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# CURRENT AFFAIRS

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## Current Affairs (11 to 20 February, 2018)

### 1. National News

#### 1.1 Modi meets Trump, Putin ahead of G-20 summit

Prime Minister Narendra Modi on Friday interacted with U.S. President Donald Trump, Russian President Vladimir Putin and British Prime Minister Theresa May ahead of the G-20 summit.

The brief exchange of views took place before the first trilateral meeting between Mr. Modi, Mr. Trump and Japanese Prime Minister Shinzo Abe scheduled for later in the day.

According to a picture tweeted by External Affairs Ministry Spokesperson Raveesh Kumar, Mr. Modi was seen clasping the hand of Mr. Trump and talking to the U.S. President.

Prime Minister Modi also interacted with President Putin.

"Catching up with other #G20 leaders from Russia, Italy and U.K. at the Leaders' Lounge," Mr. Kumar tweeted, referring to Prime Minister's interactions with President Putin, Italian Prime Minister Giuseppe Conte and British Prime Minister Theresa May.

Later, Mr. Modi joined other world leaders for a 'G-20 Argentina Family' photo.

Earlier, Mr. Modi held separate bilateral meetings with Chinese President Xi Jinping, Saudi Crown Prince Mohammed bin Salman and U.N. Secretary General Antonio Guterres. Mr. Modi and Mr. Xi discussed joint efforts to further enhance mutual trust and friendship. Asserting that the Wuhan meet was a milestone in India-China ties, Mr. Modi told Mr. Xi that he was looking forward to host him for an informal summit next year.

Mr. Modi assured Mr. Guterres, that India will play its "due and responsible" role at the crucial climate change negotiations in Poland next week.

During Mr. Modi's meeting with Crown Prince Salman, the two leaders decided to set up a mechanism to scale up the oil-rich kingdom's investments in energy, infrastructure and defence sectors in India.

Crown Prince Salman said Saudi Arabia will be finalising an initial investment in the National Infrastructure Fund.

Trilateral meeting

The trilateral meeting on the sidelines of the [G20](#) summit assumed importance in the wake of China flexing its muscles in the strategic Indo-Pacific region.

Asserting that India will “continue to work together on shared values,” Mr. Modi said, “The ‘JAI’ [[Japan](#), America, India] meeting is dedicated to democratic values... ‘JAI’ stands for victory [in Hindi].”

The Prime Minister also said the meeting was a convergence of vision between the three nations.

The Japanese Premier said he was happy to participate in “the first ever ‘JAI’ trilateral”.

Mr. Trump appreciated India’s growth story during the meet.

The leaders emphasised the importance of cooperation among the three countries on all major issue of global and multilateral interests such as connectivity, sustainable development, counterterrorism and maritime and cyber security.

They shared their views on progressing a free, open, conclusive and rule-based order in the Indo-Pacific region, based on respect for international law and peaceful resolution of all differences.

The trilateral meeting took place at a time when China is engaged in hotly contested territorial disputes in the South China Sea, and with [Japan](#) in the East China Sea. Both the areas are said to be rich in minerals, oil and other natural resources.

China claims almost all of the South China Sea. Vietnam, the Philippines, Malaysia, Brunei and Taiwan have overlapping claims in the waterway, which includes vital sea lanes through which about \$3 trillion in global trade passes each year.

The U.S. has been conducting regular patrols in the South China Sea to assert freedom of navigation in the area where Beijing has built up and militarised many of the islands and reefs it controls in the region.

Indo-Pacific region

Prime Minister Modi, in his keynote address at the Shangri La Dialogue in Singapore in June expounded India’s stand on the strategic Indo-Pacific region.

“India does not see the Indo-Pacific Region as a strategy or as a club of limited members. Nor as a grouping that seeks to dominate. And by no means do we consider it as directed against any country. A geographical definition, as such, cannot be,” he had said.

Mr. Modi, Mr. Trump and Mr. Abe also agreed to cooperate in various ways and together with other countries.

They also agreed on the importance of meeting in “Trilateral Format” at multilateral conferences.

## 1.2 Paris Agreement can't be renegotiated India

India will resist attempts by countries to renegotiate the Paris Agreement, said one of India's key negotiators at climate talks set to begin next week in Katowice, Poland.

“India won't create obstacles...however we want that the Conference of Parties-24 (discussions) be balanced, inclusive and consistent with the Paris Agreement,” said C.K. Mishra, Secretary, Union Ministry for Environment, Forests and [Climate Change](#).

“Some countries are trying to reopen the Paris Agreement.”

While he didn't name them, meetings in the run-up to the COP have seen several, particularly Australia, and the U.S. prominently, raise concerns about clauses in the deal. The landmark deal agreed to in 2015, exhorts countries to take steps to avoid temperatures from rising beyond 2C of pre-industrial levels, and even 1.5 C as far as possible, by the end of the century.

Currently global emissions are poised to warm the world by 3C by the end of the century.

The United States opted out of the deal last year but continues to be part of discussions as a complete withdrawal — as per terms of the UN convention — takes up to 4 years.

A 17-member delegation, consisting of officials from several ministries as well as Union Environment Minister Harsh Vardhan, will be representing India over two weeks in what is likely to be arduous negotiations on how to agree to implement the Paris Agreement.

A key point, said Mr. Mishra, would be transparency and accountability. Developing and developed countries have disputes on whether there should be a common set of standards that all countries must adhere to when reporting what steps each has taken to contain carbon emissions.

India and China, which have committed to ensuring that their emission intensities will not cross a threshold, also argue that all countries cannot be held to the same data-monitoring-and-reporting standards.

Then there's the thorny problem of finance. Developed countries are expected to make available \$100 billion annually to developing countries, according to a 2010 agreement in Cancun. This hasn't happened and developing countries say that all funds and technology, required to meet goals agreed to in Paris, should be over and above this.

Over the last month, India has held discussions with 40 countries, including China and Brazil, to forge alliances and compel the developed countries to make good on promises, made over the years, to provide enough finance and technology to stem runaway global warming.

### **1.3 Demonitisation pushed up direct tax collections: CBDT**

Demonetisation was beneficial in terms of increasing the tax base as well as increasing direct tax collections, Central Board of Direct Taxes Chairman Sushil Chandra said on Tuesday.

The government expects to exceed the budgeted target for direct tax collections this year, he added.

"The gross rate of direct tax collections is 16.5% and net growth is 14.5%, which in itself shows that demonetisation has really helped in widening the tax base, increasing the tax revenue, and also in deepening the tax base, which means that people who filed returns of ₹10 lakh about two years ago, are now reporting more now, and even the people filing returns of more than ₹1 crore are filing much more this year," Mr. Chandra told reporters on the sidelines of a CII conference on tax.

"We will definitely achieve the budget estimate for direct tax collections for the year," he added. "The target is ₹11.5 lakh crore and we are very hopeful that we will achieve this target. We have already covered 48% of the total budget estimate, and there will not be problem in achieving the rest."

#### **Foreign assets disclosure**

Mr. Chandra added that India had begun to receive information on an automatic basis from 70 countries regarding foreign assets and bank accounts held by Indians. "If anybody has not shown foreign assets or a foreign bank account in their I-T returns, the department will take action against them," he said.

## 1.4 India's Bhutan hydel project ready

India is expected to commission a major hydropower project in [Bhutan](#) in the coming weeks, Foreign Secretary Vijay Gokhale said on Tuesday.

Delivering a speech on India-Bhutan relations, the top diplomat said cooperation in the hydropower sector was a sign of strength of the time-tested ties between the two countries.

"This year we hope to commission the flagship 750-megawatt Mangdechhu hydropower project, hopefully this month itself, and we are also working on a number of ongoing and planned projects that will ensure our relationship in this sector continues in the future," said the Foreign Secretary assuring Bhutan of India's commitment to work with the Himalayan country.

### Adapting to the times

The Mangdechhu project was bagged by the Bharat Heavy Electricals Ltd. (BHEL) and it will be implemented on a bilateral basis. The Foreign Secretary said India-Bhutan ties had adapted to the changing times. Bhutan's latest democratic election had firmed up its position as a leading democracy in the region, he said.

Commissioning of the project will mark a highpoint in bilateral ties in the coming months.

The official said India and Bhutan were now interacting at the level of parliamentarians and civil society participants, while also maintaining close dialogue at the official levels.

### Special ties

The Foreign Minister of Bhutan Tandi Dorji told *The Hindu* on Tuesday that Bhutan would maintain its special relationship with India in the future.

The Foreign Secretary's comments came at the end of a conference organised by the Indian Council of World Affairs (ICWA) that was organised to mark half century of diplomatic ties between Delhi and Thimphu.



## 2. International News

### 2.1 India, U.S. will sort out sanctions waiver: Mattis

India and the U.S. are planning to “sort out” issues around a U.S. sanctions waiver related to India’s purchase of the S-400 Triumf missile defence system from Russia, U.S. Secretary of Defence Jim Mattis told the press at the Pentagon on Monday.

Defence Minister Nirmala Sitharaman is now on a visit to Washington.

Asked if he expects India to get a waiver, Mr. Mattis said, “Yeah, you know, India has spent many, many years in its non-aligned status. It’s drawn a lot of weapons from Russia. We have a growing strategic confluence of interests with our country and theirs... and we’ll sort out all those issues here today, and in the days ahead.”

The Countering America’s Adversaries Through Sanctions Act (CAATSA) was signed into law by U.S. President Donald Trump in April 2017.

However, the President may make an exemption to CAATSA as per the John S. McCain National Defense Authorization Act (NDAA) for FY19 — Mr. Mattis was pivotal in pushing for this part of the legislation, citing India and other countries as examples of those with historic ties to Russia now wanting to purchase U.S. defence equipment.

Ms. Sitharaman was given an extended honour cordon (guard) at the Pentagon on Monday where she and other Indian officials visited for talks with Mr. Mattis and his team. Ms. Sitharaman and Mr. Mattis spoke briefly on bilateral ties and Mr. Mattis took a few questions from the press.

Regarding the White House reaching out to Pakistan Prime Minister Imran Khan about supporting the peace process in Afghanistan, Mr. Mattis said, “It’s time for everyone to get onboard, support the United Nations, support Prime Minister Modi, support President Ghani and all those who are trying to maintain peace and make for a better world here.”

The two Defence heads have had four sets of meetings over the past year including the 2+2 dialogue with their External Affairs and State Department counterparts in New Delhi in September where the COMCASA — one in a series of U.S “foundational” security agreements was finalised.

In addition to a CAATSA waiver, discussions are reportedly underway for signing the last of the foundational agreements, the Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA) as well as India’s purchases of military equipment. *The Hindu* spoke with



and met Indian government officials in Washington, DC, but did not get a response on the status of BECA-related talks or CAATSA waivers.

On Tuesday Ms. Sitharaman flew to Reno (Nevada) to meet with the diaspora and then to San Francisco. Ms. Sitharaman will participate in a roundtable discussion at Stanford University and visit Defense Innovation Unit (Diu), a U.S. Department of Defense entity that funds innovation in the defence arena.

Ms. Sitharaman will then visit Honolulu from December 5-7, where she will meet with the Admiral Philip S. Davidson, who heads INDO-PACOM (formerly, "PACOM"), the U.S.'s Indo-Pacific Command. Ms. Sitharaman will get briefed on military activities in the area, the Indian Embassy here said.

## 2.2 OPEC agrees to cut oil production

The Organisation of the Petroleum Exporting Countries (OPEC) tentatively agreed an oil-output cut on Thursday but was waiting to hear from non-OPEC heavyweight Russia before deciding the exact volumes for a production reduction aimed at propping up crude prices, two sources from the group said.

Russian Energy Minister Alexander Novak flew home from Vienna earlier for talks with President Vladimir Putin in St Petersburg. Mr. Novak returns to the Austrian capital on Friday for discussions among Saudi-led OPEC and the group's allies.

The price of crude has fallen almost a third since October but U.S. President Donald Trump has demanded the Organisation of the Petroleum Exporting Countries make oil even cheaper by refraining from output cuts.

"We hope to conclude something by the end of the day tomorrow ... We have to get the non-OPEC countries on board," Saudi Energy Minister Khalid al-Falih told reporters before the OPEC meeting started.

"If everybody is not willing to join and contribute equally, we will wait until they are."

Asked whether OPEC could fail to reach a deal, Mr. Falih said all options were on the table. Possible output cuts by OPEC and its allies ranged from 0.5-1.5 million bpd, and 1 million bpd was acceptable, he said.

OPEC's closed-door meeting began around 1100 GMT and was still ongoing after 2-1/2 hours.

Brent oil futures fell as much as 5 % to below \$59 per barrel on fears that there could be no deal but later recovered somewhat, trading down 2 % by 1325 GMT.

“One million bpd may disappoint many. But should the cut be from a September or October baseline, rather than November, the net impact would be sufficient to limit storage builds,” Greg Sharenow, executive vice-president for Pimco, said on the sidelines of the OPEC meeting.

“It is unlikely to spark a meaningful price rally, but also will not be so dire either. In many respects it is the middle road, which may be the optimal solution,” said Mr. Sharenow, who helps manage a \$15 billion commodities fund at the \$1.77 trillion U.S. investment management firm.

OPEC delegates have said the group and its allies could cut by 1 million bpd if Russia contributed 150,000 bpd of that reduction. If Russia contributed around 250,000 bpd, the overall cut could exceed 1.3 million bpd.

Mr. Novak said on Thursday that Russia would find it harder to cut oil output in winter than other producers because of the cold weather.

Oil prices have crashed as Saudi Arabia, Russia and the United Arab Emirates raised output since June after Mr. Trump called for higher production to offset lower exports from Iran, OPEC's third-largest producer.

Russia, Saudi Arabia and the United States have been vying for the position of top crude producer in recent years. The United States is not part of any output-limiting initiative due to its anti-trust legislation and fragmented oil industry.

#### Trump raises pressure

Iranian exports have plummeted after the United States imposed fresh sanctions on Tehran in November. But Washington gave sanctions waivers to some buyers of Iranian crude, further raising fears of an oil glut next year.

“Hopefully OPEC will be keeping oil flows as is, not restricted. The world does not want to see, or need, higher oil prices!” Mr. Trump wrote in a tweet on Wednesday.

Iranian Oil Minister Bijan Zanganeh said on Thursday he would support a cut as long as Iran did not need to reduce its own output. Iraqi Oil Minister Thamer Ghadhban said Iraq as OPEC's second-largest producer would support and join a cut.

Possibly complicating any OPEC decision is the crisis around the killing of journalist Jamal Khashoggi at the Saudi consulate in Istanbul in October. Mr. Trump has backed Saudi Crown

Prince Mohammed bin Salman despite calls from many U.S. politicians to impose stiff sanctions on Riyadh.

### 3. Polity and Governance

#### 3.1 Disabilities Act: States going slow on roll-out says study

A study conducted by the Disability Rights India Foundation (DRIF) on the implementation of the Rights of Persons with Disabilities (RPWD) Act, across 24 States, has revealed that more than half have not notified the State rules, despite a significant lapse of time.

Ten States including Bihar, Chandigarh, Manipur, Meghalaya, Odisha, Telengana, Tamil Nadu and West Bengal have notified the State rules, the survey said.

##### Deadline missed

The study, conducted in collaboration with the National Centre for Promotion of Employment for [Disabled](#) People (NCPEDP) and National Committee on the Rights of Persons with Disabilities (NCRPD), said the Act, passed in December 2016, should have been notified by all States within six months.

#### Report card

A look at the status of implementation of the Rights of Persons with Disabilities (RWPD) Act, 2016, two years after it came into force:

Number of States and UTs that have responded: **24 (66.7%)**

States that have not notified State rules: **58.3%**

States and UTs without State Advisory Boards: **50%**

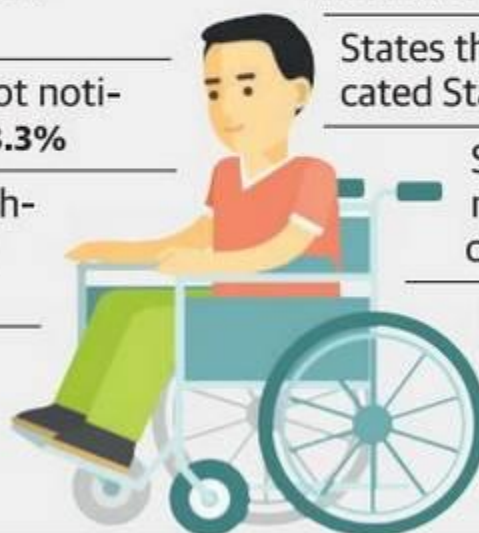
States and UTs without State Commissioners

for Persons with Disabilities: **37.5%**

States that have not allocated State funds: **79.2%**

States without notified special courts: **58.3%**

States without Special Public Prosecutors: **87.5%**



Source: DRIF, NCPEDP & NCRPD

The study, which concentrated on the States' administrative machinery with respect to the Act, found that 79.2% of the States had not constituted the funds for implementation of the RPWD Act. Among the five States to have constituted the funds, Tamil Nadu has allocated ₹10 crore while Himachal Pradesh has allocated ₹5 crore.

"Only Tamil Nadu has taken some action with regard to providing an increased quantum of assistance for people with disabilities in social security schemes," the report said.

Though 62.5% of the States have appointed Commissioners for Persons with Disabilities, "the progress has not been substantial. Only three States have constituted Advisory Committees, comprising of experts, to assist the State Commissioners" the study noted.

Out of the 24 States and Union Territories that responded to the study, Madhya Pradesh was ranked the highest, followed by Odisha, Meghalaya and Himachal Pradesh.

Andaman and Nicobar Islands along with Jammu and Kashmir ranked the lowest. The national capital was ranked number 12.

While 58.3% of the States have not notified Special Courts in the districts for trying offences under the Act, 87.5% have not appointed a Special Public Prosecutors as mandated by the law, the study said.

### 3.2 India gets first witness protection scheme

The [Supreme Court](#) on Wednesday brought in place a witness protection regime in the country noting that one of the main reasons for witnesses turning hostile is that they are not given security by the State.

A Bench of Justices A.K. Sikri and S. Abdul Nazeer said [Witness](#) Protection Scheme, 2018 will come into effect immediately across all States.

Under it, witness protection may be as simple as providing a police escort to the witness up to the courtroom or, in more complex cases involving an organised criminal group, taking extraordinary measures such as offering temporary residence in a safe house, giving a new identity, and relocation at an undisclosed place.

The top court said the scheme, which aimed to enable a witness to depose fearlessly and truthfully, would be the law of the land till Parliament enacted suitable legislation.

**Asaram Bapu case**

The issue came up when the Supreme Court was hearing a public interest litigation plea seeking protection for witnesses in rape cases involving self-styled preacher Asaram Bapu.

The Bench said witnesses feared serious consequences if they deposed against Asaram. “It is alleged that as many as 10 witnesses have already been attacked and three witnesses have been killed,” it noted.

## 4. Economy

### 4.1 RBI ready to stand as lender of last resort

Reserve Bank of India Deputy Governor Viral Acharya assured that the central bank was ready to stand as the lender of last resort in the context of liquidity needs of the non-banking finance sector.

At the same time, Mr. Acharya said the present situation did not warrant any drastic steps given the health of the Indian economy.

The Deputy Governor's comments come in the wake of sector facing a crisis of confidence.

"The Reserve Bank also stands ready to be the lender of last resort that is provided that kind of conditions warrant that sort of extreme measure," Dr. Acharya said during the post-policy interaction with the media.

"In our assessment, there is no such necessity at the present given the sound health of our economy.

"As the Governor explained in detail, we are at a level of aggregate credit growth which is in excess of nominal GDP (gross domestic product) growth with a fairly robust distribution across various sectors," he added.

The Reserve Bank said it had been watching the market developments on the issue since end August and was in 'regular touch' with Securities and Exchange Board of India (SEBI) to assess the fallout of mutual fund redemption and the resulting rollover risks for NBFCs and housing finance companies.

#### **Liquidity crunch**

NBFCs started facing liquidity crunch since August after Infrastructure Leasing and Financial Services (IL&FS) started defaulting on loans. The rates at which NBFC borrowed funds rose sharply following this.

Highlighting several steps that were taken by the central bank, Mr. Acharya said the measures had collectively eased the funding stress in a steady manner in the past two months.

"And these gave NBFCs and HFCs (housing finance companies) time and the opportunity to make their own balance sheet adjustments on both asset and liabilities side, in particular improve the duration structure of their liabilities."

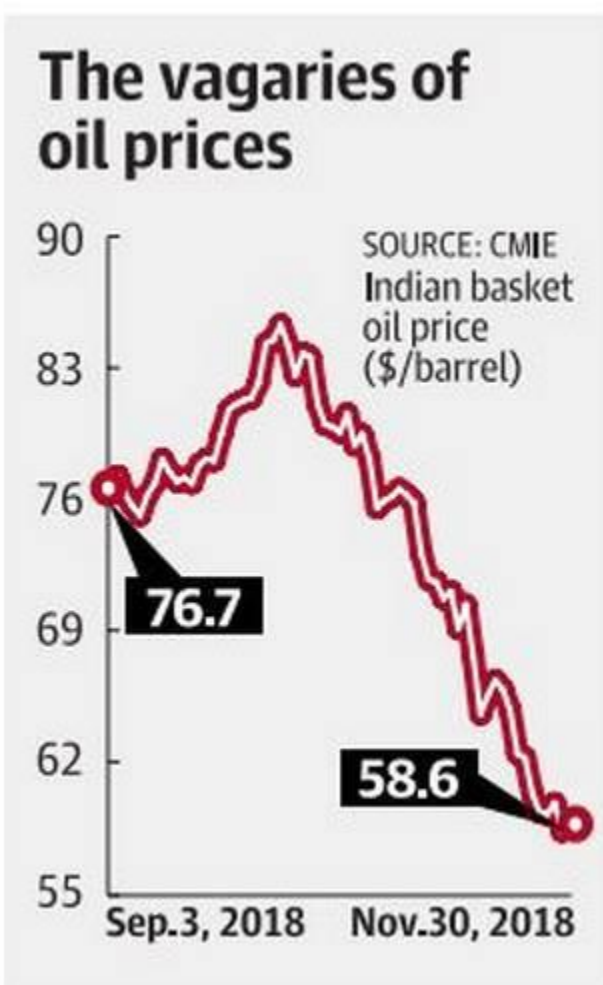


## 4.2 CAD may fall to 2.2%, thanks to oil slide

The ongoing fall in the price of crude oil has made the government rethink its projections for the current account deficit (CAD) for the year, a senior Finance Ministry official said.

Where it was earlier expecting a CAD of 2.8% of GDP, it has now revised its estimate down to 2.2%, he said, adding that if oil prices maintain this trajectory, CAD could fall below 2% next year.

### Easing pressure



Analysts and experts have been expressing worry over the effect of rising oil prices on CAD, which is the difference between the inflow and outflow of foreign currency. Being a major oil importer, rising oil prices meant more foreign exchange leaving the country. But some of this pressure has eased with oil prices falling over the last two months and the rupee strengthening against the dollar.

“When global oil prices were over \$80 a barrel, it looked like India’s current account deficit for 2018-19 would come to 2.8% of GDP,” the official said, not wanting to be named as the Finance Ministry is in its quarantine period before the Interim Budget.

“However, with the sharp fall in recent weeks, the current trajectory suggests a deficit of around 2.2% of GDP for this financial year.”

“If oil prices remain at current levels into next financial year, the full year impact of lower oil prices would bring the current account deficit well below 2% of GDP in 2019-20,” the official added.

The CAD was 1.9% of GDP in the financial year 2017-18 and 0.6% in the year before that. It stood at 2.4% in the first quarter of this financial year.

## Widening gap

*Current account deficit as % of GDP*

QUARTER ENDED	Sept 2018	2.9
	June 2018	2.4
	March 2018	1.9
	Dec. 2017	2.0
	Sept. 2017	1.1

FISCAL YEAR	2017-18	1.9
	2016-17	0.6
	2015-16	1.1
	2014-15	1.3
	2013-14	1.7

Oil price increased 17.7% in two months from \$72.4 per barrel on August 1 to a historical high of \$85.2 per barrel on October 4. Prices fell drastically thereafter to as low as \$58.6 per barrel on November 30.

### 4.3 Current Account Deficit widens to 2.9% in Q2

#### Trade deficit rises to \$50 bn compared with \$32.5 bn a year ago: RBI

Current account deficit (CAD) widened to 2.9% of GDP for the July-September quarter due to higher trade deficit compared with 1.1% during the same period of the previous year, the Reserve Bank of India said on Friday.

The deficit for the second quarter was \$19.1 billion compared with \$6.9 billion in the year-earlier period. The CAD for the April-June quarter was 2.4% of GDP or \$15.9 billion.

The widening of CAD on a year-on-year basis was primarily on account of a higher trade deficit at \$50 billion compared with \$32.5 billion a year ago, the central bank said.

“The deficit widened due to sharp rise in oil prices. But now prices have corrected 31% from peak levels. Exports also picked up after rupee weakened against the dollar.

“So, I do not think the current account deficit will stay as high as this for the full year,” said Rupa Rege Nitsure, group chief economist, L&T Finance Holdings.

Net services receipts increased by 10.2% mainly on the back of a rise in net earnings from software and financial services.

Private transfer receipts, mainly representing remittances by Indians employed overseas, was \$ 20.9 billion, increasing by 19.8% from their level a year ago.

“In the financial account, net foreign direct investment at \$7.9 billion in Q2 of 2018-19 moderated from \$12.4 billion in Q2 of 2017-18,” RBI said.

Portfolio investment recorded net outflow of \$1.6 billion in Q2 of 2018-19 — compared with an inflow of \$2.1 billion in Q2 last year — on account of net sales in both the debt and equity markets. Net receipts on account of non-resident deposits increased to \$3.3 billion in Q2 of 2018-19 from \$0.7 billion a year ago. The RBI said in the second quarter, there was a depletion of \$1.9 billion of foreign exchange reserves (on BoP basis) as against an accretion of \$9.5 billion in Q2 of 2017-18.

### **Arresting rupee fall**

The central bank had intervened in the currency market by selling dollars to arrest the sharp fall in rupee. In 2018 till October, the rupee had weakened 15% against the dollar but reversed trend in November as oil prices softened. Latest data released on Friday showed foreign exchange reserves increased by \$ 932.8 million to \$393.718 billion in the week to November 30.

Overall, the country’s balance of payments was in deficit of \$1.9 billion in the July-September quarter as compared with a surplus of \$9.5 billion in the year ago period.

For the first half of the current financial year, CAD has increased to 2.7% of GDP in first half of 2018-19 from 1.8% during the same period of last year.

Rating agency Fitch said on Thursday that the rupee could slip to 75 a dollar due to widening of current account gap.

## 5. Science and Tech

### 5.1 M.S. Swaminathan calls GM crops a failure, Centre adviser faults paper

A research paper co-authored by leading [agriculture](#) scientist M.S. Swaminathan, which describes Bt cotton as a 'failure,' was criticised by India's Principal Scientific Adviser (PSA), K. VijayRaghavan as 'deeply flawed'.

The paper, 'Modern Technologies for Sustainable Food and Nutrition Security', appears in the latest issue of the peer-reviewed journal *Current Science*. It is authored by P.C. Kesavan and Prof. Swaminathan, senior functionaries of the M.S. Swaminathan Research Foundation (MSSRF). The article is a review of crop development in India and transgenic crops — particularly Bt cotton, the stalled Bt brinjal as well as DMH-11, a transgenic mustard hybrid. The latter two have been cleared by scientific regulators but not by the Centre.

"There is no doubt that GE (genetically engineered) Bt cotton has failed in India. It has failed as a sustainable agriculture technology and has, therefore, also failed to provide livelihood security for cotton farmers who are mainly resource-poor, small and marginal farmers," according to the paper, "...The precautionary principle (PP) has been done away with and no science-based and rigorous biosafety protocols and evaluation of GM crops are in place."

#### 'Flawed and full of errors'

The piece also raises questions on the genetic engineering technology itself on the grounds that it raises the cost of sowing. Also, the insertion of foreign genes (in the plant) could lead to "molecular and cellular events not precisely understood."

"The Kesavan and Swaminathan 'Review' (sic) is deeply flawed and full of errors. Needs scientific rebuttal," Mr. VijayRaghavan tweeted from his personal account. Before being appointed the PSA, Mr. VijayRaghavan, a biologist, was Secretary, Department of Biotechnology, which funds a variety of molecular biology projects. Mr. Kesavan, who is the lead author of the piece, told The Hindu that he was unaware of Mr. VijayRaghavan's comment but was expecting a "scientific, point-by-point response (of any flaws)."


"I'm not on Twitter but I believe a senior scientist shouldn't be making such irresponsible comments," he said.

The Hindu reached out to Prof. Swaminathan's office and was told that the paper had raked up "a lot of controversy."

## Not sustainable

Arguments raised by  
P.C. Kesavan and M. S.  
Swaminathan in their paper:

- Mutations and natural selection are the predominant evolutionary mechanisms to induce variations in flowering plants
- In r-DNA technology (Genetic Engineering or GE) all the molecular and cellular events which are triggered with the insertion of 'exogenous DNA', are not precisely understood
- Since cost of GE seeds and inputs as in Bt Cotton are exorbitant, small farmers are unable to withstand crop losses
- The site of a gene's insertion is not controllable, and health concerns from unintended effects



### THE CONTEXT

- Bt cotton occupies greater than 95% of India's cotton acreage
- Yields have stagnated at around 500 kg/ha (lower than yields in China and Egypt)
- Bt Brinjal was cleared by the Genetic Engineering Appraisal Committee but was put on a moratorium by the UPA government
- DMH-11, or GE mustard developed by Delhi University was cleared by the GEAC, but later it was withdrawn

have been raised

- Precautionary principle has been done away with in India and no rigorous biosafety protocols and evaluation of GM crops are in place
- Bt cotton in India failed to live up to promises in 10 years, on high yields from

pest resistance and reduction in insecticide use

- Huge socio-economic cost is borne by farmers from hybrids in Bt cotton
- Bt cotton farmers are asked to revert to traditional pest management, displaying failure of Bollgard II cotton

"We'll likely soon be holding a press conference or a discussion on some of the points raised since the paper was published," a spokesperson for the MSSRF said.

Mr. VijayRaghavan said in a text message that he wouldn't be immediately elaborating on his criticism but would in a "few days."

### 'Last resort'

Prof. Swaminathan, credited with leading India's Green Revolution, has in recent years advocated 'sustainable agriculture' and said the government should only use genetic engineering as a last resort. "...Swaminathan emphasised that genetic engineering technology is supplementary and must be needbased. Only in very rare circumstance (less than 1%) may there arise a need for the use of this technology," according to the paper.

However, the MSSRF is also involved in GE research. It has a programme on developing drought-resistant GM rice by using genes from mangroves to potentially protect rice varieties grown along the coasts from being affected by higher saline content — a consequence of warming seas from climate change. "The programme is ongoing but isn't aimed for the present. Genes from salt-tolerant plants too aren't ideal...however, GE may be deployed to manage against abiotic stresses," said Mr. Kesavan. Abiotic stresses refer to environmental factors that could meddle with plant yield, as opposed to 'biotic' stressors such as insects. Conventional GE



technology uses genes from soil bacterium to either protect them from specific pests, or — as in the case of GE mustard — facilitate hybridisation. This means making the plant more amenable to developing higher-yielding varieties.

## 5.2 'Big bird' to take Internet to villages

India's first six-tonne-class 'big bird' in space, advanced communication satellite GSAT-11, was put into orbit in the early hours of Wednesday from the European spaceport in Guiana in South America.

Its mission is to enable high-speed satellite-based Internet services to users in rural, remote areas and to businesses down home over the next 15 years.

The heaviest ever to be built by the Indian Space Research Organisation (ISRO), the 5,854-kg satellite was launched from the Guiana Space Centre at Kourou at 2.07 a.m. IST on Wednesday, December 5. The local time at the launch centre was 5.37 p.m on December 4.

The satellite and the launch fee have cost ISRO ₹1,200 crore.

The liftoff of GSAT-11 and a South Korean co-passenger satellite on European space vehicle Ariane 5 VA246 was watched and cheered by ISRO Chairman K. Sivan.

In his post-launch remarks, Dr. Sivan said, "It will meet most of the requirements of providing broadband connectivity to rural and inaccessible village panchayats under Bharat Net which is part of the Digital India initiative."

Launched in October 2011, Bharat Net (earlier called the National Optical Fibre Network) aims to provide 2.5 lakh village panchayats with e-banking, e-education, e-health and e-governance among others through reliable broadband connectivity.

This, along with GSAT-29 and GSAT-19, smaller satellites already launched from within India, will herald a new era of satellite-driven reliable high-throughput data services. Villages, remote locations and VSAT operators who drive private and public sector data services will be the main gainers.

Enabling in-flight Internet and village web services are the government's other goals: the latter promises to bridge the urban-rural digital divides

GSAT-11 carries eight transponders for the first time in the complex and efficient Ka frequency band; and 38 transponders in the Ku band. The Ka band enables smart coverage of places with multiple and reusable spot beams.



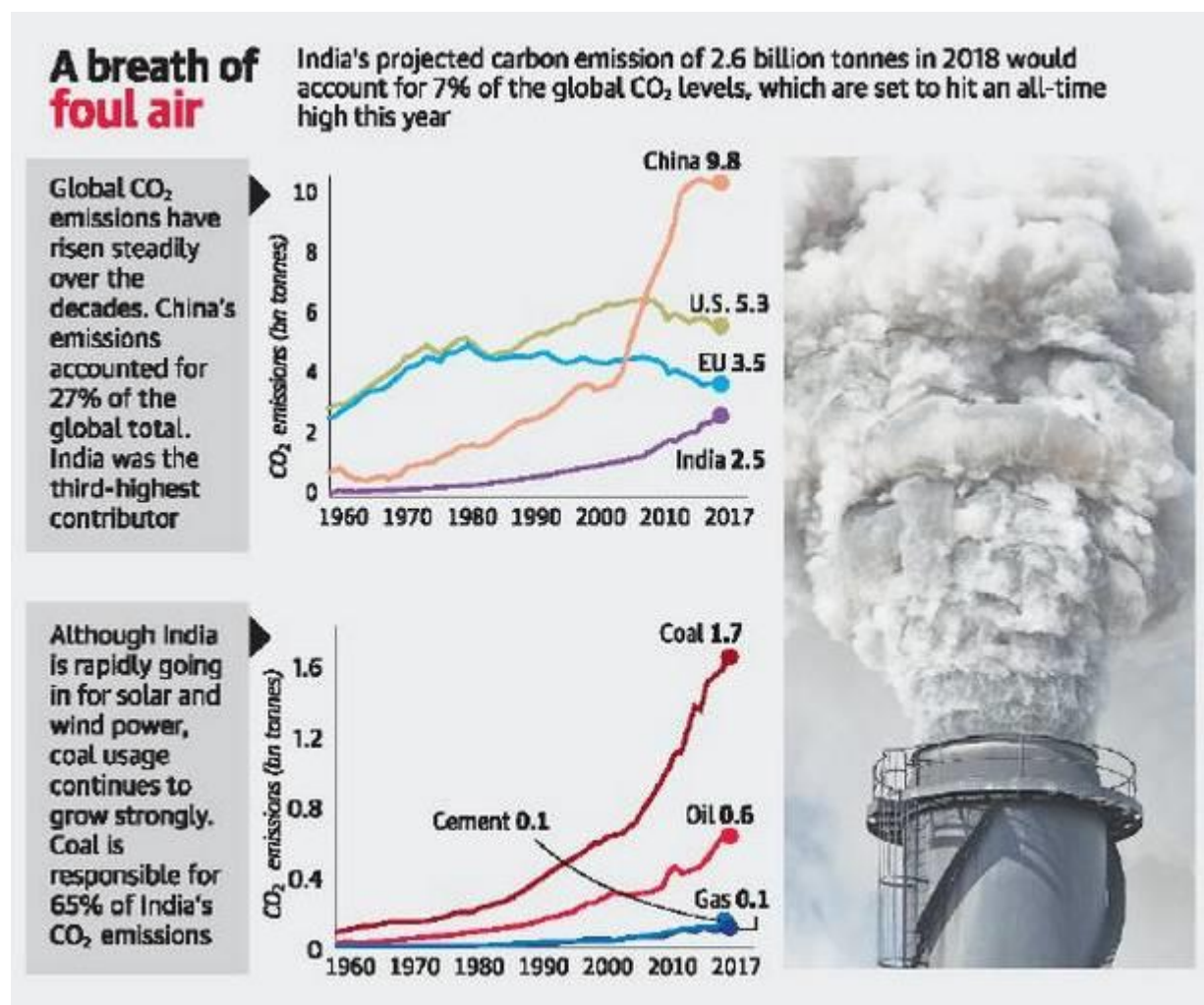
## 6. Environment / Geography

### 6.1 CO2 levels poised for record high

Global [carbon emissions](#) are set to hit an all-time high of 37.1 billion tonnes of CO<sub>2</sub> in 2018, according to researchers at the University of East Anglia (UEA) and the Global Carbon Project.

India, the third-highest contributor, is projected to see emissions rise by 6.3% from 2017. The 2.7% projected global rise in 2018 has been driven by appreciable growth in coal use for the second year in a row, and sustained growth in oil and gas use, according to the study that was published simultaneously Wednesday in several leading scientific journals.

This week, representatives from more than 190 countries have begun discussions at the UN Climate Change Conference (COP 24) in Katowice, Poland, on ways to equitably cut carbon emissions.



### Second year in a row

CO2 emissions have now risen for a second year, the study's authors say, after three years of little to no growth from 2014 to 2016. The rise in 2017 was 1.6%.

The 10 biggest emitters in 2018 are China, U.S., India, Russia, Japan, Germany, Iran, Saudi Arabia, South Korea, and Canada. The EU as a region of countries ranks third. China's emissions accounted for 27% of the global total, having grown an estimated 4.7% in 2018 and reaching a new all-time high.

Emissions in the U.S., which has withdrawn from its commitment to the Paris Agreement, account for 15% of the global total, and look set to have grown about 2.5% in 2018 after several years of decline.

Lead researcher Corinne Le Quéré, Professor of Climate Change Science and Policy at UEA, said in a statement: "We are seeing a strong growth of global CO2 emissions once again. Emissions need to peak and rapidly decrease to address climate change. With this year's growth in emissions, it looks like the peak is not yet in sight."

Limiting global warming to the 2015 Paris Agreement goal of keeping the global temperature increase this century to well below 2°C, would need carbon dioxide emissions to decline by 50% by 2030 and reach net zero by about 2050.

Though coal use contributed to the rise in 2018 from last year, it still remains below its historical high in 2013 but may exceed that if current growth continues, the study's authors.

## 6.2 Air Pollution cause of 1 in 8 deaths

India, with 18% of the world's population, has a disproportionately high 26% of the global premature deaths and disease burden due to air pollution. Moreover, one in eight deaths in India was attributable to air pollution in India in 2017, making it a leading risk factor for death.

This is according to the first comprehensive estimates of reduction in life expectancy associated with air pollution in each State, published by the India State-Level Disease Burden Initiative, a venture of the Indian Council of Medical Research (ICMR), the Public Health Foundation of India (PHFI) and the Institute for Health Metrics and Evaluation (IHME), in collaboration with the Ministry of Health and Family Welfare, along with experts and stakeholders associated with over 100 Indian institutions.

These research findings published in *The Lancet Planetary Health* were released on Thursday at the ICMR.

### **Key findings**

The key findings from the paper include the fact that 12.4 lakh deaths in India in 2017 were due to air pollution, which included 6.7 lakh deaths due to outdoor particulate matter air pollution and 4.8 lakh deaths due to household air pollution.

Over half of the deaths due to air pollution were in persons less than 70 years of age. In 2017, 77% population of India was exposed to ambient particulate matter PM2.5 above the recommended limit by the National Ambient Air Quality Standards. The report states that the highest PM2.5 exposure level was in Delhi, followed by the other north Indian States of Uttar Pradesh, Bihar and Haryana.

“There is increasing evidence globally and from India about the association of air pollution with premature death and disease burden. The findings in this paper are based on all available data on air pollution that were analysed using the standardised methods of the Global Burden of Disease Study. This comprehensive effort over several years has for the first time produced what we believe are robust estimates of the health impact of outdoor and household air pollution in every State of India,” said the first author of the study, Prof. Balakrishnan, director, Department of Environmental Health Engineering, Ramachandra Institute of Higher Education and Research, Chennai.

Further, the study states that the disability-adjusted life years (DALYs), attributable to air pollution in India in 2017 for major non-communicable diseases were at least as high as those attributable to tobacco use.

### **Life expectancy**

“The average life expectancy in India would have been 1.7 years higher if the air pollution level were less than the minimal level causing health loss, with the highest increases in the northern States of Rajasthan (2.5 years), Uttar Pradesh (2.2 years) and Haryana (2.1 years),” the study says, recommending that variations between the States in the exposure to outdoor and indoor air pollution should be taken into account while planning policies to reduce this exposure and its health impact.

“The massive adverse impact of air pollution on health is being increasingly better recognised,” Prof. Randeep Guleria, Director, All India Institute of Medical Sciences (AIIMS), in a release said, “What is now also becoming understood is that air pollution is a year-round phenomenon, particularly in north India, which causes health impacts far beyond respiratory illnesses.”

### 6.3 Tourists bring a wave of trash to beaches

In addition to air and water pollution, India can now add one more category to its pollution worries: beach pollution. And here, tourism and fishing are the biggest culprits, contributing most of the plastic litter on beaches, according to a study by the National Centre of Coastal Research (NCCR).

The NCCR conducted a qualitative analysis of the litter on six different beaches on the eastern and western coasts. It found that plastic litter from tourism alone accounted for 40%-96% of all beach litter.

At Chennai's Elliot's Beach, for instance, plastics left by tourists accounted for 40% of all the litter, while at Gopalpur in Odisha, it was as high as 96%. As for the other four beaches, plastics formed 66% of the overall litter on Fort Kochi Beach, 60% at Karnataka's Karwar beach, 87% at Visakhapatnam's R.K. Beach, and 81% at Andaman Island's Rangachang beach.

After tourism, fishing was the next biggest source of litter. While fishing nets were a major contributor, the processing of fish on the beach also produced a lot of litter.

At Fort Kochi, fishing litter accounted for 22% of the total, followed by Elliot's Beach at 15%, and Karwar beach at 10%.

Also, the proportion of biomedical litter was high in urban areas, such as Elliot's Beach and Fort Kochi Beach.

The study looked at tonnes of litter across these six beaches on September 15, 2018, the International Coastal Cleanup Day.

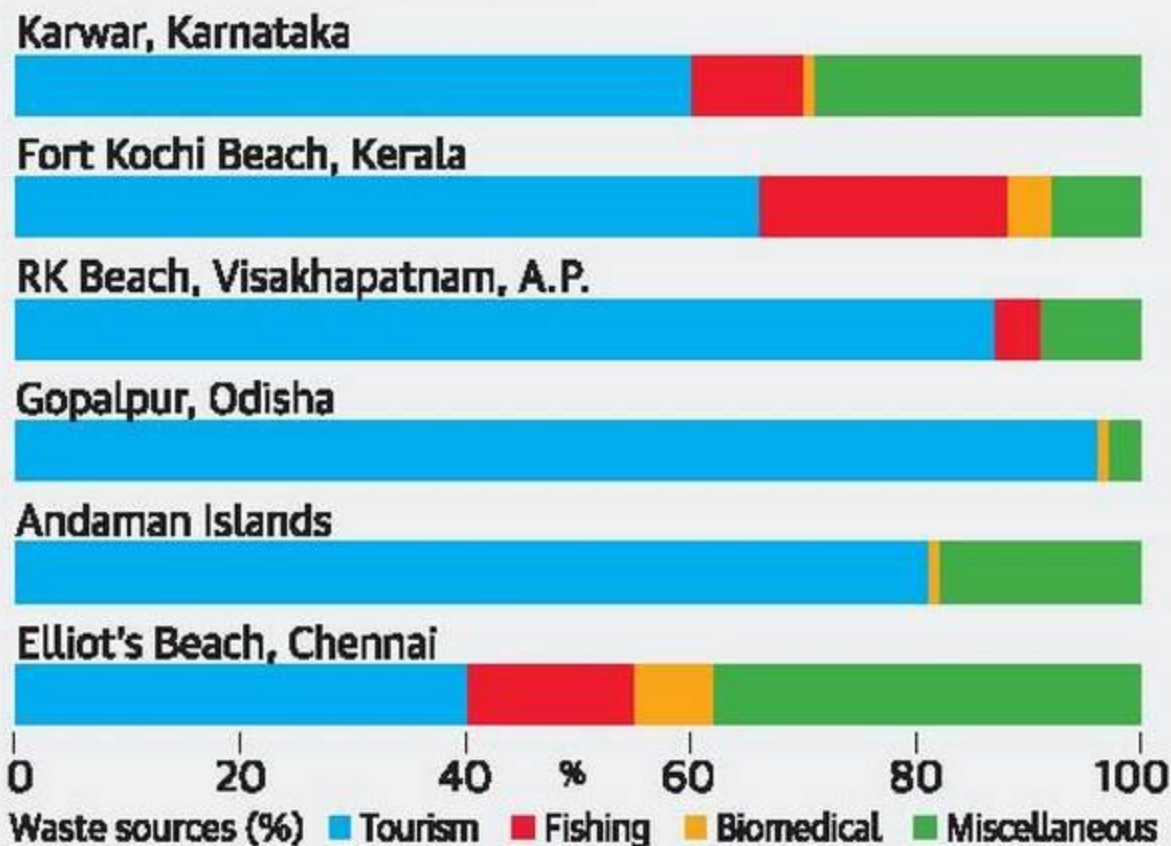
Speaking to The Hindu, M.V. Ramana Murthy, Director, NCCR, said India needed a national marine litter policy to control and manage waste on land and prevent its entry into the marine environment.

Other than the plastic litter dropped by tourists, similar waste from creeks and inlets made its way into the sea in the monsoon, he said.

Pravakar Mishra, an NCCR scientist who worked on the study, said that most of the litter consisted of plastic bottles, cutlery, and thermocol. Experts suggest installation of debris booms and fin deflectors upstream as measures to reduce the quantity of floating solid waste entering coastal waters.

## Cast away

The maximum amount of plastic waste across beaches in India is contributed by tourists



Mr. Murthy and Mr. Mishra said that India needed to start blue-flagging its beaches. The 'blue flag' is a globally recognised eco-label awarded to beaches and marinas that adhere to strict environmental and safety norms.