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QUICKLY

S&P 500, Dow Jones hit new highs July 12 The S&P 500 and the Dow Jones Industrial Average hit record highs on Friday, as the indices continued a strong run for the week on raised expectations of an interest rate cut this month.

SEC convicts Indian-origin fund CEO

New York, July 12 An Indian-origin founder of a Manhattan-based hedge fund firm and a former trader of the enterprise have been found guilty of securities fraud for their participation in a scheme to inflate the net asset value for hedge funds managed by the company by over \$100 million.

₹42-lakh fine on 5 cos for fraud trade

New Delhi, July 12 Market regulator SEBI has imposed a total fine of ₹42 lakh on five entities for executing non-genuine trades in the illiquid stock options segment of the BSE during its broad-based investigation period April 2014 to September 2015.

Good governance means no vested interests, and full accountability



J. MULRAJ

The huge electoral mandate given to the Modi government for a second term brings with it a huger expectation of good governance, including an absence of vested interests in making policy. In order to achieve our ambition of becoming a \$5-trillion economy in five years, we must ensure that policy is not directed solely by vested interests, one in which the errors are committed by policy makers, but the price is paid by others.

The remedy should be to pass a law under which, over a period of 5 to 10 years, the difference between market rents (which the government can define), and actual rent, is made good through annual increases. So, the poor governance by policy makers leads to building collapses and the price is paid by lost lives and insurance companies. Not by those responsible.

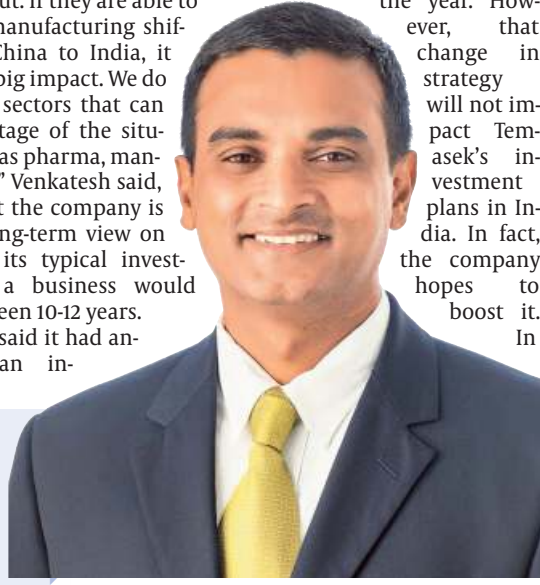
Temasek to commit more to India portfolio

Mumbai, July 12 The US-China trade war could be a boon for India as large private equity investors such as Singapore-based Temasek are doubling their investments in India on the view that the country will be a beacon of hope for growing their investment portfolio.

“The impact is minimal on India but there could be some positive fallout from it, which may come through some manufacturing theme the government is talking about. If they are able to get some manufacturing shifted from China to India, it will have a big impact. We do have some sectors that can take advantage of the situation, such as pharma, manufacturing,” Venkatesh said.

“The impact is minimal on India but there could be some positive fallout from it, which may come through some manufacturing theme the government is talking about. If they are able to get some manufacturing shifted from China to India, it will have a big impact. We do have some sectors that can take advantage of the situation, such as pharma, manufacturing,” Venkatesh said.

creasingly challenging environment since last July and moderated its investment pace — investing \$524 billion and divesting \$528 billion for the year. However, that change in strategy will not impact Temasek's investment plans in India. In fact, the company hopes to boost it.



Temasek will continue to invest over a billion dollars a year in India, and if there are opportunities, it will invest even more

R VENKATESH Managing Director — India, Temasek

Reconsider decision on the super-rich tax: FPIs to govt

Mumbai/New Delhi, July 12 Foreign investors are urging India to reconsider its decision to increase taxes on the super-rich, including a higher levy on certain groups of portfolio investors, arguing the move will hit the competitiveness of the Indian capital markets.

Foreign investors are urging India to reconsider its decision to increase taxes on the super-rich, including a higher levy on certain groups of portfolio investors, arguing the move will hit the competitiveness of the Indian capital markets.

Buyback tax: Will it hurt minority shareholders?

RINGSIDE VIEW

Chennai, July 12 KPR Mill is the first company to withdraw its buyback plan after the Union Budget imposed a tax on buyback of shares of listed companies, a tax that was until now imposed only on unlisted entities.

the time of the consideration and the approvals of the board and shareholders. As the company is not permitted to meet the buyback obligations beyond the amount approved by the board of directors and shareholders and the same can be effected only with borrowed funds, which is prohibited by law, KPR Mill was forced to withdraw its buyback plan, it further clarified.

With the proposal, the advantage of buyback over dividend distribution is largely negated. Assuming a company having cash surplus of ₹100 for distribution to shareholders: Earlier the tax incidence would be just ₹10 (10 per cent long-term capital gains tax, for holding shares for more than a year). Under the new proposal, assuming the company has the same surplus, investors would get only ₹79, after a 20 per cent tax, including surcharge and cess paid by the company.

Needs clarity However, the new proposal does not account for capital loss, i.e., if the acquisition price is higher than the buyback price. It needs clarity on whether long-or short-term capital loss on buyback in shareholders' hands would be available for set-off in subsequent years.

BROKER'S CALL

CAPITALVIA GLOBAL TCS (Buy) CMP: ₹2,107.95 Target: ₹2,245 A steady start in the new financial year with the performance for Q1 FY20, TCS has aligned growth and durability with its key strengths.

MOTILAL OSWAL Shriram Transport Finance (Buy)

CMP: ₹1,046.05 Target: ₹1,300 Our analysis of Shriram Transport Finance's FY19 annual report indicates that the company has diversified its borrowing mix by raising ₹10,000 crore from ECBs and retail NCDs (largely equal). But, these sources have been more expensive — the total landed cost of ECBs is about 10 per cent, while that of retail NCDs is 9-10 per cent.

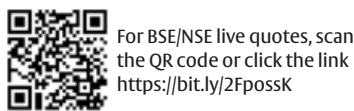
THE TOP 100

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52 W High, 52 W Low, PE, BSE Close. Lists top 100 companies including ABB India, ACC, Adani Ports, etc.

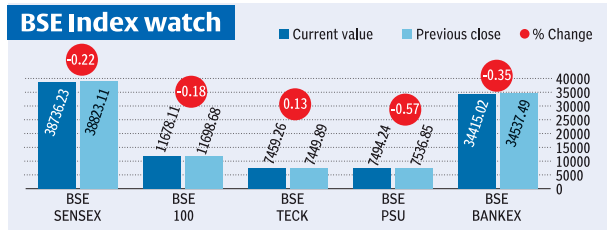


\$50-b JPMorgan fund prunes EM holdings by half on trade risk

A US interest-rate cut may be on the horizon, but a JPMorgan Asset Management fund is turning away from emerging market assets. The money managers Global Income Fund has halved its holdings of developing nation fixed income and equities to 3 per cent each, opting instead to buy European corporate junk bonds and Treasuries, according to its co-manager Eric Bernbaum.



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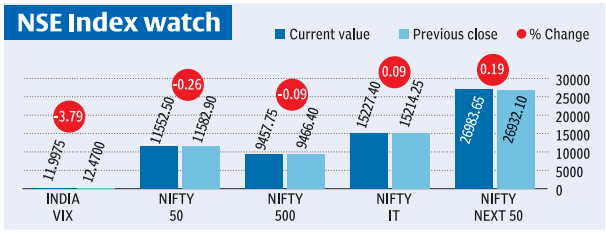


Positive cross-over

Table listing companies with positive cross-over, including Marico, GIC Housing, Century Text, and others.

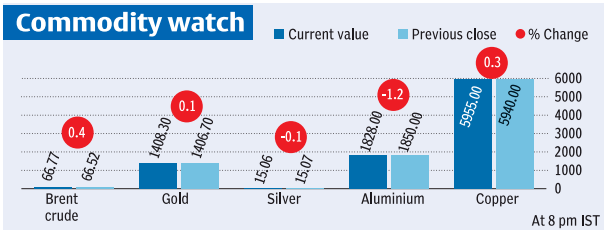
Negative cross-over

Table listing companies with negative cross-over, including Jubil Food, Omase Ltd, Laurslabs, and others.



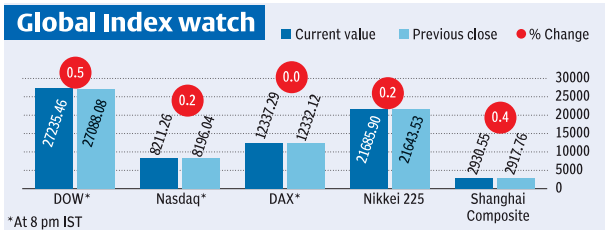
NSE Fast track

Table listing NSE Fast track companies like Reliance Communications, State Bank of India, Alkem Laboratories, and others.



Sector By Sector

Table showing sector performance for Nifty Auto, Nifty Bank, Nifty Commodities, Nifty Consumption, Nifty Energy, Nifty Fin Service, Nifty FMCG, Nifty Infra, Nifty IT, Nifty Media, Nifty Metal, Nifty Midcap 100, Nifty Midcap 50, Nifty MNC, Nifty Pharma, Nifty PSE, Nifty PSU Bank, Nifty Realty, and Nifty Serv Sector.



Highs & Lows

Table listing top gainers, top losers, all-time high, and all-time low for various stocks.

Company News

The board of directors of Tasty Bites Eatables on Friday approved a proposal for preferential allotment of up to 15,500 equity shares of face value ₹10 each for cash at a price of ₹9,030 to its promoter company, Preferred Brands Foods (India) Private Ltd.

Rallis India

Rallis India on Friday said it has received a letter from Gujarat Pollution Control Board revoking the earlier closure order. The GPCB on July 1 had directed the company to suspend operations at one of its units in Dahej.

High Delivery Stocks - BSE

Table listing high delivery stocks like Cholahladng, Pazel, Gayatri Proj, Vikas Wsp, Grauer & Weil, Filatex Ind, Iex, Contain.Corp, Tornt Power, Sagarpod, Vikasmcorp, Sri Digvij Cem, and HavellsIndia.

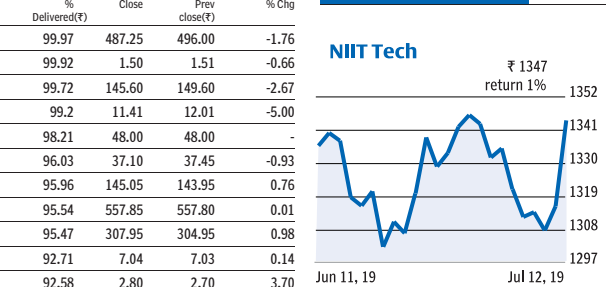
High Volume Stocks - NSE

Table listing high volume stocks like Nam, Himad.Scid, Tou.Fin.Cor, Bata India, Guj.Flu, Gul.Amb.Ex, Graphite, Calif.Sw, Guj.Ind.Pow, Ind.Nippon, and Punj.Chem.

The Under 50s - NSE

Table listing under 50s stocks like Bright Solar Limited, Nectar Lifesciences Ltd., Lloyds Steels Ind. Ltd., Sigen India Limited, Parsyanth Developer Ltd, Mawana Sugars Limited, Vikas Multicorp Limited, 3I Infotech Ltd., Hathway Cable & Datacom, Oriental Torex Ltd, K M Sugar Mills Ltd, Dwarikesh Sugar Ind Ltd, Rana Sugars Ltd, Shree Renuka Sugars Ltd, Eros Int'l Media Ltd, McLeod Russel India Ltd, Utech Ltd, Patel Engineering Ltd, Subex Limited, Brightcom Group Limited, Bajaj Hindusthan Sugar Lt, Ocl Iron and Steel Ltd, Vijay Infrahatch Ltd, Aran Limited, Shipping Corp Of India Lt, Sintex Industries Ltd, The Ugar Sugar Works Ltd, Kcp Sugar Ind Corp Ltd, Ducan Infra Technologies Lt, Mercator Limited, Reliance Communications L, Sri Infrastructure Finan, Excel Realty N Infra Lt, Ducean Infra Technologies Lt, Jalrakraft Power Ven. Ltd, Dish Tv India Ltd, Vskrange Limited, Religare Enter. Ltd, Ruchi Soya Industries Ltd, Network18 Media & Inv Ltd, LT Foods Limited, Aksh Optifibre Limited, TV18 Broadcast Limited, Tata Steel BSL Limited, Sintex Plastics Tech Ltd, Corporation Bank, National Aluminium Co Ltd, and Marksans Pharma Limited.

What to Watch



Open offer to NIIT Tech from Baring on Monday

The mandatory open offer from Baring PE to the public shareholders of NIIT Technologies will open on Monday. The private equity (PE) fund is making an open offer to acquire 1.62 crore shares, representing 26 per cent stake in the Delhi-headquartered company at ₹1,394 a share.

DMart results today; Tata Metaliks on Monday

Radhakishan Damani-controlled Avenue Supermarkets, widely known as DMart, will declare its first quarter results for the current fiscal on Saturday. Analysts will focus on DMart's margins and profit numbers, given the tight condition. While on Sunday, Bhansali Engineering Polymers will declare its numbers, Monday will see the result announcements from Automotive Stampings and Assemblies, Bajaj Consumer Care, Tata Metaliks and Tinplate Company.

NSE Circuit Breakers

Table listing NSE circuit breakers for upper and lower bands, including stocks like Adlabs En, Atlanta L, Avadh Sugr, Brightcom, Bil Energ, Celestial, Eros Intl, Eveready, Gna Axles, Gss Intl, Gtpl Hath, IIL&FS Inv, Jaypee In, Jaiprakas, Kridhan I, Kwality L, Lloyds St, Magadh Su, and Mcleod Ru.

F&O CORNER

Table listing NSE Currency Futures for USDINR, GBPINR, EURINR, JPYINR, and GBPU5D.

MCX Commodity Futures

Table listing MCX commodity futures for CRUDEOILM, CRUDEOIL, NICKEL, SILVERMIC, COPPER, NATURALGAS, ZINCMINI, GOLDM, SILVERM, GOLD, ZINC, SILVER, LEADMINI, LEAD, ALUMINIUM, NICKEL, CRUDEOIL, GOLD, and COPPER.

NCDEX Commodity Futures

Table listing NCDEX commodity futures for Guar Seed 10 MT, Castor Seed, Cotton Seed Oilcake, Guar Gum 5 MT, Chana, Mustardseed, Castor Seed, Chana, and Soy Bean.

NSE Equity Futures

Table listing NSE equity futures for NIFTY, BANKNIFTY, INDUSINDBK, RELIANCE, TATASTEEL, YESBANK, INDIGO, BAJFINANCE, AXISBANK, SUNPHARMA, INFY, SBIN, ICICIBANK, MARUTI, HDFCBANK, TATAMOTORS, TITAN, RECLTD, LT, and JINDALSTEL.

Active Nifty Calls

Table listing active Nifty calls for 18-Jul-19, 19-Jul-19, 20-Jul-19, 21-Jul-19, 22-Jul-19, 23-Jul-19, 24-Jul-19, 25-Jul-19, 26-Jul-19, 27-Jul-19, 28-Jul-19, 29-Jul-19, and 30-Jul-19.

Active Nifty Puts

Table listing active Nifty puts for 18-Jul-19, 19-Jul-19, 20-Jul-19, 21-Jul-19, 22-Jul-19, 23-Jul-19, 24-Jul-19, 25-Jul-19, 26-Jul-19, 27-Jul-19, 28-Jul-19, 29-Jul-19, and 30-Jul-19.

Long & Short NSE : Open interests

Table listing long and short NSE open interests for Index Futures, Stock Futures, Index Call, Index Put, Stock Call, and Stock Puts.

Future Oil Gainers

Table listing future oil gainers like MaxFinancial, Amararaja, Power Finance, Oil India, IOC, NIIT Tech, PVF, Bata India, Wipro, and BHEL.

Future Oil Losers

Table listing future oil losers like NALCO, Dish TV, Tata Steel, Kotak Bank, Concor, BajajFinserv, Bank of India, Nifty, Tata Elxsi, and BSOFT.

Positive Trend

Table listing positive trend stocks like IDEA, NALCO, Dish TV, Yes Bank, Bank of India, Oracle Fin, MindTree, MaxFinancial, MothersSum, and SAIL.

Negative Trend

Table listing negative trend stocks like Reliance Cap, Dewn HgFin, Reliance Infra, Dish TV, Yes Bank, Adani Power, Indiabulls HEC, Rural Elec, Arvind, and IntlGlobAviat.

High Volatile Counters

Table listing high volatile counters like Reliance Cap, Dewn HgFin, Reliance Infra, Dish TV, Yes Bank, Adani Power, Indiabulls HEC, Rural Elec, Arvind, and IntlGlobAviat.

Sensex slips marginally in choppy trade

The day, it touched a low of 11,538.6 and a high of 11,639.55. Top losers in the Sensex pack included Bajaj Finance, ONGC, IndusInd Bank, PowerGrid, I&T, Axis Bank, NTPC, Bharti Airtel, HDFC, HDFC Bank and Kotak Mahindra Bank, falling up to 2.08 per cent.



subdued expectation on Q1 FY20 results which is increasing the risk of downgrade in future earnings. Investors remain focussed on today's CPI inflation data to get cues on interest rate trajectory. Currently, market is expecting reduction in interest rate in the medium term.

"Lack of stimulus to the economy and premium valuation are influencing investors to take a cautious approach in the market," said Vinod Nair, Head of Research, Geojit Financial Services. Elsewhere in Asia, Shanghai Composite Index, Hang Seng, Nikkei and Kospi ended in the green. Equities in Europe were also trading higher in early deals. The global oil benchmark Brent crude futures rose 0.89 per cent to \$67.11 a barrel.

FUND CORNER

Hybrid Funds

Table listing hybrid funds like Aditya Birla SL Equity Hybrid '95, Aditya Birla SL Regular Savings, Aditya Birla SL Dividend Yield, Aditya Birla SL Regular Savings (Payment), Baroda Conservative HF-Plan A, Baroda Hybrid Equity - Plan A, BNP Paribas Conservative Hybrid, BNP Paribas Substantial Equity Hybrid-Reg, BOI AXA Conservative Hybrid - Eco, BOI AXA Conservative Hybrid, BOI AXA Mid & Small Cap Equity & Debt, Canara Robeco Conservative Hybrid, Canara Robeco Equity Hybrid, DHFL Pramerica Hybrid Debt, DHFL Pramerica Hybrid Equity, DSP Equity & Bond, DSP Regular Savings, Essel Equity Hybrid - Regular, Essel Regular Savings, Franklin India Debt Hybrid, Franklin India Equity Hybrid, HDFC Hybrid Debt, HDFC Hybrid Equity, HSBC Regular Savings, ICICI Pru Equity & Debt, ICICI Pru Regular Savings, IDBI Hybrid Equity, IDFC Hybrid Equity - Regular, IDFC Regular Savings, Indiabulls Savings Income, Invesco India Equity & Bond - Regular, JM Equity Hybrid, Kotak Debt Hybrid, Kotak Equity Hybrid, L&T Conservative Hybrid, L&T Hybrid Equity, LIC MF Debt Hybrid, LIC MF Equity Hybrid, LICMFUnitLinkedInsuranceScheme-Reg (D), Mirae Asset Hybrid - Equity, Principal Hybrid Equity, Quant Absolute, Reliance Hybrid Debt, Reliance Hybrid Bond, SBI Debt Hybrid, SBI Equity Hybrid, Shriram Hybrid Equity, Sundaram Debt Oriented Hybrid, Sundaram Equity Hybrid, Tata Hybrid Equity - Regular, UTI-Hybrid Equity, and UTI-Regular Savings.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like Phoenix Mill, Pitting, Piddilind, Pihl Italica, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like Sanph.Mov, Shankar, Sandaria, Sankha, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like Taiwanwa, TaiValk, Talor, Talor, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like VikasViniCor, Vinati, Vinod, Vinod, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like Qair, Qair, Qair, Qair, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like R Systems, R Systems, R Systems, R Systems, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like R Systems, R Systems, R Systems, R Systems, etc.

Table with columns: Company, Prev, Close, Open, High, Low, Qty, 52WH, 52WL, PE, BSE CI. Includes stocks like R Systems, R Systems, R Systems, R Systems, etc.

Exchange Traded Funds

Table with columns: Company, Pre CI, NSE CI, Vol, 52 WH, 52 WL, BSE CI. Includes funds like Axis Gold, AxisAMC - AXISINITY, etc.

BSE Stocks

Large table with columns: Company, Pre CI, CI, Company, Pre CI, CI, Company, Pre CI, CI, Company, Pre CI, CI, Company, Pre CI, CI. Lists various BSE stocks and their prices.

NSE Trade for Trade

Table with columns: Company, Pre CI, CI, Company, Pre CI, CI, Company, Pre CI, CI. Lists NSE trade for trade data.

POLL POURI

Will Huawei's 5G phone launch boost its chances in its fight with the US government?

53% Yes
40% No
7% Can't say

TODAY'S POLL

Digital transactions
Is the Government do more to encourage digital transactions?

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QUICKLY

HCCB inks wind power purchase pact

Chennai, July 12

FMCG player Hindustan Coca-Cola Beverages (HCCB) announced that it has entered into a wind power purchase agreement for supply of 3.8 million units per annum for one of its factories located at Nemam near Chennai under third party mechanism. In a press statement, the company announced that the new power purchase agreement will now enable the HCCB factory to meet around 40 per cent of its total electricity requirement from renewable sources. The agreement is in line with the company's sustainability goal to achieve 50 per cent of its energy requirements across all factories through renewable energy sources by 2020, the statement added.

Kartarpur corridor talks: India to ask Pak to let more pilgrims in, reduce paperwork

New Delhi will persuade Islamabad to expedite work so that corridor becomes operational by Nov

AMITI SEN
New Delhi, July 12

India will raise concerns with Pakistan on a number of crucial issues on the proposed Kartarpur corridor for Sikh pilgrims to be operational in November such as the numbers to be allowed daily, the paper-work required and the building of a bridge over a flood-prone creek when the two meet at Pakistan's side of the Wagah border on Sunday, a government official has said.

New Delhi's objections to inclusion of a Khalistani separatist in a committee set up by Pakistan on the project, which has been ignored so far, will also be raised at the meeting.

"There are a large number of issues that are to be ironed out with Pakistan including infrastructure and logistics issues and the Indian delegation will pursue

each one of them when the two sides meet on July 14. Hopefully we can settle these issues and work will progress smoothly on the Pakistani side too for completion of the corridor in less than four months time," the official told *BusinessLine*.

Last year, Islamabad agreed to New Delhi's proposal of setting up a border-crossing linking Gurdwara Darbar Sahib in Kartarpur, Pakistan, which is the final resting place of Guru Nanak, the founder of Sikhism, to Dera Baba Nanak in Gudaspur district in India.

India wants the corridor to be ready in time for pilgrims to visit Kartarpur to celebrate Guru Nanak's 550th birth anniversary in November this year. However, a lot of ground still needs to be covered both in terms of reaching an understanding on the



A file photo of the shrine of Sikh leader Guru Nanak Dev in Kartarpur, Pakistan

technical aspects of the visit with Pakistan as well as building of adequate physical infrastructure.

One major technical problem that needs to be sorted out is that while India has made facilities for handling up to 5,000 pilgrims everyday, which can be doubled on special occasions, Pakistan is ready to handle just 700 pilgrims on a daily basis. "Pakistan's willingness to allow just 700 pilgrims per day is way lower than the demand from Indian pilgrims. The

number has to go up. Moreover it wants pilgrims to move in groups while we demand flexibility," the official said.

Documentation

The documentation required for pilgrims to cross over is also a contentious issue with the Pakistani government putting the condition of travel against a special permit on the payment of a fee while India is demanding that travel should be allowed only against a valid passport. "Pilgrims need just a few hours to cross over to the Pakistani side, visit the holy place and come back. Any documentation requirement beyond passports will just create unnecessary procedural hassles which should be avoided," the official said.

India's team will also make a strong case for removal of Khalistani separatist Gopal Singh Chawla from a committee on the Kartarpur corridor set up by Pakistan.

Pakistan also has to be convinced to build a bridge over the Rabi creek channel to avoid floods from disrupting pilgrims' visit and compromising their safety. "Pakistan till now has agreed to build a mud embankment but that is not enough and a bridge has to be built," the official said. Indian officials will also try to convince their Pakistani counterparts to speed up construction work so that the corridor is complete by October-end.

Ashoka Innovators shortlists 12 for global Young Changemakers Programme

OUR BUREAU
Chennai, July 12

Ashoka Innovators for the Public, a non-profit organisation that identifies and supports social entrepreneurs across the globe, today announced that it has shortlisted 12 teenagers from India for the first Global edition of its Young Changemakers Programme.

In a press statement, the global NGO, which supports a large network of changemakers and social innovators, said that the programme focusses on the role of young people as influencers and co-leaders.

The 12 young individuals between 12-20 years age group have been selected based on their entrepreneurial initiatives and social impact from over 1,200 nominations, the release added.

A high-power panel shortlisted the nominees for the young changemakers programme based on their social initiatives in the areas ranging from animal care to hygiene and waste management, etc.

AP Budget: On debut, YSR Cong focusses on welfare schemes

OUR BUREAU
Vijayawada, July 12

In the maiden Budget presented by the YSR Congress government on Friday in the Andhra Pradesh Assembly at Amaravati, the stress was more on welfare schemes, most of them named after the late YS Rajasekhara Reddy, the former chief minister and the father of the present Chief Minister, YS Jaganmohan Reddy.

State Finance Minister B. Rajendranath Reddy presented the Budget, with its emphasis on "Nava ratnalu", the nine promises made by the YSR Congress Party in its election manifesto. He presented the ₹2,27,974.99-crore Budget, with revenue expenditure for 2019-20 being ₹1,80,475.94 crore and the capital expenditure being ₹32,293.39 crore. The fiscal defi-

cit was estimated at ₹35,260.38 crore, 3.30 per cent of the GSDP, and revenue deficit ₹1,778.52 crore, 0.17 per cent of GSDP.

A separate ₹28,866-crore agriculture Budget was presented by Minister B Satyanarayana.

Salient features

Setting up of an agriculture price stabilisation fund with ₹3,000 crore, setting up of a natural calamity fund with ₹2,000 crore, allocation of ₹500 crore for the new capital Amaravati, allocation of ₹8,750 crore for YSR Rythu Bharosa (₹12,500 financial assistance for each farmer per annum), ₹100 crore for interest-free loans to farmers under the YSR Sunna Vaddi scheme, ₹1,163 crore for YSR crop insurance scheme and ₹250 crore for the proposed Kadapa steel plant in



Andhra Pradesh CM YS Jagan Mohan Reddy with Finance Minister Buggana Rajendranath Reddy, ahead of the Budget presentation in the State Assembly, in Amaravati, on Friday

the Chief Minister's district are some of the salient features of the Budget. For Amma Vodi scheme (giving grant of ₹15,000 per annum to each mother who sends her child to

the school up to intermediate level), a sum of ₹6,455 crore was set apart. Besides, ₹1,500 crore was allocated for improving infrastructure in schools. For the mid-day meals scheme in schools, ₹1,077 crore was allocated and for fee reimbursement ₹4,962.3 crore.

For YSR Arogyasri medical insurance scheme, ₹1,740 crore was allocated in the Budget and ₹1,500 crore for improving the infrastructure in government hospitals.

Irrigation projects

For irrigation projects in the State, ₹13,139.13 crore was allocated. For the Vizag-Chennai industrial corridor, ₹200 crore was allocated. To provide relief to the victims of Agrigold scam, the State government allocated ₹1,150 crore. For small units in

the State, ₹200 crore was allocated in the Budget. For the Dairy sector, ₹100 crore was allocated and for the fisheries sector ₹550 crore. For appointing Grama volunteers, ₹720 crore was allocated.

Hundred more Rythu bazars would be set up in the State and the government would give importance to diversion of Godavari waters to the Krishna basin to provide water to the Rayalaseema region and some of the coastal districts besides stabilising the Krishna delta, the Finance Minister said.

He said the government would strive to get the promised special category status to the State.

A sum of ₹5,000 crores was allocated to the YSR Housing Scheme. ₹2,000 crore were allocated for Kapu Welfare Cor-

poration while an amount of ₹100 crore was given towards the Brahmin Welfare Corporation.

For providing interest-free loans to members of women self-help groups in the state, ₹1,140 crore was allocated.

A sum of ₹12,801 crore was given towards the pensions of the aged and widows (At present, eligible persons - above 60-year-old gets ₹2,250 per month. This would be increased to ₹3,000 per month during the next four years).

IT sector

For the IT sector and industrial incentives an amount of ₹453 crore and ₹573 crore were allocated, respectively. ₹4,525 crore were given to towards ensuring free power supply to farmers in the state.

Global platform

The programme will expose the young candidates to a global platform where they shall be given access to co-leadership boot camps, media partnerships, public speaking platforms, exposure visits, strategic allies and opportunities to groom themselves to be the influencers of youth culture in India, according to the statement.

"We at Ashoka believe that we are living in a truly historic movement where anyone can create a change. The global edition of the 'Young Changemakers Programme' is a step in that direction," Yashveer Singh, Global Director, Young Changemakers Programme, was quoted in the statement.

Founded in 1980, with a mission to make 'Everyone a Changemaker', Ashoka currently has a network of changemakers and social innovators with more than 3,500 social entrepreneurs across 93 countries.

Tamil Nadu CM unveils projects for industries, IT and e-governance worth over ₹1,100 crore

OUR BUREAU
Chennai, July 12

Tamil Nadu Chief Minister Edappadi K Palaniswami on Friday announced projects worth more than ₹1,100 crore including a new IT complex in Coimbatore, a trade centre and a Centre of Excellence for the aerospace sector in Chennai, creation of infrastructure for exporters at SIPCOT industrial estates and e-governance projects.

With the growing demand for IT space, a technology complex with a built-up area of 5 lakh sq ft on a nine-acre site in Coimbatore will be established at an outlay of ₹200 crore.

To promote the manufacture of aerospace and high-tech equipment, a centre of excellence over a lakh sq ft will be constructed involving an investment of ₹100 crore at the proposed Advanced Computing and Engineering Design facility at the Aerospace Park at Sriperumbudur near Chennai,

the Chief Minister told the Assembly. The government will also strengthen the infrastructure and create plug-and-play facilities for exporters at SIPCOT industrial estates located in Vallam Vadagal near Chennai and Perundurai in Erode district, at an investment of ₹50 crore each.

For the benefit of industries and exporters located on the IT corridor of Chennai, a 50,000 sq ft trade complex incorporating facilities such as conference halls and training centres will be set up at a cost of ₹40 crore.

As part of its focus on industry 4.0 technologies, TNeGA (Tamil Nadu e-governance agency) will create a "Blockchain Backbone Infrastructure," at a cost of about ₹41 crore, a move that will help keep the government keep its data protected.

Also, in an indication of a big leap in State's e-governance, key documents such as birth and death certificates



Tamil Nadu Chief Minister Edappadi K Palaniswami

will soon be downloadable from a proposed "citizen's vault" using a mobile phone. This project will be implemented at a cost of ₹90 crore, he said.

Desalination plant

To serve the water requirements of industries located in Tuticorin and nearby areas, a desalination plant with a capacity of 60 million litres a day will be established in the Tuticorin district at an investment of ₹634 crore.

The Chief Minister also an-

nounced several measures aimed at promoting Tamil Nadu for investments. The State will connect with the Tamil Diaspora, Tamil Sangams and trade and industry bodies to create "investment ambassadors" in order to bring investments into the State. For this purpose, a separate section, Yaadum Oorey (to us all places are one), and a portal will be created at an outlay of ₹60 lakh.

It will also create country-specific special desks to guide and support investors from Japan, South Korea, US, China, Taiwan, France, Israel and Germany. Also, a special section of Tamil Nadu Industrial Guidance Bureau will be established at Tamil Nadu Bhavan in New Delhi, he said.

'Biz Buddy'

"An online grievance portal, 'Biz Buddy', will be created at a cost of ₹50 lakh and the portal promises to resolve the issues within four weeks.

Parched Chennai gets first 'water train' from Jolarpettai with 2.5 m litres

PRESS TRUST OF INDIA
Chennai, July 12

A train carrying 2.5 million litres of water arrived in Chennai, which has been grappling with an acute water crisis over the past few months, officials said on Friday.

The train with 50 tank wagons (BTPN), carrying 50,000 litres of water in each of them from Jolarpettai in Tamil Nadu's Vellore district, reached the filling station at the Integral Coach Factory Yard in Villivakkam on Friday afternoon.

Around 100 inlet pipes installed near the railway tracks would be used to discharge 2.5 million litres to be sent to a treatment plant after passing through a conduit, an official of Chennai Metropolitan Water Supply and Sewerage Board said.

"After treatment it would be sent for distribution. This arrangement has been made for the next six months until the



The 'water special' at Villivakkam, near Chennai BIJOY GHOSH

(advent of the) the North-East monsoon," the official told PTI.

The train was supposed to reach Chennai on Thursday, but leakages in valves led to the delay. Jolarpettai is 217 km from the southern metropolis.

All the arrangements took around 20 days to complete. Chennai is facing a daily water deficit of 200 million litres, with the four reservoirs supplying to the city running dry. The Tamil Nadu government had requested the Railways to help ferry water to the city.

Chief Minister K Palaniswami had announced mitigating Chennai's water woes by getting water from Jolarpettai with an allocation of ₹65 crore.

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Big Story

The SME platforms of the BSE and the NSE have been witnessing brisk activity of late, with many of the stocks giving manifold returns. But due to their smaller size, these stocks are also highly risky. An analysis

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Digit Insurance gearing up to build a strong tech team

LN REVATHY
Coimbatore, July 12

Students who are keen to build a career in technology but are unable to pursue higher education due to financial constraints can probably look to join the undergraduate training programme offered by Digit Insurance.

The programme is open to students who have completed class XII.

The general insurance start-up recently announced the second edition of the training programme.

Amrit Jaidka Arora, Head, Human Resources, Digit Insurance, said: "We are targeting students who have completed 12th standard in 2019 and are interested to build their skills to make a career in the technology space."

The programme aims to encourage the concept "Earn while you learn" by offering a stipend of ₹10,000, ₹12,000 and ₹15,000 a month for three years.

"We are trying to build a batch of young, enthusiastic students, who eventually can be absorbed as full time employee in Digit's technology team."

Eight students were selected for the maiden edition of the programme last year.

The students appeared for a walk-in interview after registering their names over a phone call.

We have recruited 20 students to undergo training in the second batch. They will be trained at Pune, Arora said, adding, "students who are not interested in technology, will have an option to get trained in core insurance domain. On successful completion, they will be absorbed as a full-time resource person in the company."

Madras High Court rejects Tamil Nadu plea against ₹100-crore NGT penalty

PRESS TRUST OF INDIA
Chennai, July 12

The Madras High Court on Friday dismissed a petition filed by the Tamil Nadu government, challenging the ₹100-crore penalty imposed on the State by the National Green Tribunal for not cleaning the Buckingham Canal, Adyar and Cooum rivers.

A division bench of Justices R Subbaiah and C Saravanan held that the petition was not maintainable as under Section 22 of the NGT Act, an appeal against any order of the tribunal can be made only in the Supreme Court.

Interim stay

The High Court had on April 9 granted an interim stay on the ₹100-crore penalty imposed by the NGT South Zone for the government's failure to restore the Adyar and Cooum rivers and the Buckingham Canal here. Directing the government to pay the penalty to the Central Pollution Control Board (CPCB), the tribunal in its February 13 order said the money shall be utilised to restore the water bodies.

The government had challenged the NGT order contending that it "lacked non-application of mind and was based on mistake of facts."

It was also contrary to the principles of natural justice and was arbitrary and unreasonable, the petition argued.

The NGT had passed the order on a batch of pleas, including one moved by social activist Jawahar Shan-

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MISSION MOON

How Chandrayaan-2 could be India's moment in the Sun

₹603-cr project could be epochal if it can tell world where to find water on Moon

M RAMESH
Chennai, July 12
Presumed dead in a storm, Mark Watney (Matt Damon) is left behind on Mars by his colleagues in the 2015 box-office hit sci-fi movie *Martian*. Alone on the red planet, Mark sustains himself by 'making' water and growing potatoes till his colleagues' spacecraft comes back to effect a hi-drama rescue.

Fiction today could be reality tomorrow and some day there could be a human outpost on Earth's rocky neighbour. When that happens, guess who will be gratefully remembered?

Chandrayaan-2. For, it is one of the more important objectives of Chandrayaan-2, ISRO's second lunar sally, to find if there is water in the never-seen-before south pole of the Moon. The mission is essentially building upon the findings of Chandrayaan-1, which sniffed lunar water from afar. If there is water to sustain life, you can put up an outpost to build rockets to jump to other planets like Mars — an extra-terrestrial leap is six times easier from the Moon, because the Moon's gravity is

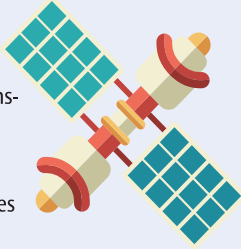
a sixth of Earth's. The Chandrayaan-2 mission could be epochal as it could tell the world where to find water on the Moon. The ₹603-crore moon mission will happen on July 15, when India's biggest rocket, the GSLV-Mk-III, capable of lifting up to 4 tonnes to 36,000 km above the earth, will lift off from ISRO's launch station at Sriharikota. About 170 km above the Earth, the rocket will eject the satellite, Chandrayaan-2, which consists of three components — the orbiter, the lander (christened Vikram) and the rover (Pragyan).

Chandrayaan-2 will start orbiting the Earth in an elliptical orbit. At appropriate points, ISRO will fire the on-board rockets to enlarge the orbit gradually, so that eventually, the orbit encompasses both the Earth and the Moon. Further firing of on-board rockets will make Chandrayaan-2 only circle the Moon.

On September 6, the satellite will be about 100 km above the moon. At that point, the 'lander', which is carrying the 'rover', will detach itself from the orbiter, and drop onto the moon, slowly. While the orbiter will continue to circle the moon, the lander will release the rover. The rover, as big as a briefcase and weighing 25 kg, will crawl out on its wheels, crawl down the lunar surface, pick up samples of soil and rock, and conduct some

India's space odyssey

- Feb 16, 1962:** The Indian National Committee for Space Research formed under the leadership of Vikram Ambalal Sarabhai and physicist Kalpathi Ramakrishna Ramanathan.
- Nov 21, 1963:** The first sounding rocket, used for probing upper atmospheric regions and space research, is launched from Thumba in Kerala, marking the beginning of the space programme.
- Aug 15, 1969:** Indian Space Research Organisation is created to "harness space technology for national development."
- April 19, 1975:** First satellite, Aryabhata designed and built in India, is launched by a Soviet rocket.
- June 7, 1979:** Bhaskara-I, the first experimental remote-sensing satellite built in India, is launched.
- July 18, 1980:** Experimental Satellite Launch Vehicle-3 takes off, making India the sixth space-faring nation.
- April 10, 1982:** Indian National Satellite System is launched for communications and broadcasting but is abandoned a year later when its altitude control propellant runs out.
- April 2, 1984:** An India-Soviet Union mission puts the first Indian in space. Rakesh Sharma flies on the Soyuz T-11 to the Salyut 7 Orbital Station.
- Oct 22, 2008:** India's first lunar mission, Chandrayaan-1, is launched. It orbits the moon but does not land.
- Nov 5, 2013:** Launch of Mars Orbiter Mission Mangalyaan. It has been orbiting Mars since September 2014.



experiments, for one full lunar day, which is 14 earth days. It will tell the lander what it finds, the lander will tell the orbiter up above, and the orbiter will tell ISRO. While the lander and the rover, which carry five and two instruments respectively, will fall silent after its one-day work, the orbiter, with five gadgets, will continue to circle the moon for one year, taking and relaying photos.

There was some speculation (and hope) that the Chandrayaan-2 mission will look for Helium-3, believed to be a key fuel for clean energy but which is not available on Earth; ISRO has, however, categorically said that Helium-3

is not a part of the mission. The rover will do in-situ (right there) analysis of other minerals, notably, sodium, magnesium, aluminium and silicon.

Beating blue

Only the US has sent man to the Moon. Only the former Soviet Union and China have landed instruments on the Moon. Israel tried in April this year, but failed. India, therefore, could be only the fourth country to step on the Moon.

In doing so, it will also have beaten Blue Origin, the space company founded by billionaire, Jeff Bezos. Blue Origin also wants to land on the south pole of the Moon. So

also Israel, which is trying to take another shy at the moon.

Finding water on the Moon is a big thing. There are spots, inside some craters, where the warmest it gets is -156 degrees C. The hope is that these places could hold ice-estimates varying from 10,000 tonnes to 100 million tonnes.

If the Chandrayaan-2 succeeds in telling the world something like 'here is where you could find water', then it would have earned itself a special spot in space exploration.

If a tiny colony comes up next to a lunar oasis, rescuing a Mark Watney from Mars may not be such a big deal.

REWIND

When a leak nearly grounded Chandrayaan-1

M RAMESH
Chennai, July 12
In a space mission, anything can go wrong, and often something does. As the Chandrayaan-2 mission gets ready to take to the skies, veterans remember some tense moments with its predecessor.

The Chandrayaan-1 was launched on October 22, 2008. The previous day, liquid propellant was being filled onto the second stage. The propellant consists of a fuel, a chemical called UH25, and oxidiser nitrogen tetroxide. Nitrogen tetroxide is a highly toxic chemical; inhale and you are gone. Twenty-five tonnes of it were to go into the rocket.

The filling, handled by computers, was being supervised by a team headed by Director-operations MYS Prasad some 10 km away. Around 3 pm, the CCTV monitors showed thick,

pink-coloured smoke engulfing the rocket.

Braving the toxic fumes, two people—Prasad and Annamalai—drove to the launch pad, and wearing gas masks inspected the rocket. To their relief, they found the problem was a leaky joint in the pipe connecting the oxidiser tank and the rocket. The rocket itself was fine.

It took several hours to repair the coupling. The team also realised that to prevent a leak from recurring, the loading would have to be slowed. They did, yet the coupling sprang a leak.

So, once again a team was sent to do the repair. This set the clock back by some three hours. Worse, a leak occurred a third time, around midnight.

"The entire world was watching us..." recalls Prasad. If the mission was aborted, it would be a national shame. By that

time, 23.5 tonnes of the oxidiser had been loaded. K Sivan (current ISRO Chairman), who was in charge of computer simulations, did some calculations and said the rocket was good to go with this much oxidiser.

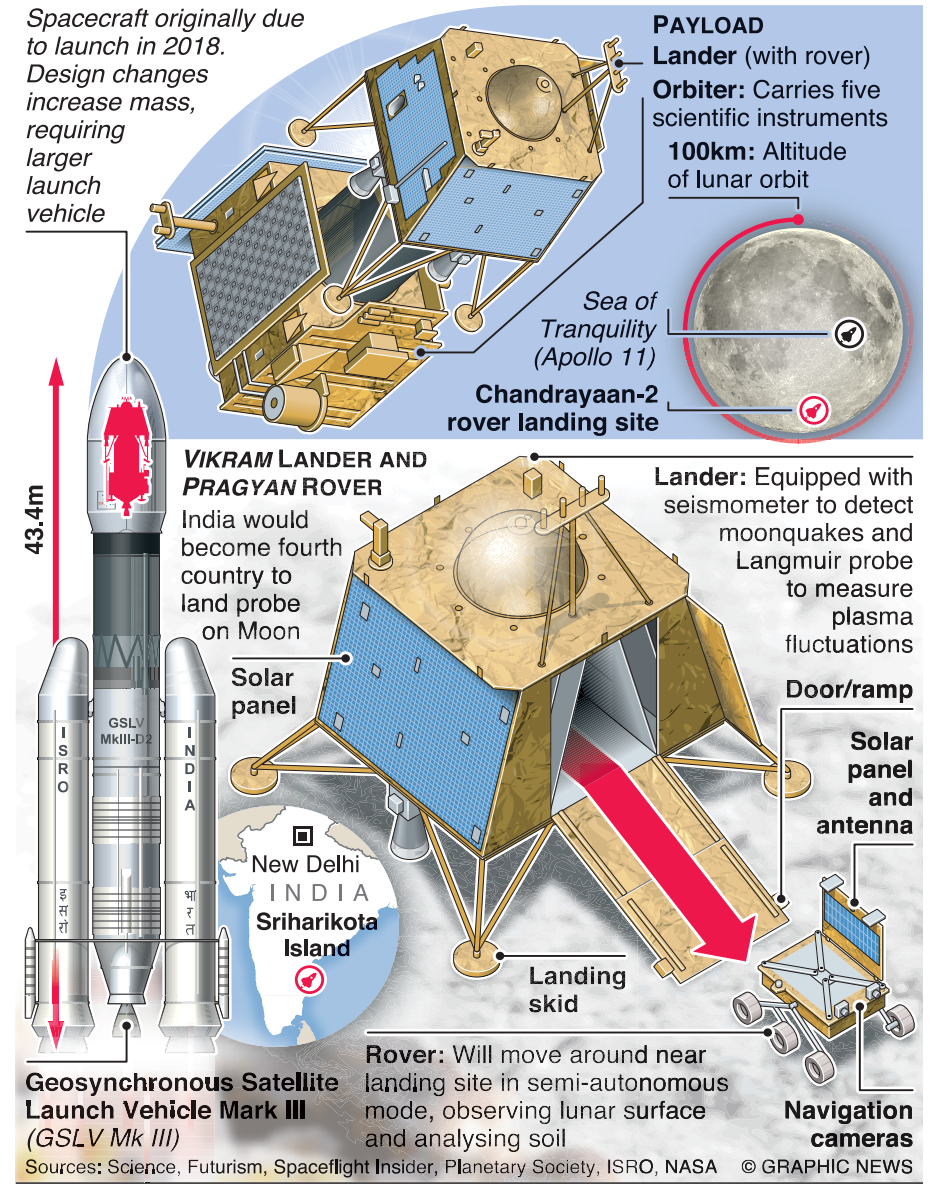
At this point, the fuel had to be loaded, raising a dilemma. If a similar leak occurred while loading the fuel, it would come in contact with the oxidiser hanging around, and result in an explosion.

Prasad decided to first blow away the oxidiser cloud, using the compressed air kept for some other purpose. This was done, and fuel loading began.

It was also decided that other operations, such as charging of the satellite batteries, would go on simultaneously, rather than sequentially, to save time. After all the drama, the PSLV-C11 took off carrying Chandrayaan-1, and the mission was a success.

Chandrayaan-2 heads for the Moon

India's Chandrayaan-2 spacecraft plans to land a briefcase-sized rover on the Moon, 600km from the lunar south pole, while an orbiter above searches for water — vital to future manned missions



SPACE CALLING

It's a new race to the moon... and it's hotting up

M SOMASEKHAR
Hyderabad, July 12
Exactly 50 years after Neil Armstrong and Buzz Aldrin set foot on the Moon, planet Earth's lone satellite is seeing a resurgence of global interest from the top space powers to emerging ones as well as billionaires.

India could well set off a new race with its ambitious July 15 launch of Chandrayaan-2 (Moon Mission) attempting to soft land on the Southern Polar region of the lunar surface, where no nation has dared to go so far. The Indian Space Research

Organisation (ISRO) is fully geared and its Chairman, K Sivan exudes confidence about a successful launch.

Others preparing for a journey to the Moon, which is about 384,500 km from Earth, are the US, Russia, China, India, South Korea, and Israel as well as billionaires and corporate giants, including Elon Musk's Space X and Jeff Bezos' Blue Origin.

The first half of 2019 has already seen a wave of interest.

China made a historic landing on the lunar far

side in January with its Chang'e series. It is also preparing to launch a first-of-its-kind sample return mission by the end of the year, to the southern side.

South Korea is reportedly developing its first lunar probe for launch in early 2020.

Russia, a space superpower, began exploration of the Moon in 1959 with Luna probes.

But the space forays slowed post the break up of the Soviet Union. Russia is working on a series of landers in a bid to return to

the Moon. With US President Donald Trump setting a target of 2024 to put astronauts, including the first woman, on the Moon, NASA will begin by sending a set of robotic probes.

Named Artemis, the multi-billion-dollar project will be the first attempt since the last Apollo landing in 1972. But the American plan is beset with delays and challenges, say analysts.

India hopes to become the fourth nation after the US, Russia and China to land on the Moon. The Chandrayaan-2 mission is led by two

women, Mission Director Ritu Karidhal and Project Director Muthayya Vanitha, and rides both on confidence and expectation. Confidence, derived from the success of Chandrayaan-1 in 2008. Expectation, because it hopes to unlock more in the 'shadowed' Southern Polar region.

So, it's the moon and space calling as nations look for resources and habitation opportunities outside our planet, which is under pressure from the growing population and climate change.



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