making detailed project reports to stop that from happening and water will be given to Punjab, Rajasthan, Delhi and Haryana,” Mr. Gadkari said in Rohtak.
Himachal Pradesh as well as loans for the North East connectivity project.

‘Cannot reveal Rafale details due to new pact’
The Union government cannot disclose details of the Rafale deal as India and France had recently signed an agreement to protect classified information exchanged between the two sides, according to officials.

The government told Parliament this week that the two sides signed the agreement when French President Emmanuel Macron visited India on March 10.

“An agreement between India and France regarding the Exchange and Reciprocal Protection of Classified or Protected Information was signed on March 10, 2018 during the visit of President of France to India,” Minister of State for Defence Subhash Bhamre told Lok Sabha.

This new treaty would replace an agreement of 2008 and is the reason why the government would not disclose details of the deal for the purchase of 36 Rafale fighters from France, officials point out.

Mr. Bhamre further said: “This agreement defines the common security regulations applicable to any exchange of classified and protected information between the two countries.” The Minister did not provide further specifics of the agreement.

The new pact is significant in the wake of the Opposition, especially the Congress, alleging a financial scandal in the purchase of the 36 Rafale fighter jets through a government-to-government deal, instead of the 126 fighter aircraft deal through competitive tendering that was under way.
Science, Tech. and Environment

Dual mechanism for embryonic stem cells to maintain pluripotency

Embryonic stem cells are capable of generating all the cell types that compose the organs and systems of the human body. Now, researchers at Pune’s National Centre for Cell Science (NCCS) have found a dual mechanism that keeps specific genes off, which helps the embryonic stem cells maintain pluripotency — their ability to give rise to all the cell types. The dual mechanism functions in such a way that even if one mechanism fails, the other can function as a back-up and help the embryonic stem cells maintain pluripotency.

Role of endocytosis

Embryonic stem cells contain multiple endocytosis-associated genes whose expression is suppressed unlike in the case of the specialised or differentiated cells. Some of the genes are directly responsible for or involved in the regulation of the transport of molecules present on the cell surface membrane to the interior of the cell. The precise mechanism by which the expression of endocytosis-associated genes are turned off in embryonic stem cells and the role of endocytosis (transport of molecules from the membrane surface to inside the cell) in maintaining pluripotency was not known. A team led by Dr Deepa Subramanyam from NCCS has deciphered them. The results were published in the journal Scientific Reports.

“We attempted to identify and ascertain if certain genes that are associated with endocytosis have their expression kept under check or not in stem cells, and if these genes had any role in maintaining the stemness of embryonic stem cells,” says Dr Subramanyam.

Two pathways

The team identified two pathways — polycomb repressive complex (PRC2) and embryonic stem cell-specific cell cycle (ESCC) regulating microRNAs — that suppressed the expression of the endocytosis-associated genes in embryonic stem cells but not in cells that have already differentiated. While the expression of 50 endocytosis-associated genes is kept under check by one pathway (PRC2), the expression of a smaller subset of 12 genes is also reduced by the action of the second pathway (ESCC).

The PRC2 complex has four subunits, and when one particular subunit (Ezh2) was knocked down it led to significant increase in the expression of endocytosis-associated genes. Similar results were obtained when another subunit (Suz12) was knocked down.

MicroRNA

Stem cells have a class of small non-coding microRNAs called the ESCC-family of microRNAs. The microRNAs work by binding to the complementary sites seen on messenger RNA (mRNA). “Of the 50 endocytosis-associated genes, 21 genes had complementary sites for the microRNA, indicating that these 21 could potentially be controlled by microRNAs,” she says.

“The function of the PRC2 complex is to suppress the expression of the 50 endocytosis-associated genes. And the microRNAs function as a back-up, in case the expression of some of the genes is not completely shut down by the action of the PRC2 complex,” says Dr Subramanyam.

To confirm that the genes have to necessarily be turned off for pluripotency to be maintained in stem cells, the researchers introduced the genes into stem cells in such a manner that the expression of these genes was not turned in the stem cells. "We introduced only one gene at a time and we tested a total of two genes. In both cases, the embryonic stem cells began losing their pluripotency and there was an upregulation of differentiation markers," says RidimDadasaheb Mote from NCCS and first author of the paper.

“Our work will be helpful in regenerative medicine. Understanding the pathways and mechanism of endocytosis can now give us a handle to try and convert induced pluripotent stem (iPS) cells, which are pluripotent, into specialised cells, such as neurons, by altering the expression of the endocytosis-associated genes,” says Dr Subramanyam.

Supercapacitor built from discarded lithium ion batteries

Used old batteries can now help create supercapacitors, which can in turn create better long-lasting batteries. Scientists from CSIR–Central Electrochemical Research
NASA observes dramatic rise in sea levels

The sea level may rise twice as high by 2100 as previously estimated because of climate change, a NASA study says. According to findings detailed in the journal-Proceedings of the National Academy of Sciences, rise in sea level may increase by up to 65 centimetres in the next 80 years, which will do to cause significant problems for coastal cities, Space.com reported. This is believed to be a conservative estimate by scientists.

Solar goal for 2022 too hot to handle

India had been on track to meet its target of 100 Gigawatt (GW) of solar energy capacity by 2022 but momentum has been severely eroded in the last few months, according to industry players. Issues such as uncertainty around import duties and future tax rates on existing power purchase agreements have dampened investor sentiment.

“Today lithium-ion batteries are used widely and disposed after they run out, leading to mounting e-waste. We tried a new method and succeeded in recycling activated carbon which is expensive and environmentally hazardous while our method is cheaper and fully environmental friendly” explains by Sivasankara Rao Ede, Ph.D scholar from CSIR-CECRI and one of the first authors of the paper published in Colloids and Surfaces A: Physicochemical and Engineering Aspects.

The new electrodes made using the reduced graphene oxide showed high stability even after 20,000 cycles. They also had high retention capacity where 70% of the efficiency was retained even after 85 cycles. The efficiency slowly increased and reached 108% after 20,000 cycles. The long-term stability and robustness of the capacitor are the key parameters for qualifying as suitable candidates for commercial application.

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The graphite anode and aluminium and stainless steel from dismantled batteries were used. The graphite was converted into graphene oxide by oxidation and subsequent exfoliation. Graphene oxide was further reduced to reduced graphene oxide.

Wind turbines

Supercapacitors are now being used explicitly in wind turbine pitch control, rail (on-board or wayside), automotive (including hybrid vehicles), heavy industrial equipment, UPS and Telecom systems for power delivery and memory backup. “We are further evaluating the capacitive nature of our prepared electrode in two electrode system and hope to bring it out soon for large scale commercial applications,” says H. C. Bajaj, emeritus scientist at CSIR-CSMCRI and the other corresponding author.

NASA observes dramatic rise in sea levels

The sea level may rise twice as high by 2100 as previously estimated because of climate change, a NASA study says. According to findings detailed in the journal-Proceedings of the National Academy of Sciences, rise in sea level may increase by up to 65 centimetres in the next 80 years, which will do to cause significant problems for coastal cities, Space.com reported. This is believed to be a conservative estimate by scientists.
hary, MD and CEO of Vikram Solar said. “In the pre-GST regime, we had zero tax on solar panels. Now it is 5%. There is a lot of confusion surrounding the GST on projects. We need clarity on that. In a VUCA [volatility, uncertainty, complexity and ambiguity] environment, what do investors and financiers need? They need some sort of certainty.”

“With the advent of anti-dumping and the prospect of safeguard duties, so many changes, it becomes that much more uncertain.”

Ashish Khanna, CEO and ED, Tata Power Solar said, “While I agree that FY18 has been a good year as far as the installation of large-scale projects and the focus towards solar pumps are concerned, this recent phenomenon of the last few months with regard to uncertainties of customs duty, and certain investigations taken by the government especially regarding the safeguard duty, I think, are not helping the environment.”

Last year, the global capacity addition in solar stood at 105 GW, according to Mr. Chaudhary, who added that India was in third place in terms of how much its market has grown over the year.

“What’s lacking is an effective ecosystem to make this happen in a speedy and time-bound manner,” Mr. Chaudhary said. “It’s riddled with a lot of complications and a lot of noise from the industry as well, where everybody wants protectionism. China has done nothing like that. It has created a bottom up approach where 60-70% of the global manufacturing in solar is from China.”

“They have built this huge ecosystem that is fuelling the growth,” he added. “Out of 105 GW last year, 52 GW came from China, so you can imagine the kind of installation that is happening there.”

The problem in India is that uncertainty surrounding tariffs coupled with a large target means that the road ahead to 2022 will be a tough one. Industry players across the board have said that they are waiting for more certainty before they bid for more projects or expand their existing projects.

“The installation base in solar in India has touched 20 GW,” Mr. Chaudhary said. “Our targets are 100 GW of solar by 2022. So, that gives us effectively four years. In the last 10-12 years, we have come from 10 MW to 20 GW. Now we have to do 20 GW every year to achieve the target, so it’s pure maths. Unless there is some serious might behind this, the target looks unlikely to be met.”

“We need to go into the details of what has happened,” Mr. Khanna said. “In the case of bids, certain tariffs are decided upon but there was uncertainty over the incidence of future taxes and how they would affect the tariffs. Developers are not in a position to take a guess regarding the future statutory changes that are beyond their control.

“And, they cannot mitigate that risk by keeping a margin in the bid.” Another major issue that is causing industry players to slow their investments is the incidence of State governments trying to renegotiate past power purchase agreements due to lower tariffs being discovered subsequent to the signing of their PPAs.

Renegotiation by States

“The renegotiation of renewable power purchase agreement (PPA) tariffs by quoting high tariffs is not an apparent option available with State discoms,” India Ratings and Research said in a report. “Although there is anecdotal evidence of cancellation of renewable PPAs in contravention to possible exit clauses available in PPAs, there have been instances of lower-than-contracted payments or grid curtailments. There is no direct evidence of PPA cancellation due to higher tariffs, except in Uttar Pradesh... However, additional clarity will attract investments in the sector.”

The report added that anecdotal experience shows high power cost (that States had signed off on) as the sole reason for the proposed renegotiation or cancellation of PPAs.

Solar power tariffs plunged to Rs. 2.44/kWh in May 2017 from Rs. 5.10 in June 2015. “It did hurt investor sentiment,” Mr. Chaudhary said. “There were a couple of cases where this was tried, but it didn’t fly with the courts. If something like that were to happen, it would crush the industry because there would be no surety.”

The other aspect that will likely hold up India’s achievement of the 100 GW target for solar is the rooftop solar component within this target. Out of the total, utility scale capacity is to make up 60% of the target and rooftop solar is to make up the remaining 40%.

“If the total achievement in solar is 20 GW today, then about 18 GW of that is probably from utility scale. On the rooftop side, I think the volumes installed today are modest. It’s less than 2 GW,” Mr. Hines said.

In other words, the utility scale segment has achieved 30% of the 2022 target with four years to go. The rooftop segment has achieved less than 4%.

Threat of new malware looms over cyberspace

A new threat looms large on the horizon of cyberspace. After Mirai and Reaper, cybersecurity agencies have de-
Turf wars with ISRO stall connectivity: DoT official

India built the cheapest satellites but had the most expensive bandwidth, a government official said, blaming turf wars between the Indian Space Research Organisation (ISRO) and the Department of Telecom (DoT) for delays in taking connectivity to far-flung areas.

DoT’s special secretary N. Sivasailam also flagged issues of costs and said the ISRO should do more in order to keep the charges on par with global experience.

Mr. Sivasailam said more transponders were required on satellites.

According to him, there is a “problem of domains” between the DoT and the ISRO that has impacted the rollout of connectivity in far-flung areas for 20 years.

“The problem is of domains. We (DoT) don’t want to leave our domain. ISRO doesn’t want to leave its domain. It is a domain-related problem...I do not see people coming together and negotiating this aspect out,” he said.

‘It’s hurting businesses

Admitting that there was “politics” which “makes things difficult”, Mr. Sivasailam pitched for both the agencies getting over the problems for the benefit of all. “It is time it stopped because it is hurting business development and ultimately people are not getting (benefited),” he said, speaking at the annual FICCI Frames.

On the critical issue of costs, he said it would cost around Rs. 150 to serve one user with the current cost structure in the country whereas in the U.S., it cost $1 or Rs. 65.

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Sources said that while the CERT has not yet issued any alert regarding Saposhi, guidelines for protecting devices from Saposhi are likely to be issued in the days to come.

“We need to first ensure that the information we have is indeed substantiated before raising alarm bells. Right now, what we know for sure is that Saposhi exists, and is highly capable. Factors like whether it is aimed at any particular kind of device, or has a specific purpose are still being verified,” another officer said.

Malwares like Saposhi, Reaper and Mirai are primarily aimed at DDoS attacks, in which the malware first creates a network of bots — called a botnet — and then uses the botnet to ping a single server at the same time. As the numbers of pings are far beyond the server’s capacity, the server crashes and denies service to its consumers. For example, if a large botnet attacks the server of a fleet cab provider, its server will crash, and scores of consumers will be unable to avail of its services, causing chaos in daily commuting as well as massive losses to the company.

In July 2016, small and medium internet service providers in Maharashtra fell prey to a DDoS attack, which caused disruption in the services of several Internet Service Providers (ISP) in the State.

Another malware, Mirai, using a botnet of 5 lakh devices, had caused the servers of Dyn, a leading domain name service provider, to crash, affecting services of popular websites like Twitter, Netflix and Reddit.

India’s endangered Asiatic lion population increases to 600

The endangered Asiatic lion, which only lives in one forest in India, has fought back from the verge of extinction,
Scientists may be closer to finding a way to turn CO2 into usable energy

Can carbon dioxide (CO2)—a greenhouse gas whose high emissions contribute to global warming—be turned into usable energy? Scientists believe this can be done. They are now one step closer to making it a reality, and claim to have identified a “new electrocatalyst that efficiently converts CO2 to carbon monoxide (CO), a highly energetic molecule”.

The study by a team of researchers including scientists at the US department of energy’s (DOE) Brookhaven National Laboratory was published in February in international journal Energy & Environmental Science.

“There are many ways to use CO ... You can react it with water to produce energy-rich hydrogen gas, or with hydrogen to produce useful chemicals, such as hydrocarbons or alcohols. If there were a sustainable, cost-efficient route to transform CO2 to CO, it would benefit society greatly,” Eli Stavitski, a scientist at Brookhaven and an author on the paper, said in a statement.

The findings are significant as “scientists from long have sought a way to convert CO2 to CO but traditional electrocatalysts cannot effectively initiate the reaction. That’s because a competing reaction, called the hydrogen evolution reaction (HER) or water splitting takes precedence over the CO2 conversion reaction,” the study explained.

“Single atoms prefer to produce CO, rather than perform the competing HER, because the surface of a bulk metal is very different from individual atoms,” Stavitski added.

The study stressed that the scientists discovered that “single nickel atoms catalyzed the CO2 conversion reaction with a maximal of 97% efficiency” and according to scientists, “this is a major step toward recycling CO2 for usable energy and chemicals.”

“To apply this technology to real applications in the future, we are currently aimed at producing this single atom catalyst in a cheap and large-scale way, while improving its performance and maintaining its efficiency,” Wang added.
The World Health Organization (WHO), invited pharmaceutical companies around the world to submit proposals to manufacture affordable versions of newer medicines for treatment of drug resistant tuberculosis.

A WHO spokesman said the aim was to replicate the success of addressing the HIV epidemic. Competition among Indian drug producers had then brought down the price of HIV medicines by 99% from $15,000 per patient per year to less than a dollar a day.

WHO has now requested drug makers to submit an Expression of Interest (Eoi) for Bedaquiline and Delaminid, two new-generation drugs, recommended for drug resistant-TB. Under WHO norms, drugs submitted upon such requests and complying with its standards are included in a list for procurement by the UN and other organisations.

India has nearly 1.3 lakh DR-TB patients, the most in the world, but the Health Ministry gets only 10,000 doses of Bedaquiline and 400 doses of Delaminid. The medicines are obtained as donations from Janssen (US) and Otsuka Pharmaceuticals (Japan), the respective manufacturers.

“One of the aims of pre-qualification is to ensure that a greater number of manufacturers are supplying quality medicines, which, in turn, means a more competitive market and more affordable prices. We have seen this with HIV, where the pre-qualification of many predominantly Indian manufactured products brought the price down of many anti-retrovirals. Inclusion within the scope of PQ has also incentivized the development of fixed dose combinations, which have yielded much better results for patients,” said Daniela Bagozzi, communication manager, WHO.

In the case of HIV, one company, Cipla, came up with a ‘AIDS cocktail’ combination of Stavudine, Lamivudine and Nevirapine, enabling effective treatment.

Cheaper drugs to treat HIV became possible at the time as the Indian Patents Act did not provide for product patents on pharmaceutical products, until required by the Trade Related Intellectual Property Rights (TRIPS) framework of the World Trade Organization (WTO). India became TRIPS compliant with pharmaceutical products in 2005.

Open to generics

“The whole world looks to India to provide access to affordable drugs because of our capabilities. With WHO’s backing, we will be able to accelerate introduction of generics,” said D.G. Shah, secretary general, Indian Pharmaceutical Alliance (IPA).

Inclusion of the two new drugs, Bedaquiline and Delaminid, in the pre-qualification call is being interpreted by aid agency Médecins Sans Frontières (MSF) as WHO’s backing for generics.

Christophe Perrin, pharmacist at MSF, said, “It is clear from the Eoi that WHO considers the two drugs key compounds to address challenges of drug-resistant TB. It also means that they want to encourage generic competition to start finding ways to make these medicines available in countries where they are not yet registered. The Eoi allows generics manufacturers interested in producing these two drugs, and currently facing technical challenges, to address their questions to WHO’s pre-qualification team.”

Arun Kumar Jha, Economic Advisor, Union Health Ministry, said, “We are not wasting a single moment in ensuring affordable versions of these medicines are scaled up.”

‘Seven districts prone to heatwave’

The Indian Meteorological Department (IMD) has warned of severe heat and heatwave conditions in many mandals in Andhra Pradesh this summer.

The official cautioned that the temperature may cross 45° Celsius in many places, and asked people to take steps to prevent sunstroke deaths. Andhra Pradesh State Disaster Management Authority (APSDMA) Relief Commissioner M.V. Seshagiri Rao released the brochures on dos and don’ts during summer.

In a joint press conference organised here, Mr. Rao and officials of the IMD, AP Space Applications Centre (APSAC) and A.P. State Development Planning Society (APSDPS) warned that seven districts in the State are likely to face severe heatwave conditions.

“Andhra Pradesh experienced intensive heatwave for three weeks during 2015, 2016 and 2017, and more than 45°C heat and heatwaves were recorded in many mandals, and moderate heat was recorded in other places. This year, 52% chances are there to have normal and above normal heatwave conditions in coastal Andhra Pradesh in the next three months,” IMD Director and scientist Y.K. Reddy said.

40 days

This year, an average of one degree centigrade and above temperatures and heatwaves are likely to occur for about 40 days, Mr. Reddy said and advised people to go in for cool roofs, maintain phone numbers of the doctors and Primary Health Centres (PHCs) and check dehydration every day.

“Prakasam, Nellore, East and West Godavari, Guntur, Krishna and Visakhapatnam districts are prone to heatwave in 2018. Heatwave may occur severely if low pressure is formed,” the Director said.
APSDPS Senior Project Manager P.V. Ramana Murthy explained that Heatwave Action Plan-2018 has been prepared and communicated to all district Collectors and the line departments.

"A State Emergency Operation Centre and State-level Heatwave Monitoring Cell was opened at APSDMA Office. IMD will release forecast and warnings every day," Mr. Murthy said.

Electricity from soil bacteria and reading lights from plants

We generate electric power through hydroelectric plants (in Bhakra, Nagarjunasagar or Hirakud dams), from coal and fossil fuels (Ramagundam, Bhilai and Neyveli), or nuclear plants (ones at Tarapur, Kudankulam or Kakra par). Each method has its downside – be it water shortage or inter-state disputes, fouling the environment with pollution dust and greenhouse gases, or safety issues with radioactive damage. Can we at all have a pollution-free and nature-friendly power plant?

Biology appears to suggest a way. A group of researchers at the Wageningen University in the Netherlands, led by Dr. Marjolein Helder, has hit upon a method that generates electricity from living plants and the microbes that live beneath them in the soil, where the plants drop their roots. The plant of course does photosynthesis, using sunlight, water and atmospheric carbon dioxide, generating food in the form of carbohydrates and oxygen for our breathing. The microbes in the soil use some of this organic material coming out of the plants into the ground, metabolise them and, in the process, generate carbon dioxide and hydrogen ions and electrons.

While the plant above the ground does photochemistry, the bacteria beneath do electrochemistry, generating positive and negative ions. What Dr. Helder and colleagues have done is to place positive and negative electrodes in appropriate positions and obtain an electric current, just as we do with batteries. This method of producing electricity is through what is termed as plant microbial fuel cells (PMFC).

Looking at the simplicity of it. The method is completely natural and environment-friendly, needs no externally added material and is part of a cyclic process in nature. But how much electricity is produced with such PMFC? It depends on the size. A small 50 cm x 50 cm plot of a garden is estimated to produce 5 volts of electricity, while a 100 square metre garden gives enough electric power to charge a cell phone or to light up several LED light bulbs. Indeed the Wageningen group has lit up their Atlas building with LED bulbs, using PMFCs, and a mobile phone charging station in a place at the nearby town Tilburg.

Theory suggests that one should be able to generate 3.2 watts of electric power per square meter (3.2W/m2), using PMFCs. The best level obtained so far in practice is but a sixteenth of it, namely, 220 mW/m2. Thus, improvement in efficiency needs to be done, both by adding such microbes in the soil which perform better, and by enhancing the area by miles and miles of grass lawns, farm lands and focus on paddy fields and similar acreages. These will also bring the cost–benefit ratio to acceptable proportions. It is with this in mind that Dr. Marjolein Helder came over to visit N. Chandrababu Naidu to consider taking up electricity generation across the state of Andhra Pradesh.

Plants that glow

Another dramatic advance, this one directly from the plants themselves rather than the microbes underneath, has come from Dr. Michael Strano of MIT, Cambridge, MA, USA. This is an audacious idea, namely, "how to make plants glow with light"! We know that a plant captures light, and using this, converts water molecules and atmospheric carbon dioxide into sugar. What Strano’s group aims to do is to make plants not just absorb but also emit light and, indeed, glow such that we may use such plants as a table lamp to help read a book in a dark room! In other words, make a plant glow as a firefly does. A firefly glows because it has an enzyme that converts a molecule called luciferin into o xo luciferin, and the energy released in this reaction comes out in the form of visible light. The enzyme is called luciferase. (Incidentally, luciferin is named after the Latin word lucifer, meaning light-bringer or the morning star). Now, plants do not have luciferin or luciferase. If we can somehow inject into a plant luciferin and luciferase, perhaps the plant too will emit light — this was the idea that Strano had. Towards this, he used the technology of nanoparticles.

Taking watercress and spinach as experimental plants, his group first packaged luciferase in nanoparticles made of silica. Then, they packed luciferin in another set of nanoparticles made of the polymer PLGA. Each of these nanoparticles carried a tag that would allow it to go to one specific part of the plant cells. Then they also devised a third nanoparticle system, packed with molecules called co-enzyme A, which was to remove a product of the luciferin reaction, which inhibits or stops the reaction from proceeding.

They now immersed the plant in water, added the three sets of nanoparticles, and applied high pressure so that these will enter and position themselves in appropriate places inside the plants. Now, the reaction proceeded and the plant emitted feeble glow, a Eureka moment, which lasted for about 3 hours!
Clearly, more tinkering needs to be done in order to brighten the glow, increasing the time it lasts and other issues. Also how to turn off the light when you do not need it anymore (this has already been established by adding a switch-up the off molecule at will). Given the progress, these appear doable soon enough. Strano says: “our work seriously opens up the doorway to street lamps that are nothing but treated trees and to indirect lighting around homes”.

Now, low viscosity fuel oil from plastic waste
Certain plastic wastes can soon help fuel your cars. Researchers from IIT Guwahati have successfully converted packaging plastic waste to plastic-derived oil (PDO), which has characteristics similar to diesel. Low- and high-density polyethylene (LDPE, HDPE) and polypropylene are commonly used as packaging materials and end up in the waste stream. According to a 2016 Central Pollution Control Board report, almost 15,000 tonnes of plastics waste is generated per day in India. The researchers collected the waste (biscuit wrappers, shopping bags, food containers, shampoo bottles) from houses, cleaned and segregated them according to the resin identification code. These codes on plastics indicate the type of plastic resin it is made of.

Using a semi-batch reactor, the different wastes were heated for six to seven hours at 300-400 degree Celsius. “Heating at very high temperatures in inert conditions caused the plastic to convert into wax, so we chose this particular temperature range in which the plastic turned to plastic-derived oil and stayed in its oil state,” explains Pallab Das, PhD scholar at the institute and first author of the paper published in Resources, Conservation and Recycling.

But burning plastic waste generates pollution, particularly dioxins which are toxic to humans. “There is no oxygen in the three plastic wastes that is heated that we are also not supplying any oxygen. Pyrolysis is done under inert conditions. Only hydrocarbon gases such as methane, ethane and propane were produced and there was negligible amount of carbon dioxide and carbon monoxide produced,” says Das.

Further research
“More experiments need to be carried out to get a trade-off between the quality of the oil and the environmental pollution caused by the pyrolysis process. We are working on this and hope to create an ideal operating condition which can provide high-quality oil with less pollution,” says Dr. Pankaj Tiwari, Assistant Professor, IIT Guwahati, and corresponding author of the paper. “Compared with combustion, pyrolysis causes less pollution.” The researchers then studied the properties of the new plastic derived oil. One of the oil samples from polypropylene showed a high research octane number of approximately 92. Octane number indicates the quality of the gasoline range fuel. Premium petrol has research octane number of 98 to 100.

The oil also showed low viscosity and had high calorific value. Calorific value denotes the amount of heat generated when unit amount of sample was burnt with oxygen supply. The new oil had calorific value greater than 45 MJ per kilogram. Calorific value of petrol and diesel is 46-48 and 44-46 MJ per kilogram, respectively. “We are yet to carry out engine tests. Once tested, these oils can soon find application in transport and industrial sectors,” says Dr. Tiwari.

Coral sediments in oceans could dissolve by next century
As oceans get more acidic, sediments that constitute coral reefs could begin dissolveing by the end of this century, suggests a study published in the journal Science. Coral reefs are formed by not just the calcium carbonate skeletons that tiny animals called coral ‘polyps’ create, but also carbonate sediments which accumulate on them over thousands of years. Ocean acidification – lowering of sea water’s pH when it absorbs the excess, human-caused carbon dioxide from the atmosphere – prevents polyps from building their stony skeletons.

In several reef systems, acidification also dissolves corals’ carbonate sediments. Scientists from several institutions including the Southern Cross University in Australia studied this less-explored aspect of sediment dissolution at 57 locations across five reefs in the Pacific and Atlantic Oceans. They found that the link between sediment dissolution and acidification is stronger than that between acidification and coral formation.

Predictions
Based on this, the team also predicted changes in coral systems by incorporating several factors including current rates of coral formation and sediment dissolution. According to their calculations, coral sediments will begin dissolving by 2050; by 2080, they will dissolve faster than they are formed.

“It would be extremely worrying if this does start to happen,” says scientist Rohan Arthur of Nature Conservation Foundation, who studies the coral reef systems of India’s Lakshadweep Islands. “This could add to the problem of coral decline that we are already seeing because many
of the reefs in the Indian Ocean are already net eroding." This means ocean acidification is causing coral reef systems to erode rather than grow. Currently, the processes of coral formation are also under threat. In 1998, Lakshadweep’s reefs experienced bleaching; increased ocean temperatures caused algae that live as symbionts within corals to leave, stress the corals. Two more bleaching events followed in 2010 and 2016. With repeated bleaching, frequent storms due to climate change and now, ocean acidification that causes sediment dissolution apart from slowing down coral-building, Lakshadweep’s reefs could be facing a triple whammy, says Arthur.

“Local factors like over-fishing in reefs too play a role,” he adds.

Indian reefs
Coral reefs span 3,062 sq. km in India. Many coral species are afforded protection at par with tigers; they are included in Schedule I of the Wildlife Protection Act (1972). While coral systems support a diversity of fish species that local communities depend on for sustenance, many like those in Lakshadweep also provide protection from storms and prevent coastal erosion.

Saliva prevents traveller’s diarrhoea: study
Scientists in the U.S. have identified a protein in saliva (histatin-5) that protects the body from traveller’s diarrhoea. The finding, published in the Journal of Infectious Diseases, may lead to the development of new preventative therapies for the disease.

Traveller’s diarrhoea can be deadly. It produces watery diarrhoea, which can cause life-threatening dehydration in infants or other vulnerable populations in endemic countries. Hundreds of thousands of deaths can be attributed to this bacterial disease which is caused by enterotoxigenic Escherichia coli (ETEC), invading the small intestine using arm-like structures called “pili”, according to the study.

This new finding opens up the possibility that other salivary proteins might exist which protect against many other diseases, including infectious gastritis, food poisoning or even pneumonia.

SC seeks details from States on claims to forest lands
The Supreme Court has ordered State governments to provide details of the number of claims for the grant of land under the provisions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act of 2006.

A Bench of Justices Madan B. Lokur, Kurian Joseph and Deepak Gupta, on a batch of petitions including that of Wildlife First, said it wanted updated information on claims to forest lands, encroachments and evictions.

The court said the claims for grant of land should be those made by the Scheduled Tribes and separately by other traditional forest dwellers, along with the number of claims rejected by States in respect of each category. It called for information on the extent of land over which such claims were made, number of rejections in respect of each of the two categories and the action taken against those claimants whose claims were rejected.

The court, in its March 7 order, asked for the status of eviction of those claimants whose claims were rejected and the total extent of area from which they were evicted. The States have to provide the extent of the area in respect of which eviction has not yet taken place in respect of rejected claims.

Legislative competence
The Bench said it wanted information to be provided in four weeks and listed the matter for hearing on April 18.

The court recorded that the petitioners had challenged the constitutional validity of the Act as well as legislative competence of Parliament to enact the statute.

Noting that the forests and wildlife are in a “critical state,” the petitioners have indicated that they would want a performance audit by the Comptroller and Auditor General of India or by any other appropriate authority.

What is International Solar Alliance?
What is this alliance?
The International Solar Alliance (ISA) was unveiled by Prime Minister Narendra Modi and then French President Francois Hollande at the U.N. Climate Change Conference in Paris on November 30, 2015. The idea was to form a coalition of solar resource-rich countries to collaborate on addressing the identified gaps in their energy requirements through a common approach. Towards this, the ISA has set a target of 1 TW of solar energy by 2030, which current French President Emmanuel Macron said would require $1 trillion to achieve.

Who are the member countries?
The ISA is open to 121 prospective member countries, most of them located between the Tropics of Cancer and Capricorn as this is the region worldwide with a surplus of bright sunlight for most of the year. So far, however, only 56 countries have signed the ISA Framework Agreement. These include Australia, Bangladesh, Benin, Brazil, Burkina Faso, Cabo Verde, Cam-
The Mukundpura one is a carbonaceous meteorite, one of the most primitive types. They contain grains of calcium and iron, which date to a time before the sun came into existence. They may contain clues to the formation of early life," a scientist at GSI told The Hindu.

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The impact of the meteorite, which fell on sandy farmland, created a hole six inches deep, with a diameter of nearly 43 cm. The GSI now refers to the object as ‘Mukundpura carbonaceous meteorite.’ The GSI says this is a rare type of meteorite, since carbonaceous meteorites constitute only 3%-5% of all meteorite falls. Analysis has also revealed the presence of water-bearing minerals in the meteorite.

The GSI report says the meteorite is “believed to have the most pristine primordial matter recovered from space, which might carry important clues to the origin of early life.”

Meteorites mostly originate from the asteroid belt between Mars and Jupiter.

The meteorite that fell in NatunBalijan in the flood plains of LohitRiver, has been classified as an “ordinary chondrite.”

According to the National Aeronautics and Space Administration, this is the most common type of meteorites, made of small grains of rock and believed to be mostly unchanged since the formation of the solar system.

Neutrino project gets environmental nod

The India-based Neutrino Observatory (INO) project has got a fresh lease of life with the Ministry of Environment and Forests (MoEF) taking it up as a special case and granting it environmental clearance to set up the lab in Bodi West hills.

MoEF’s Expert Appraisal Committee (Infra 2), after detailed deliberations on the proposal and submissions by the project proponent, recommended this at its meeting on March 5. According to the minutes of the meeting available in the public domain, the EAC was given to understand that though the proposals were not within its scope, the Ministry wanted it to consider this as a special case.

The panel was informed that there was no scope for radioactivity and leaching of water and these have been explained to the courts. The project proponents clarified that studies showed there would be no impact of blasting on any habitation in the vicinity.

During the panel’s deliberations, an expert from the Defence Research and Development Organisation (DRDO) was present.

Two conditions

While granting EC, the committee stipulated specific conditions, of which two are key for the project to take off. One is the consent to establish and operate to be obtained from the Tamil Nadu Pollution Control Board (TNPCB). In the past, INO project proponents had complained that the TNPCB had been sitting on the file for years without taking any action when Jayalalithaa was Chief Minister (2011-16). Also, the INO team has to obtain the necessary forest and National Board for Wild Life clearances as per law. The Mathikettan Shola National Park in Idukki district, Kerala, is situated within five km...
from the project site.
When the project was considered by the Tamil Nadu State Expert Appraisal Committee in November 2017 (after Jayalalithaa's death), it said that the proposed site forms part of the catchment area of various streams that contribute to the Vaigai watershed.
Therefore, Tamil Nadu was of the opinion that the proposal could not be appraised under category B of item 8(a) ‘Building and construction projects of the Schedule to the EIA notification 2006’, as it involved many technical features other than mere construction. The SEAC also said the project should be appropriately handled by the Centre. Incidentally, Deputy Chief Minister O. Panneerselvam represents the Bodinayakanur Assembly constituency.
Considering the national importance of the proposal, the MoEF decided to take the proposal at the Central level as a special case — a category 8(a) project — and granted environmental clearance with 17 conditions.

NGT issues notice to BCCI, 9 States
The National Green Tribunal (NGT) issued notices to the Board of Control for Cricket in India and nine States on a petition alleging that water would be misused during the upcoming Indian Premier League matches. The petitioner further sought a ban on the tournament citing wastage of water in the process of preparing the cricket pitches.
A bench, headed by judicial member Jawad Rahim, sought responses from the BCCI, the Ministry of Water Resources and nine States, including Delhi, West Bengal, Maharashtra, Karnataka and Telangana. The panel directed the respondents to file their replies within two weeks.

The plea filed by Alwar resident Haidar Ali read, “There is rampant misuse of water by some individuals and societies and organisations and on the other hand, in major parts of India, people are suffering from scarcity of drinking water. Lakhs of litres of water will be used for preparing the cricket stadium pitches for playing 60 matches, which is adversely affecting the ecosystem and overall ecology of a country already suffering from droughts.”

Equipment for Kudankulam third reactor shipped from Russia
The first batch of equipment for Kudankulam Nuclear Power Project’s (KKNPP) third reactor, under construction, has been shipped from Russia.
PJSC ZiO-Podolsk, one of the enterprises of Rosatom Machine-Building Division ‘JSC Atomenergomash’, shipped out the first batch of equipment for the turbine hall and two high-pressure heaters last Tuesday, officials here said.
Four high pressure heaters each will be delivered for the third and the fourth 1,000 MW VVER reactors. The oversized equipment will be delivered at the KKNPP site using multimodal way. From the premises of Podolsk, the equipment were moved by railroad to St. Petersburg seaport. The cargo will reach Thoothukudi port and will be delivered at the KKNPP complex in April, said officials of Rosatom, Russia’s Atomic Energy Corporation.
Working design documentation had been elaborated by PJSC ZiO-Podolsk specialists. They would also implement the follow-up of the manufacture and subsequent site mounting supervision at the KKNPP site, officials added.

Rosatom’s JSC Atomenergomash is the supplier of key equipment for the KKNPP, which will house 6 x 1,000 MWe VVER nuclear reactors to be built with Russian assistance. For units 3 and 4, the company will manufacture steam generators, main circulation pumps, pressure compensators, pipe fittings, ancillary pumps, other equipment for reactor hall and turbine building.

Notice to Bengal over GI tag for ‘Rosogolla’
The Geographical Indication (GI) Registry has issued a notice to the West Bengal State Food Processing and Horticulture Development Corporation, asking why the GI recognition given to ‘BanglarRosogolla’ not be withdrawn. Reacting to an application for rectification or removal filed by Ramesh Chandra Sahoo, chairperson of the Bhubaneswar-based Regional Development Trust, the GI Registry office in Chennai served this notice to West Bengal.

Questions documents
Through this petition, Mr. Sahoo had objected to the GI status procured by West Bengal for ‘BanglarRosogolla’ four months ago. He had also questioned the data provided by West Bengal for getting the GI tag.
He also said that Odisha was not given a chance to explain its stance when West Bengal applied for the GI status.

Odisha Small Industries Corporation applied for the GI tag for ‘Odisha’s Rasagola’ on January 23 this year. The application includes historical evidence seeking to prove that the famous sweet was part of the offering in Sri Jagannath Temple of Puri at least five centuries ago.
“With the emergence of more and more historical evidences, it is proven that the rasagola had originated in
Odisha as a special offering at the Sri Jagannath Temple of Puri. Later, its preparation technique had reached West Bengal and other parts of the country,” said cultural researcher Asit Mohanty, who helped in collecting evidences for the ‘Odisha’s Rasagola’ GI tag application.

A floating laboratory to save the famed Loktak Lake

Three days a week, four women in white lab coats traverse the Loktak Lake in a custom-built motorboat, scooping flasksfuls of water for analysis. They record changes in the temperature, acidity, conductivity and dissolved-oxygen in the 300-sq km lake.

Rising urbanisation and land-use change over the years has seen the Loktak Lake, the largest in the northeast, become a dump yard for municipal waste.

Rajkumari Supriya, a researcher at the Institute of Bioresources and Sustainable Development (IBSD), said she and her colleagues, all in their 20s, as part of their routine, first measure preliminary characteristic of the water on the boat and then follow it up with more analysis at their lab. “Over there, we calculate the biochemical oxygen demand, chemical oxygen demand, chloride test and nitrogen levels,” she said.

‘Silent threat’

Though the Loktak Lake is yet to see worrying levels of pollution, early signs suggest that there’s needed to be vigilant.

“All talks about carbon dioxide levels, but nitrogen pollution is a major, silent threat,” said Dinabandhu Sahoo, director, IBSD and project head. “Already there are signs of calcium anomalies in some of the mollusc and other aquatic life in the lake.” This is similar to the phenomenon of coral bleaching in oceans, where rising sea surface temperature cause organisms that live on corals to disengage, thereby killing the corals themselves.

The model of a floating laboratory ties in with a larger initiative by the Centre’s Department of Biotechnology (DBT) to monitor the health of aquatic systems in the northeast. Last September, the DBT announced plans to have multiple boats cruising the 3,500-km Brahmaputra river and collecting water samples to track its health.

The health of the lake also affects the Phumdis, or the unique ‘floating islands’, on the lake. These islands, made of a mix of vegetation and soil, coalesce to form a thick mat that, for centuries, have hosted huts and fishing settlements. “We are studying the nutrient uptake of these vegetation and monitoring their health,” said Mr. Sahoo.

The pH level of the lake, as per measurements so far, varies from 6.8 to 7.2 (ideally it should be slightly below 7). “Studies of ocean acidification have shown that even a 0.1 increase can cause [harmful] decalcification,” Mr. Sahoo said. “We shouldn’t wait for the lake to hit the ICU before thinking of ways to save it.”

IIT Kanpur researchers find why babies need to move in the womb

Formation of joints in the developing embryo and their maintenance after birth is sensitive to mechanical movement. Now, researchers at Indian Institute of Technology (IIT) Kanpur have deciphered the molecular mechanism underlying this phenomenon. They have demonstrated how permanent cartilage is formed in an embryo due to mechanical movement. They also found out how permanent cartilage is lost and temporary or transient cartilage is formed in its place in the absence of movement.

While permanent cartilage lines the joint, the transient cartilage is a bone-forming one. Earlier this group demonstrated that during embryonic development, a bipotential cartilage population gives rise to both permanent and transient cartilage. BMP and Wnt are two major signals regulating this process. While BMP promotes transient cartilage formation, Wnt promotes permanent cartilage formation.

In patients with osteoarthritis, the permanent cartilage acquires all the characteristics of a temporary cartilage, which affects joint function. Currently, in people with osteoarthritis, it is not possible to reverse the fate of permanent cartilage that has become a temporary-like cartilage.

The work done by a team led by Prof. Amitabha Bandyopadhyay from the Department of Biological Sciences and Bioengineering at IIT Kanpur suggests that it might be possible to prevent osteoarthritis from worsening if intervened at an early stage. The results were published in the journal Development. The work was carried out in collaboration with the laboratory of Prof. Paula Murphy of Trinity College Dublin.

Transient cartilage

BMP signalling — which helps in the formation of transient cartilage — is normally not present in permanent cartilage cells in a joint. That transient cartilage forms in the place of permanent cartilage due to joint immobilisation was already known. And independently, the team had shown that BMP signalling promotes transient cartilage formation. “So we wanted to find out if immobilising the joints in a chick embryo allows the BMP signalling to come up in the joint cartilage cells. We did find that happening,” Prof. Bandyopadhyay says.
The investigation into what causes the BMP signalling to be present in future permanent cartilage cells when the joint is immobilised led them to a surprise finding. The lead author, Pratik Singh, found out that an inhibitor of BMP signalling (Smurf1) is absent in the joint that is immobilised resulting in increased BMP signalling. “The role of the Smurf1 inhibitor is to maintain a BMP-free area thereby enabling the progenitor cells to become permanent cartilage. But due to increased BMP signalling the permanent cartilage gets converted into transient-like cartilage,” says Prof.Bandyopadhyay. The Smurf1 inhibitor is not directly involved in joint cartilage formation but creates an environment that permits the formation of permanent cartilage by keeping the BMP signalling under check.

**Toggle switch**

Mechanical movement seems to act like a toggle switch. In the presence of it, Wnt – the signal that promotes joint cartilage – is on and BMP signalling is off in the joint cartilage cells. The opposite is true when the joint is immobilized. This is the reason why immobilisation of joints causes greater disturbance to permanent cartilage than even inhibition of Wnt signalling. “We are now investigating if osteoarthritis is also associated with appearance of BMP signalling in the wrong place. If so, we can block the BMP signalling in these cells during the early-stage of osteoarthritis to possibly prevent the condition from worsening,” he says.

No sign of new neurons in adult humans, says study

The human brain may not be as pliant as was believed, a recent study shows. In this study, bound to provoke argument, researchers observe that the latest neurons form in the brain when the subject is about 13 years old and no later. This finding, published in Nature, contradicts earlier experiments, according to which neurons in the hippocampal region of the brain could be formed even late in adulthood.

**Hippocampus**

The hippocampus is a region which is believed to be the abode of long-term memory and emotional responses. This was also believed to be true in other mammals such as chimpanzees and rodents. In the study, the researchers took advantage of the fact that specific antibodies could bind to proteins of interest and indicate their locations in tissue. They thereby identified the locations of the neural precursor cells, proliferating cells and immature neurons in samples from 59 human subjects and traced the development from the foetal stage to old age. Up to 14 weeks of gestation, the three cell types migrated from their point of genesis to the region within the hippocampus – the dentate gyrus – where they stayed and developed. The oldest individual they observed with immature neurons was 13 years old.

The researchers observe that a lack of neurogenesis in the hippocampal region has been suggested in the case of some aquatic mammals like dolphins, porpoises and whales. This is interesting because these mammals are known for their intelligence, longevity and complex behaviour, too. They also offer a reason for why humans appear to differ so drastically from other mammals studied.

IIT Guwahati develops super hydrophobic coating that mimics lotus leaves or rose petals

A polymeric coating that is extremely water-repelling (superhydrophobic) and will allow water to roll off from the surface like in the case of a lotus leaf or stick to the surface as in the case of rose petals has been synthesised by a two-member team from the Indian Institute of Technology (IIT) Guwahati. It can be spray-coated on various surfaces (glass, plastic, metal, wood and concrete) of diverse chemical composition, texture (smooth or rough surface), geometry (plain sheet or complex shape such as shoes), and size. The researchers led by Dr.Uttam Manna from the institute’s Department of Chemistry found the water-repelling property of the coating remained intact even when subjected to severe physical and chemical abuse.

**Modulated functionality**

By modulating the functionality of the coating with small amine molecules, the coated surface was made to behave either as non-adhesive superhydrophobic coating (where water rolls off as in a lotus leaf) or adhesive superhydrophobic coating where the droplets stick to the surface like in the case of rose petals. The results were published in the Journal of Materials Chemistry A.

“There is a fundamental difference in the way the trapped air is present at the interface between the surface and water droplets and this makes the coated surface either adhesive or non-adhesive superhydrophobic,” says Dr. Manna. In the case of the non-adhesive superhydrophobic coating, the trapped air is continuous and uniformly distributed. This leads to the trapped air minimising the contact area between the water droplet and the substrate. With adhesive superhydrophobic coating, the trapped air...
is not continuous and the contact area between the water droplet and the substrate is more thereby causing the droplets to stick to the surface up to 20 degrees tilt angle. The superhydrophobic coating was prepared by mixing a polymer (branched poly(ethyleneimine)) and a reactive small molecule (dipentaerythritol penta-acrylate) in different alcoholic solvents — ethanol to pentanol.

“We were able to achieve a stable coating only when pentanol solvent was used,” says Dr. Manna. The polymer and the small molecule react rapidly in the presence of pentanol. Also, the volatility (rate of evaporation) of pentanol is way less compared with other alcoholic solvents. “As pentanol evaporates slowly, it allows the reaction between the polymer and small molecule to be completed thus making the coating to be stable and uniform,” says Koushik Maji from the Department of Chemistry at IIT Guwahati and first author of the paper. “With other solvents, the reaction is slower and the solvents evaporate quickly leading to less stable coating (cracking and peeling).”

The coating is highly chemically reactive and this makes it possible to post-modify the coating with amines containing small molecules to make it either adhesive or non-adhesive superhydrophobic. Unlike in other cases, the reactants themselves get covalently cross-linked thus making the use of external binder or cross-linker for stability redundant.

The superhydrophobic coating has diverse applications depending on whether it is made adhesive or non-adhesive. The non-adhesive one can be used for oil-water separation and making the surface self-cleaning.

Since the coating remains adhesive up to 20 degrees of tilt, the adhesive coating can be used in open micro-fluidic devices for diagnostic purposes where controlled transfer of aqueous droplets without any loss in volume is needed.

**Novel nanoparticles to help cell imaging**

New fluorescent nanoparticles created from simple biomolecules can now help light up cancer cells for better imaging.

Scientists from Indian Association for the Cultivation of Sciences (IACS), Kolkata have created nanoparticles from folic acid, riboflavin and lactose and tuned the molecules to give a green fluorescence to help in cell imaging using bright-field microscopy.

“The cadmium selenium quantum dots currently used for imaging purposes are highly toxic to the human cells. But we have used simple molecules which are found within the human body as basic ingredients to do the same work,” says Dr. Nikhil R Jana, Professor and corresponding author of the paper published in MRS Advances.

**Green fluorescence**

The newly created nanoparticles are mixed with the cell culture medium, kept for 2-3 hours, washed and then viewed under the microscope. The nanoparticles label the cancer cells alone and are seen with a green fluorescence under the microscope.

The nanoparticles exhibit specific labelling properties. Since oral cancer cells have folate and riboflavin receptors, the nanoparticles prepared from folic acid and riboflavin bind to these receptors. Folic acid nanoparticles bind to ovary cancer cells, while nanoparticles made from lactose bind to galactose receptors found on liver cancer cells.

They found that the green fluorescence depended mainly on the temperature at which they were treated. “We used a wide range of temperature for cooking the molecules (90-340 degree C). The broadness of the fluorescence spectra increased with the lowering of the reaction temperature,” says Hayder Ali, PhD scholar and first author of the paper. “These new nanoparticles are less than 10 nanometre in size and can also be used for targeted drug delivery as they seem to have specific labelling abilities.”

Preliminary in vivo studies using a mouse model show no toxicity, and the researchers are currently working on getting a red emission so that bioimaging can be done with low background signal.

**Maharashtra’s two potentially endangered endemic shrubs**

Crotolaria species (ripe fruits of which are used by children as rattles) are small shrubs bearing bright yellow blooms and are common across the Indian countryside. But Indian botanists have just discovered two rattlepod species — woody and multi-bracted rattlepods — that survive only in the hill tracts of Maharashtra.

Of the 85 species of rattlepods or Crotolaria found in India, 73 survive only in peninsular states. Many of these are concentrated along the Western Ghats and it takes a trained eye to discern the (often) slight physical differences between various rattlepod species. On their field trips to Maharashtra’s Kolhapur district in 2011 and 2015, researchers at the University of Delhi’s Department of Botany spotted two types of rattlepods that looked unlike any they had seen before. Intrigued, they collected specimens and measured in detail the fine morphological features specific to these plants in their lab. They found that the width of the keel (one of the petals of a flower)
Hashgraph has all these features,” insists Paul Madsen, the US-based start-up HederaHashgraph insists that unlike blockchain, hashgraph can provide the speed required for multiplayer gaming, stock market transactions, micro payments, and food and in-app purchases. With blockchain, which is finding favour with financial institutions and even manufacturing firms in India, each participant has a copy of the ledger’s data that contains the most recent transactions or changes, thus reducing the need to establish trust using traditional methods. “Hashgraph has all these features,” insists Paul Madsen, technical lead at Hashgraph, and is also capable of processing hundreds of thousands of transactions per second, compared with bitcoin (less than 10 per second) and ethereum (less than 25 per second).

Hashgraph further offers “consensus time-stamping”, according to Madsen, which prevents an individual from affecting the consensus order of transactions—by not allowing anyone to manipulate the order of transactions. On the other hand, “a miner (in the blockchain world) can choose the order in which transactions occur in a block, can delay orders by placing them in future blocks, (and) even stop them (users) entirely from entering the system”.

Madsen points out that if two miners create two blocks simultaneously, the community will eventually select one and discard the other, resulting in wastage of efforts. “In hashgraph, no container (block) is discarded,” he adds. Over the next couple of years, HederaHashgraph hopes to introduce “a viable cryptocurrency—one that has seconds of latency like a credit card and not an hour as in bitcoin; one that has fees of pennies and not $10 dollars; and one that users will be willing to use because its value is stable and not wildly fluctuating based on speculation”, says Madsen.

Experts perceive hashgraph as a promising technology and one that has fewer limitations when compared to blockchain but add that it’s too early to predict whether hashgraph will unseat blockchain. For one, blockchain is a more proven technology than hashgraph. Jaspreet Bindra, senior vice-president, digital transformation at Mahindra Group, points out that large banking, financial services and insurance (BFSI) firms and governments across the world are increasingly testing blockchain proofs of concept (or PoCs).

“For example, Mahindra Group successfully tested a bill discounting product on blockchain while NitiAayog is building and testing Indiacoin for a PoC around educational degrees, certificates,” he adds. Bindra, however, acknowledges that while blockchain is “excellent in terms of consensus-driven security and trust, along with provenance, the very consensus-building attribute of blockchain slows it down considerably”.

“Large public blockchains like bitcoin can only process 7-8 transactions per second, as opposed to Visa’s 30,000-50,000 per second, for example. This is because each proof of work has to be ratified by consensus across all participants or nodes. Therefore, most enterprises tend to go build private blockchains, with fewer nodes and consensus points, rather than using public blockchains. While this improves speed and scalability, the...
very properties of blockchain—trust, security, vulnerability to DDOS (distributed denial of service) attacks—get diluted,” explains Bindra. He believes that hashgraph “seems to solve this problem through some very clever algorithmic treatment and architecture”.

Jayanth Kolla, founder and partner of research and advisory firm Convergence Catalyst, acknowledges hashgraph is one of the leading technologies among Directed Acyclic Graph (DAG)-based blockchains. “It belongs to the third generation or what we call ‘Blockchain 3.0’ group”.

Hashgraph, he notes, is also a one-of-the-family of blockchain technologies designed on FFM—fast, feeless, and minerless—concept. DAG-based blockchain technologies including hashgraph remove miner from the equation using “gossip about gossip” protocols, in which the machines on the network spread the transaction information and verify and authenticate, instead of the “gossip” protocol used by blockchain and ethereum where there is a dependency on the miner to solve the puzzle, verify and authenticate the transaction. This enables hashgraph to handle 4,000 transactions per second.

## India joins Europe’s satellite data sharing pool

India has joined Europe’s mega global arrangement of sharing data from earth observation satellites, called Copernicus.

Data from a band of Indian remote sensing satellites will be available to the European Copernicus programme, while designated Indian institutional users will in return get to access free data from Europe’s six Sentinel satellites and those of other space agencies that are part of the programme, at their cost.

The space-based information will be used for forecasting disasters, providing emergency response and rescue of people during disasters; to glean land, ocean data; and for issues of security, agriculture, climate change and atmosphere, according to a statement issued by the European Commission here.

The agreement was signed in Bengaluru by Philippe Brunet, Director for Space Policy, Copernicus and Defence, on behalf of the EC and by P.G. Diwakar, Scientific Secretary, and Indian Space Research Organisation.

The multi-billion-euro Copernicus is Europe’s system for monitoring the earth using satellite data. It is coordinated and managed by the EC.

### Range of applications

The free and open data policy is said to have a wide range of applications that can attract users in Europe and outside. The Copernicus emergency response mapping system was activated on at least two Indian occasions — during the 2014 floods in Andhra Pradesh in October 2014 and after the 2013 storm in Odisha.

“Under this arrangement, the European Commission intends to provide India with free, full and open access to the data from the Copernicus Sentinel family of satellites using high bandwidth connections. Reciprocally the Department of Space will provide the Copernicus programme and its participating states with a free, full and open access to the data from ISRO’s land, ocean and atmospheric series of civilian satellites (Oceansat-2, Megha-Tropiques, Scatsat-1, SARAL, INSAT-3D, INSAT-3DR) with the exception of commercial high-resolution satellites data,” the EC said.

The arrangement includes technical assistance for setting up high bandwidth connections with ISRO sites, mirror servers, data storage and archival facilities.

## How the Facebook-Cambridge Analytica saga unfolded

Facebook Inc. is under fire following reports that the personal data of 50 million users were obtained by an analytics firm that helped elect President Donald Trump. Lawmakers and regulators in the US and UK are now scrutinizing the social media giant, whose shares have dropped more than 9% since the news broke on 17 March.

1. **Who took what from Facebook?**
   
   During the summer of 2014, the UK affiliate of US political consulting firm Cambridge Analytica hired a Soviet-born American researcher, Aleksandr Kogan, to gather basic profile information of Facebook users along with what they chose to “Like”. About 270,000 Facebook users, most or all of whom were paid a small amount, downloaded Kogan’s app, thisisyourdigitallife, which took the form of a personality survey. Kogan collected data not just on those users but on their Facebook friends as well, if their privacy settings allowed it—a universe of people that reached 50 million. The app, in its terms of service, disclosed that it would collect data on users and their friends.

2. **Did Kogan have Facebook’s permission?**
   
   In a general sense, yes. Since 2007, Facebook has allowed outside developers to build and offer their own applications within its space. When Kogan offered his app, Facebook also allowed developers to collect information on friends of those who chose to use their apps if their privacy settings allowed it.
3. Then what’s the issue here?
Facebook says Kogan “lied to us” by saying he was gathering the data for research purposes and violated the company’s policies by passing the data to Cambridge Analytica. (Kogan has said the app’s terms and conditions were written to allow commercial uses.) Facebook says that after it learned of the situation in 2015, it removed Kogan’s app and demanded that he “and all parties he had given data to” destroy the data. Facebook says it received assurances that the data was destroyed, though recent media reports say it wasn’t. Cambridge Analytica has maintained that it deleted all the data Kogan provided.

4. Why did Cambridge Analytica want the Facebook data?
The firm uses data to reach voters with hyper-targeted messaging, including on Facebook and other online services. The company may have wanted the data to create psychological profiles that could be used to target voters during political campaigns. The firm believed those profiles were better predictors of how voters could be swayed through targeted ads than traditional data on party registration and voting patterns. Cambridge Analytica was funded by former Renaissance Technologies co-CEO Robert Mercer, a major supporter of Trump in 2016. Trump’s campaign manager, Steve Bannon, served on the firm’s board.

5. Did Cambridge Analytica pay Kogan?
It covered his costs in creating his app—more than $800,000—and allowed him to keep a copy for his own research, The New York Times reported, citing company emails and financial records.

6. Did the Facebook data help Trump win the presidency?
Whether Cambridge Analytica’s models really work is a point of contention; even some of the firm’s clients have said they saw little value in it. Cambridge Analytica has denied it used psychographic modelling techniques on the Trump campaign. But it’s not clear whether the firm used the Facebook data in other ways to better understand and target voters. Also unknown: how many of the 50 million Facebook users whose data were acquired were registered US voters.

7. Did any of this violate any rules?
That remains to be seen. The UK has data-protection laws that ban the sale or use of personal data without consent. And in 2011, Facebook settled privacy complaints by the US Federal Trade Commission by agreeing to get clear consent from users before sharing their material. The FTC is now investigating whether Facebook violated the terms of that 2011 consent decree. The company would face millions of dollars in fines if it were found to have violated that pact. Lawmakers in the US and UK are conducting their own inquiries.

Indigenous technology tested on BrahMos
The BrahMos supersonic cruise missile was successfully test-fired with an indigenous seeker for the first time. So far the seeker, a critical technology in missiles, came from Russia.
“BrahMos, the formidable supersonic cruise missile with indigenous seeker was successfully flight tested at 08:42 hrs at the Pokhran test range in Rajasthan. The precision strike weapon with indigenous seeker flew in its designated trajectory and hit the pre-set target,” the Defence Ministry said in a statement.

Expert tie-up
The seeker was jointly developed by the Defence Research and Development Laboratory (DRDL), Hyderabad, and BrahMos Aerospace. Seeker technology, which determines the accuracy of a missile, is a closely guarded secret. Mastering it is a significant milestone in missile technology and would reduce import dependence.
BrahMos is joint collaboration between India and Russia and is capable of being launched from land, sea, sub-sea and air against surface and sea-based targets. The range of the supersonic missile was initially capped at 290 km as per the obligations of the Missile Technology Control Regime. Since India’s entry into the club, the range has been extended to 450 km and the plan is to hit 600 km.

FB apologises for breach of trust
“I started this when I was so young and inexperienced,” Mr. Zuckerberg said. “I made technical errors and business errors. I hired the wrong people. I trusted the wrong people,” he said.
He said the company will “investigate every app that has access to a large amount of information from before we locked down our platform, and if we detect any suspicious activity, we’re going to do a full forensic audit.”
“We’re going to review thousands of apps,” he said. Facebook said it discovered last week that Cambridge Analytica might not have deleted the data as it certified. “We should not have trusted Cambridge Analytica’s certification, and we are not going to make that mistake again,” he said.
“This was a breach of trust between Kogan, Cambridge Analytica and Facebook,” Zuckerberg wrote in the post.
“But it was also a breach of trust between Facebook and the people who share their data with us and expect us to protect it.”

Slew of measures
In a damage-control mode, he announced a slew of measures to secure the platform further.
The company would take three steps to prevent the data misuse. “We will investigate all apps that had access to large amounts of information before we changed our platform to dramatically reduce data access in 2014, and we will conduct a full audit of any app with suspicious activity,” he said. “We will ban any developer from our platform that does not agree to a thorough audit. And if we find developers that misused personally identifiable information, we will ban them and tell everyone affected by those apps,” he added.

Restricting data
Mr. Zuckerberg said the second step was to restrict developers’ data access even further to prevent other kinds of abuse.
“We will reduce the data you give an app when you sign in — to only your name, profile photo, and email address. We’ll require developers to not only get approval but also sign a contract in order to ask anyone for access to their posts or other private data. And we’ll have more changes to share in the next few days,” he said.
He said that next month, Facebook would show everyone a tool at the top of their News Feed with the apps they have used and an easy way to revoke those apps’ permissions to their data.

Dead eggs, stillborn turtles found at Versova
A day after Olive Ridley turtles returned to hatch at Versova beach after a 20-year hiatus, the Forest Department is looking into the possibility of more turtle nests being present at the beach.

Among the 97 eggs that were found in a four-foot deep pit at the beach on March 22, 84 eggs hatched of which four turtles were stillborn. The remaining 13 eggs didn’t hatch at all.

The Forest Department took the dead turtles and unhatched eggs to conduct further lab tests to ascertain the cause of death. Additional Principal Chief Conservator of Forest, Vasudevan N. said, “The mortality rate is usually up to 10% and is likely to go up due to genetic issues. External factors don’t really result in the death of the turtles.”

Mr. Vasudevan said the dead turtles and unhatched eggs were found evening. ‘The possibility of having more pits at the beach is quite likely. We have deployed some officials at the site to look into it,” he said. All eggs were found in one pit suggesting they belonged to a single turtle.

Centre issues notice to Cambridge Analytica
The government has sent a notice to U.K.-based Cambridge Analytica — accused of misusing data of 50 million Facebook users — asking it to disclose if data of Indian users was used, and to name the entities that used their services.
The firm has been asked to reply by March 31.
“The Ministry of Electronics & Information Technology, Government of India has issued a notice, in the first instance, to Cambridge Analytica, wherein the serious breach of propriety and misuse of data intended to profile and influence voting behaviour has been highlighted,” an official statement said.
Political parties in India, including the ruling BJP and the Congress, have accused each other of engaging the services of Cambridge Analytica, leading to questions over influencing elections “through questionable means.”
“The fairness of Indian democracy and electoral process is a matter of pride and any attempt to influence the sanctity of the electoral franchise through dubious and questionable means is unacceptable,” the Ministry of Electronics and IT said in a statement.
The notice addressed to Cambridge Analytica seeks immediate response to six questions, including “whether they have been engaged in any assignment to utilise data of Indians from the above cited breach? Who are the entities that have engaged them for the above?” They have also been asked to clarify how they came to be in possession of such data? And was consent taken from the individuals?
“How such data collected was used? Was there any profiling done on the basis of such data?,” the Ministry asked.

Radar speed signs to slow down drivers
There are traffic police, armed with interceptors, to flag down motorists who drive over the speed limit. But that hasn’t really helped. Recently, a head constable, who was on duty on NICE Road, was knocked down by a speeding vehicle.
The police are now planning to use technology that will appeal to drivers in the hope that they will slow down.
LED display boards will be installed on the medians of key roads. These will display a vehicle’s speed in real time against the permitted limit. “These are called driver feedback systems that work on radar or Doppler technology. They register the speed of an approaching vehicle 50 metres away. This will be flashed to the driver on the display board,” said R. Hithendra, Additional Commissioner of Police (Traffic). So what if there are multiple vehicles? On high-speed corridors, it’s rare to see multiple vehicles at a stretch, said Mr. Hithendra. “But in such cases, it will flash the highest speed.” The purpose of radar-speed signs is to make drivers aware that they are crossing the limit. They are used to slow the drivers down in many countries. Traffic expert Prof. M.N. Srinhari said this technology is commonly used on highways in Europe and the United States. Empirical evidence shows that displaying the speed of a vehicle against the speed limit will see drivers slowing down. “These are also called traffic calmers,” said Mr. Srinhari. Traffic police officers concur. “When the real-time speed is shown to the drivers, they react by slowing down. Even co-passengers in the vehicle will ask the driver to slow down. It’s a psychological trigger that will work,” said Mr. Hithendra.

50 units to be installed
The traffic police are all set to issue tenders for 50 such driver feedback systems, where each will have two radar systems for either lane. These will be put up in accident-prone zones on Outer Ring Road, the elevated expressway to KIA on Ballari Road, the elevated expressway to Electronics City, NICE corridor and Tumakuru Road, sources said.

IIT Guwahati develops silk scaffold for bone regeneration
A scaffold made of silk composite functionalised with copper-doped bioactive glass to facilitate faster bone regeneration has been developed by researchers at Indian Institute of Technology (IIT) Guwahati. The scaffold seeded with stem cells was found to differentiate into bone cells, facilitate growth of blood vessels and successfully integrate the newly formed bone cells with the native bone. The researchers were able to replicate the results in rabbits using functionalised non-mulberry silk composite. Rabbits with scaffolds implanted at the site of bone injury showed successful growth of bone cells and integration with the native bone at the end of three months.

Commercially available synthetic grafts have a failure rate of about 25% and 30-60% complication rates. This is due to slower bonding with native bone and poor blood vessel growth. The team led by Prof. Biman Mandal from the Department of Bioscience and Bioengineering at IIT Guwahati developed the silk composite by adding chopped silk fibre to liquid silk. Unlike pure silk, the silk composite has greater strength. The addition of bio glass further enhanced the strength of the composite. Besides other kinds, both mulberry and non-mulberry silk composites were tested. The non-mulberry silk composite was found to be superior in all respects. The RGD sequence in non-mulberry silk is a cell binding site and helps in better cell attachment and proliferation. As a result, more stem cells get attached to the composite leading to better bone tissue formation with time.

Suitably rough
Besides enhancing the strength of the composite, the minerals from the bioglass gets deposited on the composite making it rougher. “Bone cells prefer rough surfaces and the scaffold mimics the native bone surface architecture,” says Prof. Mandal. Bioglass also helps in stem differentiation. “We found stem cells differentiating into bone cells with the formation of extracellular matrix similar to natural bone,” he says.

Doped copper
The doped copper plays a crucial role in stabilising the gene responsible for blood vessel formation. The gene, in turn, regulates the downstream angiogenetic factors thus helping blood vessel formation. Copper also plays a role in attracting endothelial cells (which forms the inner lining of blood vessels) present nearby to the bone defect site making blood vessel formation possible. The mulberry silk composite degrades and gets desorbed by the body at a faster rate than the non-mulberry silk. The rate of silk composite degradation should match the rate of new tissue formation else the bone that forms will tend to be weaker. “The non-mulberry silk material will be replaced completely in a few years. Since bone healing is slow, the silk material should not degrade quickly,” Prof. Mandal says.

The researchers tested the potential of the composites in repairing bone defects in rabbits and found more than 80% bone formation at the end of 30 days. “In the rabbits, the scaffolds promoted new bone tissue formation and growth of blood vessels. The resorbable nature of the scaffolds enabled them to degrade inside the body while being replaced with viable bone tissue in the small
focal sized bone defects. No remnants of the scaffold were seen,” says Joseph Christakiran Moses from the institute’s Department of Bioscience and Bioengineering and first author of a paper published in the journal Advanced Healthcare Materials.

“The results from rabbit models are very promising. We would like to undertake trials on larger animals such as sheep and goat,” says Prof. Mandal. “Since we use green methodology, the prospects of regulatory clearance are brighter.”

Do Olive Ridley turtles reach the Odisha coast using magnetic power?

One of the magnificent sights to behold in India is the arrival and nesting of tens of thousands of Olive Ridley turtles on the Gahirmatha seashore of Odisha every year as clockwork. They traverse thousands of kilometres northwards on the Indian Ocean south of Sri Lanka, land, nest and produce baby turtles, and after a while, return. The temperature, the season, the natural environmental resources all fit perfectly for this grand continuity of life.

**Built in GPS**

What kind of global positioning system (GPS) do these turtles have, allowing them to do this year after year? The details of the answer are yet to be worked out. There are two major theories that attempt to address this issue. They both use the fact that Mother earth is a huge magnet, with well-defined North and South poles, a magnetic axis and with an intensity or strength that varies systematically across the surface. Turtles appear to use this cue to move and position themselves for this vast journey. Towards this, it is claimed that each turtle itself is a tiny magnet.

Turtles are but one example. Other marine animals such as a variety of fish and lobsters, birds, bees, bats and even mammals such as dogs and some primates seem to have such a built-in compass. (Apparently dogs position themselves north to south as they urinate or defecate!). It appears that all but humans have such a compass, or what is technically described as geo-magneto-reception. What then are the two theories? One, suggested by two veterans in the field, Joseph Kirschvink of Caltech and Kenneth Lohmann of the University of North Carolina, argues that these animals have tiny magnets in their bodies. This magnet arises due to the presence of a material called magnetite (an iron-based mineral containing Fe3O4). These two groups have been systematically looking for magnetites in fish (such as the zebrafish - the favourite of experimental biologists), turtles, birds and so forth. (See, for example, the review “Geomagnetic imprinting: a unifying hypothesis of long-distance natal homing in salmon and sea turtles” by KJ Lohmann, NF Putman and MF Lohmann, PNAS (US) 105: 19096, 2008, and “Birds, bees and magnetism: a new look at the problem of magnetoreception” by J. Kirschvink, in Trends in Neurosciences, 5: 160, 1982).

**Biochemical approach**

At about the same time, the group led by Prof. Klaus Schulten of the University of Illinois, has been pursuing and pushing a more biochemical approach to magnetoreception. They suggest that the key molecule here is a protein called cryptochrome, which is found in the retina of the eye.

This protein has a long evolutionary history, found not only in plants, but also in fish, turtles, amphibians, birds and animals (humans too). Schulten points out that when blue light falls on this proteins, a pair of free radicals are generated, which do not quench each other (as free radicals normally do) but form an ‘entangled pair’, which generates a tiny magnetic piece. And it is this tiny molecular compass that aligns and interact with the earth’s magnetic field, leading to the movement of the animal (see “Cryptochrome and magnetic sensing- animal magnetoreception”, in <ks.uiuc.edu/>).

Which of the two is right, or do they work in tandem? Some answer to this has come from a recent paper by the group of Dr. Gil G. Westmeyer of the Technical University of Munich, Germany, which has appeared in Nature Communications last month ( Nature Communications | (2018) 9:802). Using zebrafish and another fish called medaka, they shone blue light on the fish and found that they responded as predicted by Schulten. However, even when they shone not blue or visible radiation at all, but infrared wavelengths, the fish still responded the same way. This suggested that there are alternate or additional mechanisms available (suggesting that Kirschvink too may have a point). Clearly more work needs to be done, using not zebrafish and medaka alone, but birds, and animals too.

Given that Olive Ridley turtles are available, and a good summary about them is available from the Wild Life Institute of India, and even some aspects of their DNA have been studied, it will be well worth some researchers from India to study their magnetoreception behaviour both by examining their magnetite content on one hand and cryptochrome activities on the other. This would add to our understanding of the basis of their magnetoreception, a field that waits to be investigated at greater depth.
Nanomotors for targeted cancer therapy

Research on nanomotors for various medical applications is an emerging field in nanoscience and researchers from Indian Institute of Science (IISc), Bengaluru, have had a measure of success.

The researchers have developed a new type of zinc-ferrite-coated magnetic nanomotors that are highly stable and can generate localised heating to kill cancerous cells. The results were published in Nanoscale.

**Just 3 microns**

Measuring just about 3 microns in size, the magnetic nanomotors can be manoeuvred in different biological environments like blood, tissue etc using rotating magnetic fields of less than hundred Gauss (safe level for human beings) and targeted to the area of interest in the body. They are popular due to their non-invasive nature and the absence of the need for chemical fuel to propel them. “We can inject these ferric nanomotors directly into the tumour or guide them to the area of interest using magnetic fields,” says Lekshmy Venugopalan, Research Associate at IISc’s Centre for Nano Science and Engineering and first author of the paper.

Hyperthermia experiments were carried out using these nanomotors on human cervical cancer cells in the lab. “On applying the appropriate magnetic field and frequency for about 20 minutes the temperature rises by 7-8 degrees Celsius — the window of cell death. The generated heat was high enough to kill the cancerous cells,” adds Lekshmy. Nanomotors of 2 mg/ml caused about 50% cell death in 20 minutes. “The nanomotors are biocompatible and in vivo studies are being carried out to understand how it will be processed in the body.”

“The current limitations of cancer therapies including inaccessible locations in the body and drug resistant tumours could be overcome with such tiny heat-generating motors irrespective of the type of cancer,” says Shilpee Jain, DST INSPIRE faculty fellow at the institute and co-author of the paper.

**Shows potential**

Silicon dioxide forms the backbone of these nanomotors and magnetic material such as iron is deposited on top of it. The zinc ferrite coating is then applied to provide multifunctional properties such as enhanced physical and chemical stabilities, and magnetic hyperthermia potential.

“These new developments have sorted out some long-standing technological issues like agglomeration of the nanomotors,” says Ambarish Ghosh, corresponding author of the paper. “Future research in this area would be directed towards in vivo experiments. More studies on combining drug release with magnetic hyperthermia need to be carried out. “The targeted therapy could have great implications for cancer therapeutics.”

Damaged reefs turn butterflyfish into flexible eaters

Fewer options on the menu could force you to be a less fussy eater. At least that’s what Lakshadweep’s melon butterflyfish experience, find scientists. In bleached coral reefs that host less food resources, these fish change their diets and eating patterns to adapt to reef damages caused by climate change.

Climate change–induced ocean warming can cause coral bleaching, which stresses coral patches and makes them prone to death. Bleaching is not new in Indian reef systems; the bleaching event of 2010 killed patches of corals in several reefs off the Lakshadweep Islands. This can be catastrophic for exclusive coral-eaters like melon butterflyfish. How do they deal with this?

**Live coral cover**

Scientists from Bengaluru’s Nature Conservation Foundation (NCF) and National Centre for Biological Sciences (NCBS) studied live coral cover and butterflyfish numbers in three reefs fringing the islands of Kadmat (coral death was highest here with only about 7% live coral cover and, therefore, resource-poor), Bitra and Kavaratti (least coral death, nearly four times more live coral cover than Kadmat) in Lakshadweep. Surprisingly, their surveys show that despite these large differences in coral cover across the reefs, melon butterflyfish numbers were similar in all three.
Fish behaviour caught on the team’s underwater videos showed why. The video footage recorded the coral species that 58 pairs of melon butterflyfish they followed ate, the time the fish spent eating and the time they took to travel between patches of live coral to obtain food. In resource-poor reefs, fish ate coral species that they otherwise clearly avoided in rich reefs like Kavaratti. Fish spent more time travelling and less time searching for food in resource-poor reefs, making food procurement both difficult and energetically expensive. To compensate for this, the fish ate more ‘compulsively’ in such reefs, taking faster bites (about two times quicker than in rich reefs) off corals in a hurry, write the scientists in their study published in the journal Ethology.

This flexibility in butterflyfish is something that his team has documented in other reef fish such as predatory groupers too, wrote co-author of the study Rohan Arthur of NCF in an email to The Hindu. “What is emerging from reefs like the Lakshadweep is that the ability to be flexible is going to be a key ingredient that separates the ‘winners’ from the ‘losers’ as reefs decline,” he wrote. However, such short-term resilience may not guarantee longer-term survival, according to the scientists.

Bizarre ‘alien’ skeleton was of human foetus: study

A six-inch skeleton discovered in Chile’s Atacama Desert belongs to a human foetus, and does not have extraterrestrial origins, scientists say. After five years of deep genomic analysis, researchers from the Stanford University and University of California, San Francisco (UCSF) in the US have pinpointed the mutations responsible for the anomalous specimen. They found mutations in not one but several genes known to govern bone development, researchers said.

The skeleton, nicknamed Ata, was discovered more than a decade ago in an abandoned town in the Atacama Desert of Chile. After trading hands and eventually finding a permanent home in Spain, the mummified specimen started to garner public attention. Standing just six inches tall with an angular, elongated skull and sunken, slanted eye sockets, the internet began to bubble with other-worldly hullabaloos and talk of ET, said Sanchita Bhattacharya from UCSF, the lead author of the study published in the journal Genome Research.

After sequencing Ata’s genome, researchers found mutations in seven genes that separately or in combinations contribute to various bone deformities, facial malformations or skeletal dysplasia. The analysis pointed to a decisive conclusion: This was the skeleton of a human female, likely a foetus, that had suffered severe genetic mutations.

Nolan noted that 8% of the DNA was unmatchable with human DNA, but that was due to a degraded sample, not extraterrestrial biology. Later, a more sophisticated analysis was able to match up to 98% of the DNA, he said.

GSAT-6A to give armed forces a shot in the arm

GSAT-6A, the second predominantly S-band communications satellite, is set to be launched from Sriharikota on March 29.

It will complement GSAT-6, which has been orbiting since August 2015 at 83 degrees East longitude. The 2,000-kg-class 6A, costing about Rs. 270 crore, is a great deal more than a routine communications satellite. It is designated for the use of the Armed Forces and will not add any transponder capacity for general uses, according to sources in the Indian Space Research Organisation (ISRO).

A special feature of the GSAT-6A is its 6-metre-wide umbrella-like antenna, which will be unfurled in once it is in space. The antenna is thrice as broad as the antennas generally used in ISRO satellites. It will enable mobile communication from anywhere via hand-held ground terminals. Regular communication satellites with smaller antenna require much larger ground stations, said a former director of ISRO.

The S-band’s antenna was developed by ISRO’s Space Applications Centre, Ahmedabad. The unfurl-able antenna, hand-held ground terminals, and network management techniques could be useful in future satellite-based mobile communication applications. GSAT-6A will also have a smaller 0.8-metre antenna for communication in the C band. GSAT-6A is slated to be launched at 4.56 p.m. on a GSLV rocket.

GSAT-6A gives India bigger eye in the sky

The Indian Space Research Organisation (ISRO) successfully placed a communication satellite GSAT-6A in a geosynchronous transfer orbit. It was carried on board the GSLV F-08 from the Satish Dhawan Space Centre here.

The GSAT-6A is a communication satellite that incorporates the high-thrust Vikas engine. It will complement the GSAT-6, which is already in orbit. The GSAT-6A’s antenna has a diameter of six metres — it can be unfurled and opened like an umbrella once it reaches its prescribed
The ISRO team at Mission Control appeared pensive waiting for the indigenous cryogenic upper stage to fire and take the satellite into its initial orbit. Former Chairmen of ISRO, K. Radhakrishnan and A.S. Kiran Kumar, too, watched the proceedings from Mission Control.

"These two satellites combined will provide platforms for development of advanced technologies such as the unfurlable antenna, hand-held devices, and ground networks," K. Sivan, Chairman, ISRO, said after the satellite was placed in an initial orbit of a periapse of 170 km and apogee of 35,975 km, 18 minutes after the rocket blasted off at 4.56 p.m. The satellite will be placed at a height of 36,000 km in a geostationary orbit, and the antenna will be unfurled in the coming days.
History classes become a voyage of discovery with 3D views

It takes a special knack to bring history to life from boring textbooks with flat 2-dimensional photographs. In schools, teachers often rely on visual aids and videos to grab the attention of students. Some classes, though, are travelling back in time using Google Earth Voyager, which allows children to explore empires and monuments in 3D. Since its development in May 2017, classrooms all over the world have started using Google Earth’s Voyager tool to delve into the past.

At Government Higher Primary School, Anthapura, Gubbi taluk, Tumakuru, the technology is being used to teach children about the Vijayanagar empire, which dates back to 1336 AD.

Social science teacher, Chandrakala R., has never seen students so eager for a history lesson. “I used the tool to teach my class 7 students, who were able to experience first-hand the history and culture of the people who lived at the time. We got 3D views of the Virupaksha temple and the Stone Chariot in the Vittala temple complex,” she said.

This feature was developed after India Literacy Project, a non-governmental organisation, approached Google Earth to build interactive content for the Social Sciences component of their Multi-Dimensional Learning Space project that aims to make children explore, experiment, discover and learn in a variety of ways. The stories developed through this initiative, focus on historical sites, kingdom and rivers, and are aligned with the school curriculum of four States: Karnataka, Tamil Nadu, Telangana, and Andhra Pradesh.

A pilot project has been rolled out in 15 schools across Karnataka and Tamil Nadu. The Indian Literacy Project has also conducted an orientation with 400 teachers. The pilot was for four chapters as part of the class 7 curriculum. The stories are storyboarded using Google Sheets, which consists of all text and links to maps and other interactive content.

The ‘Acharya envoys’ who propagate Indian culture

In a new initiative by the Narendra Modi government, a band of Indian officials posted to three missions in America now promote ‘Indian culture’ as part of diplomacy. Designated as ‘Yoga and Indian Culture Acharya’, the three officials in Washington D.C, New York and Chicago are experts in Sanskrit, Yoga and Hindu scriptures. They were selected by the Indian Council for Cultural Relations through a special recruitment process and have diplomatic passports and offices in Indian missions. Their appointment is initially for two years, extendable by two more. All three have the mandate to travel around and organise events that promote ‘Indian culture’.

Giving a glimpse into the initiative, Mokshraj, one of the three ‘Acharyas’ who joined on January 12, said: “Jaisidharshith, vaisisrishthi — you act according to your vision.” “This is the vision of the current government, but previous governments did not have this," Mr. Mokshraj, a Ph.D in Vedas from the Rajasthan Sanskrit University, said. DayashankarVidyalankar, an ‘Acharya’ at the Indian Consulate in New York, tells that the entire world was “guided by the wisdom of Vedas at one time but we lost that due to various factors. After Independence, this is the first time that India has a government that thinks that Indian culture should be propagated. That is how I am here.”

Prerna Arya, who serves at the Indian consulate in Chicago, became part of the initiative on December 7, 2016.

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Ms. Arya, who completed her Ph.D from the Gurukul-Kangri University in Haridwar and whose thesis was on ‘Naturopathy in Vedic Literature’, told that she was planning to popularise traditional forms of treatments. “For example, the yagnachikitsa. If a patient experiences the environment of yagna, it could be therapeutic in many cases,” she said.

Mr. Dayashankar was born in Gorakhpur. MahantAvaidyanath, guru of Uttar Pradesh Chief Minister Yogi Adityanath, sent him to Haridwar, where he served lepers until he joined Baba Ramdev. He then headed to Gujarat, where he learned Sanskrit. “I taught yoga in Parliament House for nearly 15 years and serve on several advisory boards of government departments,” he told The Hindu.

“I worked with Yogiji in all elections that he fought. He is my guru.”

He said it would be appropriate to call these bands of officials India’s “cultural ambassadors”. “Twenty four Indian missions and cultural centres abroad now have this position,” said Mr. Mokshraj.

**Spreading yoga**

These ‘Acharyas’ felt that yoga is being commercialised and, in the process, its spiritual dimension gets lost. “Asanas, the exercise part of it spread fast... butyogvidya is about the person’s physical, spiritual, intellectual, social, psychological, and economic progress... We have to spread these values. That is our sacred mission,” said Ms. Arya.

Mr. Mokshraj explains it similarly. “ VasudhaivaKutumbakam and JiyoaurJeene Do — these are two spiritual mottos that guide this initiative. How will this happen? When we think good of others... through the route of yoga and meditation,” he said. “Our responsibility is to... take yoga to each individual, without cost, so that they could reduce their medical bills and lead peaceful lives,” he said.

Mr. Mokshraj has been making rounds of temples and gurdwaras around the DC area, “wherever our Bharatiya community lives, with the message that if they organise a camp, this free service from the embassy is now available”. He has also started a regular yoga class for the embassy staff.

Mr. Dayashankar also plans to explain havan and yagna to American audiences. “Havan and yagna can benefit the world. [They have] a role in resolving the problems that the world faces today... when people think beyond themselves and think of the whole universe, that will lead to end of conflict,” he said.

A knowledge hub for medicinal plants

The use of Indian medicinal plants for drug discovery and therapeutics just received a boost.

A database of such plants has been built by a Chennai-based team led by AreejitSamal of the Institute of Mathematical Sciences.

By documenting 1,742 Indian medicinal plants and 9,596 chemicals that plants use to thrive and ward off threats (phytochemicals), this database has the distinction of being the largest so far. This is a first step towards validating and developing traditional systems of medicine that use plant extracts.

**Tribal medicine**

For the repository, the scientists sourced information from several texts including those that documented tribal medicine.

With supporting studies in the form of well-planned lab tests, this work has the potential to improve health care and enhance drug discovery.

Plants secrete various special chemicals to ward off predators, fight pathogens and survive in difficult situations. Some of these so-called phytochemicals have been used to prepare traditional medicines and also poisons. While there are extensive databases of phytochemicals of Chinese herbs, there has no similar work in India.

The new database, named IMPPAT (Indian Medicinal Plants, Photochemistry and Therapeutics) brings together not just the Indian medicinal plants and their associated phytochemicals, but also the latter’s 2D and 3D chemical structures, the therapeutic use of the plants and the medicinal formulations.

Among the many challenges in building IMPPAT was the removing redundancy and standardising names and spellings that varied across the several books and documents they have referred to.

From previous work we know that natural products are made of highly complex molecules, which therefore are more likely to bind to very specific proteins unlike commercial (or synthesised) drug molecules.

“We show that phytochemicals in IMPPAT also have high stereochemical and shape complexity similar to natural product library of Clemons et al, and thus, IMPPAT phytochemicals are also expected to be specific protein binders,” says AreejitSamal.

Drug molecules which are specific protein binders are likely to have fewer side-effects as they will bind specifically to their target protein.

**Quest for druggability**

The team analysed the features of the phytochemical...
Vitamin B12 supplements may reduce diabetes risk

Researchers from CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad along with scientists from Pune, Singapore and UK studied the molecular pathway to understand how B12 supplements are associated with Type 2 diabetes and its associated genes.

“Previous studies from our lab have shown that B12 supplementation for a year was able to bring down the level of homocysteine (a marker for cardiovascular diseases). We wanted to explore further as we know that B12 plays an important role in many reactions of the body and influences risk for many diseases including cardio-metabolic disorders,” says Dr. Giriraj R. Chandak, scientist at CSIR-CCMB and corresponding author of the paper published in Epigenomics.

The study involved 108 children from the Pune maternal nutrition study (PMNS). The children were randomly divided into four groups. One group was not given any supplements while the second was given B12 supplements (10 microgram/day), third B12 with folic acid (known to influence homocysteine levels) and fourth only folic acid. After a year, their blood samples were collected and genomic DNA was isolated and studied for differences before and after supplementation.

Crucial factor

“An Iditalmar follows stringent sacred rituals by eating

man.

at large. In Saora society, a shaman is believed to be

caused diseases faced by the iditalmar s or the villagers

are associated with their art practice. Iditals are sketched

in our paintings,” says Sanjay Gamang, a 22-year-old

Talented artists from the community have clearly ben-

It is a remarkable transformation for the sacred art of a

and the U.S. The paintings, which are pleasing to the eye

Saora paintings, lately sought by art lovers for living

rooms overseas

Saora paintings, lately sought by art lovers for living

around the world, have their origin in the mud walls of aboriginal LanjiaSaora tribal homes in Odisha. Selling fast at tribal art fairs and handicraft outlets, painting lots are also exported regularly to Germany, France and the U.S. The paintings, which are pleasing to the eye and widely admired for their artistic excellence, now offer a sustainable source of livelihood.

Idital and iditalmar s

A Saora painting is called Idital and the person who cre-

ates it is known as theiditalmar . Interesting anecdotes

are associated with their art practice. Iditals are sketched to

appease Saora ancestors and deities that may have caused diseases faced by the iditalmar s or the villagers at large. In Saora society, a shaman is believed to be an intermediary between the worlds of the living and the dead. The iditalmar draws to instructions from the shaman.

“An Iditalmar follows stringent sacred rituals by eating
one meal a day for 10-15 days till the painting is completed. Before the painting is made, the wall is cleaned and smeared with locally available red soil, then rice paste is prepared as white colour for painting with bamboo sticks (instead of brushes),” says Purusottam Patnaik, researcher with the State-run Scheduled Caste and Scheduled Tribe Research and Training Institute (SCSTRTI), Bhubaneswar.

Each painting has a rectangular frame, and features icons of deities, or those drawn from nature. It’s said that there are 64 artistic motifs that are drawn by the iditalmar s in a painting. Some frequently featured motifs include Labasum (the earth god), Jodisum (the village deity), Manduasum (the sun god) and Jananglosum (the wind deity). Distinct paintings are drawn with different occasions between birth and death in mind.

SCSRTI director A. B. Ota believes tribal cultures can be preserved if they are seen as livelihood options. He encouraged some changes that made Saora paintings easy to market.

Skills honed
“We sent Saora youth to professional institutes like the B. K. School of Arts, where they honed their skill further, and the National Institute of Fashion Technology (NIFT) where they received inputs for modernising. Little changes were introduced, such as painting in different sizes and using acrylic colours for longevity,” said Dr. Ota. Saora paintings have also been embossed on tea cups and document folders.

While some changes were made to the paintings, we kept their essence intact and never interfered with their sacred beliefs,” he added.

The agrarian Saoras have lived a quiet life in the lap of nature for centuries. The tribe finds mention in the Hindu epic Ramayana with Savari, Lord Ram’s devotee.

Hardly any iditalmar remains unemployed. The artists are also hired by civic authorities to paint and beautify city walls. It takes a day to complete a 20x8 inch painting priced upwards of Rs. 700; the materials required to make it cost Rs. 100. Larger paintings are more expensive.

Buoyed by their success in linking Saora paintings to the market, Odisha’s ST and SC Development, Minorities and Backward Classes Welfare Department is preparing other training modules. It wants to bring similar value to the DongriaKondh shawl, Dokra relics, bamboo and paddy handicrafts, the tribal jewellery of Nilagiri, Koraput’s workmanship in iron, and the bead jewellery of the Bonda tribals.

ZydusCadila gets USFDA nod for cardiac drug
Drug firm ZydusCadila said it had received the final nod from the U.S. Food and Drug Administration (USFDA) to market Metoprolol Succinate extended-release tablets, used for treating different cardiac conditions, in the American market. The product would be manufactured at the group’s formulations manufacturing facility at SEZ, Ahmedabad, ZydusCadila said in a statement.