IIT-D may turn to space aggregators for hostel rooms

July 28, 2019 https://www.hindustantimes.com/delhi-news/iit-d-may-turn-to-space-aggregators-for-hostel-rooms/story-o28NL1MJILLnyPqdnu0X8L.html

When contacted, an Oyo official said "while there are no developments that we can confirm at this point, we look forward to the opportunity to engage with relevant stakeholders".

The Indian Institute of Technology, Delhi (IIT-D) may consider leaning on space aggregators to meet the shortage of hostel space on its campus.

The institute is facing a shortfall of around 400 hostel rooms. It had earlier set up a committee to find a solution to the problem. The committee deliberated dealing with entities such as Oyo, which could tie up with property owners and then market rooms on rent are referred to as space aggregators.

When contacted, an Oyo official said "while there are no developments that we can confirm at this point, we look forward to the opportunity to engage with relevant stakeholders".

According to a senior official, the institution is considering the possibility of getting rooms in areas close to its campus through the space aggregator."We are considering utilising the service for nearly 400 hostel seats. However, a clear picture of the plan may occur in a couple of days. Others may also be considered. It is a new situation so all aspects have to be seen," a senior official said.

The institution is faced with an unprecedented rise in the number of students on its rolls for a variety of reasons such as a supernumerary quota for girls, focus on getting foreign pupils and the EWS quota.

The institution has been facing a space crunch for the past few years and hostel rooms meant for a single student are, in many cases, being shared by two students while rooms for two are often allotted to three residents.

According to officials, with the number of students increasing due to the introduction of supernumerary quota for girls which was announced earlier and now the 10% quota for economically weaker sections.

Most students need hostel, but the space is not sufficient," the official said.

The number of students in undergraduate courses was around 850 last year which is likely to go up to 1,050 students after the EWS quota is implemented. Similarly, the number of post graduate and PhD students would go up from 3,000 by 700-800, according to officials.

IIT Delhi sets a target to enroll 500 foreign students in next 05 years

July 25, 2019 https://www.ummid.com/news/2019/july/25.07.2019/iit-delhi-sets-a-target-to-enroll-500-foreign-students-by-2024.html

Foreign students can apply for PhD in 28 academic units at the IIT

[Foreign students can apply for PhD in 28 academic units at the IIT, including applied mechanics, atmospheric sciences, biochemical engineering, among others. (Photo: IIT Delhi/Twitter)]

New Delhi: With a target of enrolling 500 foreign students within the next five years, the IIT Delhi on Wednesday organised a summit meeting for diplomats from various countries to showcase the opportunities at the premier institution.

"Globalisation of IIT Delhi: New opportunities for Higher Studies in India" was attended by Ambassadors and Education Attaches of 12 countries including South Korea, Indonesia, Sweden, Britain, and Mexico.

In his address at the summit, IIT Delhi Director, Prof V Ramgopal Rao said: "Our target is to have at least 10 per cent foreign students in our Ph.D. programmes and make them work on technology platforms that can serve global needs."

Foreign students can apply for PhD in 28 academic units at the IIT, including applied mechanics, atmospheric sciences, biochemical engineering, among others.

During the summit, IIT Delhi presented the newly launched International PhD Fellowship Programme (IPFP), which provides liberal financial assistance to the meritorious international students. The aim of IPFP is to encourage best talents from across the world to join PhD programmes at IIT Delhi.

The institute will also be looking towards attracting teachers from various academic institutions in different countries to join the IIT Delhi's faculty.

IIT Delhi organises summit meeting on globalization of IIT Delhi and new opportunities for foreign students

July 25, 2019 https://www.devdiscourse.com/article/education/609512-iit-delhi-organized-globalisation-summit-to-go-global-for-students-faculty

IIT Delhi, recognized as an Institution of Eminence by the government of India, organised a summit meeting on 'Globalization of IIT Delhi: New Opportunities for Higher Studies in India' on Wednesday.

IIT Delhi, recognized as an Institution of Eminence by the government of India, organised a summit meeting on 'Globalization of IIT Delhi: New Opportunities for Higher Studies in India' on Wednesday.

One of the objectives of the Summit Meeting attended by the Ambassadors, Education and Cultural Attache of various countries to India was to explore the possibilities of attracting aspiring students from different countries to take admissions for postgraduate and doctoral studies at IIT Delhi.

The institute also took this opportunity to explore the possibilities of attracting young and aspiring faculty from various academic institutions in different countries to join IIT Delhi as faculty members.

The diplomats present in the meeting expressed their support for the objectives and showed a keen interest in possibilities related to academic and research opportunities at IIT Delhi. The Institute on its part assured all necessary help and assistance in this regard.

Addressing the Summit Meeting, Prof V Ramgopal Rao, Director, IIT Delhi said, "Cultural diversity is very important for any higher educational institution. This is one thing which is missing in leading Indian institutions. IIT Delhi has taken steps to address this issue. We wish to produce students who develop a global outlook and become global players in their chosen field of work. Creativity also happens when unlike minds interact with each other. Our target is to have at least 10% foreign students in our Ph.D. programmes and make them work on technology platforms that can serve global needs. Thanks to the Institute's efforts, this year, we have already seen a 4X increase in the number of foreigners joining the IIT Delhi's PhD Programme. We also see this as a way to raise the quality of our graduate programmes."

Prof Sanjeev Sanghi, Dean, Alumni Affairs & International Programmes, IIT Delhi said: "The Summit Meeting was organised with a view to take concrete steps to further the vision of globalization of the institute. The support from diplomatic community is very heart warming and we assure all help to the meritorious international students seeking academic/ research opportunities in the institute."

The Summit Meeting attended by the Ambassadors, Education and Cultural Attaché of various countries like Indonesia, South Korea, Mexico, Britain, Sweden, Argentine Republic, Bangladesh, Uganda, Namibia, Brunei Darusslam, Gambia, Lithuania was a grand success.

During the Summit Meeting, IIT Delhi presented various opportunities to the diplomats like the newly launched International PhD Fellowship Programme (IPFP), which provides liberal financial assistance to the meritorious international students. The aim of IPFP is to encourage best talents from across the world to join PhD programmes at IIT Delhi.

Laid down after considerable deliberations, the attractive features of the IPFP, launched in February 2019 in the presence of Ambassadors of various countries to India, are aimed at bringing about significant increase in the number of meritorious international students on IIT Delhi campus.

Salient features of IPFP

-Under IPFP, international students selected for PhD admissions to various programmes will be eligible for fellowships on par with Indian PhD students;

-The fellowships are open in all academic Departments, Centres and Schools of the institute and cater to a wide area of interest of academic and research community;

-Under IPFP, 500 PhD fellowships will be provided to international students over the next 5 years;

-Candidates holding foreign passports (including persons with OCI and PIO cards) will be eligible to apply under this scheme.

Apart from the above, all international students admitted to PG programmes in IIT Delhi, will pay fees on par with Indian students.

IIT Delhi admits 70 foreign national students for PhD programme

July 24, 2019 https://economictimes.indiatimes.com/industry/services/education/iit-delhi-admits-70-foreign-national-students-for-phd-programme/articleshow/70363009.cms

The foreign students are entitled to scholarship just like any Indian student is entitled for the PhD programme at the IIT, V Ramgopal Rao, director, IIT Delhi told ET.

As part of its efforts to increase the intake of foreign students at its campus, the Indian Institute of Technology (IIT) Delhi has admitted 70 foreign national students for PhD programme so far starting this academic year. The IIT, which organised a summit meeting on "Globalization of IIT Delhi: New Opportunities for Higher Studies in India" this Wednesday, is targeting to admit 500 foreign students over next 5 years.

Ambassadors and education attache' of 12 countries including South Korea, Indonesia, Sweden, Britain, Mexico, etc were part of this meeting.

The foreign students are entitled to scholarship just like any Indian student is entitled for the PhD programme at the IIT, V Ramgopal Rao, director, IIT Delhi told ET.

ET had first reported that IIT Delhi would soon roll out fellowship to foreign students on July 21, 2018 (IIT-Delhi to give full scholarship to international students for PhD courses). By enrolling foreign students, IIT is also looking at improving its ranking among global higher education institutes. This would also boost the Institute of Eminence tag the IIT currently holds, said Rao.

Until last year, a foreign student had to shell out roughly about $2000 per semester as opposed to $150 per semester now with the launch of this programme for foreign students.

"Same fellowship would be available to foreign candidates as is available to Indian students pursuing PhDs," said Rao.

Foreign students can apply for PhD in 28 academic units at the IIT. This includes Applied Mechanics, Atmospheric Sciences, Biochemical Engineering, among others.

Why IITs, NITs are facing faculty shortage in specialised streams

July 24, 2019 https://timesofindia.indiatimes.com/home/education/news/why-iits-nits-are-facing-faculty-shortage-in-specialised-streams/articleshow/70359096.cms

Strict recruitment rules set by MHRD narrows the scope to find quality candidates

Thousands of faculty positions at the premier engineering colleges including IITs and NITs are lying vacant. According to MHRD data, 2,813 faculty positions in IITs and 3,211 positions in NITs are lying vacant. Efforts are on to reduce the shortage, say officials from the institute.

Indian Institute of Technology Delhi (IIT-D), for instance, hired 60 new faculty members in 2018 and initiated a special drive to fill another 300 vacancies. "We are hiring at a rate of 10%, as against the average faculty hiring rate of 3%. These vacant positions will be filled in the coming five years," says Sudipto Mukherjee, dean, faculty, IIT Delhi.

Most IITs have undergone a sea change in terms of infrastructure, regulations, functioning, courses and more. Since most institutes have started new departments such as Design, Material Sciences, Cyber Systems and Information Assurance, Centre for Automotive Research and Tribology (CART) etc. at IIT D, it is looking for faculties. "In traditional courses, hiring a faculty is not much of a problem. But, new courses have fewer academics," says Mukherjee. He adds that before hiring the faculty, institutes need to ensure that proper infrastructure is in place. "Faculty members also require research labs and offices, which are presently not sufficient. We are building new academic spaces to accommodate an additional 200 teaching staff," Mukherjee said.

IIT-D being an Institute of Eminence (IoE), can now recruit foreign nationals for faculty positions. "We have reached out to several candidates overseas and are actively promoting hiring international academics, but these things are bound to take time. Five foreign nationals have already been recruited as faculty members," he says.

The intake capacity of IITs and NITs has risen continuously owing to the introduction of supernumerary seats to accommodate more women candidates and students from the economically weaker sections. The problem of faculty crunch has been a long standing one. "When regional

engineering colleges were converted to NITs in 2002, the teaching manpower remained almost the same till 2012. However, there was a significant increase in students' strength. Only in May, 2012 restructuring of faculty cadres and creation of additional faculty posts were undertaken by the MHRD, keeping in mind a student-faculty ratio of 12:1. Therefore, shortage of faculty has been a concern for quite some time," says Aloysius Sequeira, dean (faculty welfare), NITK, Surathkal, which has 141 vacancies at various levels.

"The process of screening the candidate for final selection has been tough; hence all vacancies do not get filled especially in some of the specialisations that have a huge demand," he adds. "Temporary faculty is being hired at the entry-level. In addition, adjunct faculty, consisting of senior professionals with a proven track record in research are appointed regularly depending on the needs of the departments," says Sequeira.

GATE 2020 information brochure released, know details about the exam

July 23, 2019 https://indianexpress.com/article/education/gate-2020-information-brochure-released-know-details-about-the-exam-gate-iitd-ac-in-5844144/

GATE 2020: The Indian Institute of Technology (IIT), Delhi will conduct the examination on February 1, 2, 8 and 9, 2020

GATE 2020: The information brochure of the Graduate Aptitude Test in Engineering (GATE) 2020 has been released. The brochure contains the details about the exam pattern, marking scheme, syllabus, sample question papers, cut-off and other important information about the examinations.

This year, the Indian Institute of Technology (IIT), Delhi will conduct the examinationon February 1, 2, 8 and 9, 2020. It is scheduled to be held in two shifts – forenoon shift beginning from 9:30 am and concluding at 12:30 am and afternoon shift to be conducted from 2:30 to 5:30 pm.

The applications for the same will begin from September 3 and close on September 24, 2019 at the official website, gate.iitd.ac.in. Candidates will also be given a window to make changes to their application form. The last date for requesting a change of examination city, with an additional fee is November 15, 2019.

The exam will be conducted on 24 subjects including Aerospace Engineering, Agricultural Engineering, Architecture and Planning, Biotechnology, Civil Engineering, Chemical Engineering, Instrumentation Engineering, Mathematics and Mechanical Engineering among other subjects. A candidate is allowed to appear in only one paper in any one session.

GATE 2020: Paper pattern

The GATE 2020 will be a computer-based multiple-choice question or MCQ-based exam. Candidates will have to answer 65 questions for a total of 100 marks within three-hours' time. The exam consists of two sections. The paper will contain questions on general aptitude (15 marks), engineering mathematics (10-13 marks) and core engineering area of the candidate.

The result for the same, as per the schedule will be declared on March 16, 2020. The GATE score is valid till three years of the announcement of the result.

Based on GATE 2020 score students will be eligible for admission to IISc, and IITs at master's and doctoral level programmes. Candidates who qualify GATE are also eligible to apply for government jobs.

Admissions over at IIT-Delhi, extra seats filled this year

July 22, 2019 https://timesofindia.indiatimes.com/city/delhi/admissions-over-at-iit-d-extra-seats-filled-this-year/articleshow/70321820.cms

IIT-Delhi has completed its admission process, with all the 1,064 seats having been filled. The institute also finished its seventh round of counselling.

Compared with the previous year, when admissions took place for 910 seats, the EWS quota and increase in supernumerary seats for women students meant that IIT-D took in a larger number of students this time around. The institute claimed to have met the 17% target for enrolment of women students, with Sidharth Pandey, chairman of JEE at IIT-D, saying it's possible that even that number has been surpassed.

In 2016, IIT-D admitted 70 women students; the number went up to 93 in 2017 and 143 in 2018. This, officials said, was the result of concerted efforts to improve the gender ratio on the campus. Two students were admitted under the defence services category — for the wards of those martyred or disabled in war — whereas there was an additional entry under the EWS quota.

As many as 120 students opted for textile technology, 117 civil engineering, 100 electrical, 91 computer science and engineering, 89 mechanical engineering, 87 production and industrial engineering, 81 chemical engineering, 69 mathematics and computing, 67 biochemical and biotechnology, 60 engineering physics and 57 for electrical engineering power and automation.

There were 55 admissions for the integrated five-year chemical engineering, 37 for integrated computer science and engineering and 31 for integrated mathematics and computing. Pandey said the admission process started on May 14 and the applicants had till June 25 to withdraw or modify their choices.

IIT-Delhi gets solar-powered rickshaws on the campus

http://www.newindianexpress.com/cities/delhi/2019/jul/20/iit-delhi-gets-solar-powered-rickshaws-on-the-campus-2006640.html

These solar-powered rickshaws will ply only inside the campus of IIT Delhi as according to the Motor Vehicle Act, hybrid vehicles are not legal, Sukoon Managing Director Amod Kumar explained.

The rickshaws will run on Solar, human and conventional power | IIT-Delhi

Under a new initiative, rickshaw-pullers at IIT's Delhi Campus have been distributed solar-powered rickshaws, which can also be peddled, in order to reduce the strain for the rickshaw puller. The initiative has been taken by Central Electronics Limited (CEL) through their CSR activity with the support of an NGO - Sukoon.

These solar-powered rickshaws will ply only inside the campus of IIT Delhi as according to the Motor Vehicle Act, hybrid vehicles are not legal, Sukoon Managing Director Amod Kumar explained. The purpose of the solar hybrid system was to provide electrical traction support to the rickshaw puller during acceleration and tough rides.

It runs with a combination of Solar Power, Human Power and Conventional Electrical Power (Optional), Kumar said. IIT-D Director V Ramgopal Rao said that innovation could inspire students. "When students will see these solar rickshaws in their campus, they will come with more ideas," he said.

No room for more students in his hostels, IIT Delhi considers approaching space aggregators

July 18, 2019 https://www.hindustantimes.com/cities/no-room-for-more-students-in-his-hostels-iit-delhi-considers-approaching-space-aggregators/story-RTbr5JynFPKhBIjh0d5IoL.html

According to a senior official, the institution has been facing a space crunch for the past few years and hostel rooms meant for a single student are, in many cases, being shared by two students while rooms for two are often allotted to three residents.

IIT-Delhi is short of at least 400 hostel seats. (HT)

One of the country's topmost engineering institutes, IIT-Delhi is now considering engaging space aggregators to rent rooms in the neighbourhood for providing accommodation to at least 600 students.

The institution which had already been facing a shortage of 400 hostel seats is faced with an unprecedented rise in the number of students on its rolls for a variety of reasons such as a supernumerary quota for girls, focus on getting foreign pupils and the EWS quota.

According to a senior official, the institution has been facing a space crunch for the past few years and hostel rooms meant for a single student are, in many cases, being shared by two students while rooms for two are often allotted to three residents.

"The number of students has increased. First a supernumerary quota for girls was announced to ensure their number reaches 20%. Currently, the number of girls is at 17%. Then 10% quota for economically weaker sections was announced. This would mean that seats would go up by as much as 25%. Most of the IIT students need hostel, but the space is not sufficient," the official said, requesting anonymity.

He said the number of students in undergraduate courses was 850 last year. It will be 1,050 students after the EWS quota is implemented. Similarly, the number of post graduate and PhD students would go up from 3,000 by 700-800.

"We are already short of around 400 hostel seats. With new seats the minimum shortage would be around 800 seats," the official said.

Prof V Ramgopal Rao, IIT-Delhi director, said a committee has been formed under deputy director (strategy and planning) M Balakrishnan to find a solution to the problem.

The official said engaging space aggregators is one of the proposals under consideration. Entities such as Oyo, Airbnb, etc which tie up with property owners and then market rooms on rent are referred to as space aggregators.

"IIT Delhi is an Institute of Eminence aiming to rise further in global rankings. The quality of students is an important aspect. However, students who do not get accommodation may shift to another institute," the official quoted above said.

Among the older IITs, IIT Delhi has the smallest campus at 320 acres, much smaller than others like IIT Kharagpur which is spread over 1200 acres. The institution also cannot add space vertically since it is situated close to the airport.

"The institute is not very far from the airport. So the aviation norms apply and our hostel buildings cannot be higher than seven to eight storeys," the official said.

Air pollution in India: IIT Delhi turns to AI to combat Delhi NCR's poisonous air

July 17, 2019 https://www.timesnownews.com/auto/features/article/air-pollution-in-india-iit-delhi-turns-to-ai-to-combat-delhi-ncrs-poisonous-air/455103

Air pollution in India: IIT Delhi's Centre of Excellence for Research on Clean Air is working on a variety of measures to help deal with the growing levels of air pollution in the country.

Air pollution in India: India has long struggled with decidedly unnerving levels of air pollution and has, in the recent past, taken up a slew of measures to help deal with it. Unfortunately, this is what 'too little, too late' looks like. Nonetheless, we must continue striving to develop and implement modern measures that will help us effectively deal with this particular problem. To that end, IIT Delhi says it has something to offer. An ET report said the institute is working on an array of solutions that will allow authorities to monitor and cut down air pollution in India.

Working on these solution at its Centre of Excellence for Research on Clean Air (CERCA), IIT-D, in its most recent research report, picked out 10 districts in Punjab and Haryana where stubble burning is prevalent. These districts, it says, are the key culprits behind the rising air pollution in northern India.

Arun Duggal, founder, Centre of Excellence for Research on Clean Air, said, "Overland air patterns and stubble burning in over 50 districts in Punjab and Haryana are being studied by researchers. This would help in pinning down the districts responsible for maximum air pollution through stubble burning."

Besides that, the institute's research has also focused on learning from countries like Japan and China. These countries too struggle with the nuisance and yet they have managed to substantially curb air pollution levels over the last few years.

Duggal added that their research work is extensive and not limited to the aforementioned measures. He said CERCA is also looking into artificial intelligence-based solutions to help forecast pollution levels in different regions across Delhi as well as National Capital Region. These solutions, Duggal explained, can help predict pollution levels up to two weeks in advance, which will then be shared with the Central Pollution Control Board (CPCB) to enable the agency to adopt solutions accordingly.

Such measures, though seemingly small in scale, will play a crucial role in the long run since the country is still taking baby steps when it comes to more comprehensive and long term measures to contend with air pollution, such as that new enthusiasm for electric vehicles in India. Though we are a little late to the EV party, it does comes bearing the potential to serve as an abiding solution to this particular challenge.

IIT Delhi, CSIR Laboratories Join Hands to Promote Cooperative Research

July 16, 2019 https://www.ndtv.com/education/iit-delhi-csir-laboratories-sign-mou-to-promote-cooperative-research-2070663

As a part of MoU, IIT Delhi plans to promote collaborative research, exchange of ideas, development of knowledge, enhancing high quality research throughput.

The MoU was signed by the Directors of the laboratories and Prof V. Ramgopal Rao, Director, IIT Delhi

Indian Institute of Technology (IIT) Delhi, recognised by the Government of India as an Institution of Eminence, has entered into an agreement with five of the renowned national laboratories of by signing an MoU to promote cooperative research. The laboratories are CSIR-Advanced Materials and

Processes Research Institute, CSIR-Central Scientific Instruments Organisation, CSIR-Central Electronics Engineering Research Institute, CSIR-Institute of Minerals & Materials Technology and CSIR-National Physical Laboratory of India.

CSIR or Council of Scientific and Industrial Research works under the Government of India as the largest research and development organisation in the country.

The MoU was signed by the Directors of the laboratories and Prof V. Ramgopal Rao, Director, IIT Delhi in the presence of Dr Shekhar C. Mande, DG, CSIR today.

Prof. Rao in his opening remarks said that IIT Delhi has been pioneering in providing its students and faculty with world class infrastructure and conducive environment for research.

He also spoke about the plans to initiate about 60 Interdisciplinary Research projects with the five CSIR laboratories this year.

Welcoming the partnership, Dr Mande said that the CSIR laboratories can benefit immensely with such collaborations that are in the mutual interest areas of research and together it can participate more proactively in solving nation's persisting problem in the areas of science and technology, healthcare.

As a part of MoU, IIT Delhi plans to promote collaborative research, exchange of ideas, development of knowledge, enhancing high quality research throughput.

The MoU would also serve as a platform to students, faculty and other research scholars equally to contribute towards research and development growth of nation and fuelling its growth, an IIT Delhi statement said.

IITs to contribute to defence & space sectors in Government's Make in India program

July 12, 2019 https://www.timesnownews.com/education/article/iits-to-contribute-to-defence-space-sectors-in-government-s-make-in-india-program/452727

Soon IITs may be working in Central Government's Make in India intiative in defence and space sectors. The educational institutes will promote indigenous defence and space capabilities as a part of the program.

Indian Institute of Technology, IITs may soon contribute to defence and space sectors in Central Government's Make in India initiative. In a meeting conducted on June 14 by HRD Ministry with directors of IITs, it has been conveyed that the educational institutes will help the government to take defence and space sectors of the country to the next level.

As per news report, in the meeting, it was directed that the ministry wants a core team with members from IITs, the defence and space sectors to be constituted to leverage the expertise of these IITs and Indian Institutes of Information Technology (IIITs).

While talking to a news website, a senior ministry official said, "IITs and IIITs are government-funded institutions, hence it is expected that they play an active role in nation building." The idea is to promote indigenous defence and space capabilities as a part of the Make in India program. Further, he added that "In his first meeting with the IITs, the HRD minister gave a brief to these institutions to work for defence and space sectors directly. A plan will be finalised by all the institutions on how they want to go about executing the idea."

Since long, Central Government has been trying to construct and manufacture high technology equipment like fighter planes to naval ships under the Make in India program but never succeeded. With this new initiative, the idea is expected to take off and the defence equipment that was imported earlier will now be manufactured here, helping in cutting the cost as well.

Till now, IITs were working with the research wing of Ministry of Defence and ISRO, now they will directly work with defence personnel. This will help them to understand their demands and requirements and work on it.

IIT Delhi Director V Ramagopal Rao while sharing his thoughts to the news website said, "We already have a collaboration with DRDO and we have been working on a lot of defence research projects along with them, but that is just the research part of the defence. If we are required to work directly with the army, navy and air force, the kind of role that we play will be different. We will have to understand their requirements and work accordingly to provide solutions for them."

Smart India Hackathon- 2019 (Hardware Edition) Grand Finale at IIT Delhi

July 9, 2019 https://indiaeducationdiary.in/smart-india-hackathon-2019-hardware-edition-grand-finale-iit-delhi/

The Grand Finale of 2nd part of the Smart India Hackathon-2019 (Hardware Edition) is being conducted from 8th to 12th July, 2019 at 18 nodal centres in 9 states, one Union Territory and one Capital Territory of India.

The first part of Smart India Hackathon 2019, (Software Edition) was conducted on 2nd – 3rd March 2019.

The Grand Finale of Smart India Hackathon (SIH) -2019 (Hardware Edition) was inaugurated by the Union Minister for Human Resource Development, Shri Ramesh Pokhriyal 'Nishank' in New Delhi today.

The Union HRD Minister and MoS HRD Sh. Sanjay Dhotre interacted with the students participating in the Grand Finale at various nodal centres through video conferencing from New Delhi.

Speaking on the occasion the Minister said that Smart India Hackathon (SIH) – 2019 is a right platform where students' innovators can develop smart solution to day to day problems. He said that through research, innovation and appropriate use of technology we can become a highly advanced, developed and prosperous nation.

Shri Pokhriyal informed that it is the third consecutive year of Smart India Hackathon, the World's Largest Open Hackathon and we are growing each year in terms of participation and solutions. He congratulated the participating students and officials of HRD Ministry and All India Council for Technical Education (AICTE) for this grand initiative for the betterment of the country.

While addressing the gathering, the Minister of State for HRD, Shri Sanjay Dhotre said that Smart India Hackathon is an initiative of HRD Ministry in line with the vision of Prime Minister Shri Narendra Modi in making a New India. He said that in this Hackathon "Out of Box Thinking" of students will bring out technology based, easy, workable solutions, which will lead to commercial products to develop start-ups.

Inaugurating the Smart India Hackathon 2019 at IIT Delhi (one of the nodal centres), Prof V Ramgopal Rao, Director, IIT Delhi said, "Engineering is all about solving problems using optimal resources. A multi-disciplinary approach is the key to find a solution to a problem. Learning to work in a team on a problem that has a relevance for the society or an industry, is a huge a learning experience by itself. I am happy that the Smart India Hackathon provides students with such an experience."

On this occasion Prof PVM Rao, Head of Design Innovation Centre, IIT Delhi; Ms. Selvarani, MHRD; and Prof Srinivasan Venkataraman (SIH 2019 IIT Delhi Coordinator) from Dept of Design were also present.
SIH was started in the year 2017, with participation of around 50000 students, in year 2018 around one lakh students participated. This year, the magnitude has grown bigger; around two lakh students have participated this year.

More than 1.2 Lac students from 2235 colleges sent their entries for 198 problem statements, submitted by more than 40 industries and 9 Central government ministries and various Government Departments.

In the Grand Finale of Smart India Hackathon 2019 (Hardware Edition), around 2000 participants from 250 teams of 178 different colleges are participating, including IITs and NITs.

These teams will provide innovative hardware solutions for 124 problems. In Nee India, the participation of female candidates is enthusiastic this year, the ratio of male and female is 1.6: 1.

In Smart India Hackathon 2019 (Hardware Edition), problems are broadly based on Agriculture & Rural Development, Food Technology, Waste management, Clean Water, Renewable Energy, Healthcare & Biomedical Devices, Smart Vehicles, Robotics and Drones, Security & Surveillance, Smart Communication, Sports and Fitness, Sustainable Environment, Smart Textile, Smart Cities areas.

At IIT Delhi, 16 college teams from Pondicherry Engineering College, Chennai Institute of Technology, Datta Meghe College of Engineering, National Institute of Science & Technology, Sri Sivasubramaniya Nadar College of Engineering, Sri Krishna College of Technology, Indian Institute of Technology Kharagpur Sethu Institute of Technology, C.V. Raman College of Engineering, Bharatiya Vidya Bhavan, Sardar Patel Institute of Technology, Jaipur Engineering College and Research Centre, Swami Keshvanand Institute of Technology, Management & Gramothan, Shri Guru Gobind Singhji Institute of Engineering and Technology, St. Joseph's College of Engineering and Sathyabama Institute of Science and Technology will work on one of the seven problem statements proposed by Hero Electric Vehicles Ltd., Maruti Suzuki India Ltd., Ministry of AYUSH and Yamaha Motor Solutions India Pvt. Ltd, for 5 days and are expected to develop and demonstrate the working of the product developed.

The 16 teams consist of 75 male and 31 female participants from Odisha, Pondicherry, Tamil Nadu, Maharashtra, West Bengal, Rajasthan and Pondicherry.

A Jury comprising of faculty members from IIT Delhi, heads of successful IIT Delhi incubated start-ups, and experts from industries, with expertise in electromechanical/electronics/mechanical engineering, will monitor the progress of all the teams, and accordingly, decide the winners in various categories

Depending upon nature of problem, cash prizes for selected ideas and solutions will be given to participating teams. For simple problems Rs. 50,000; for complicated problems Rs. 75,000 and for complex problems Rs. 1 lac will be awarded.

More About Smart India Hackathon (SIH): Smart India Hackathon (SIH) 2019 is a nationwide initiative of the Innovation Cell of Ministry of Human Resource Development, Govt of India, to provide students a platform to solve some of the pressing problems people face in their daily lives. It is expected that this will, over a course of time, inculcate a culture of innovation and a mindset of problem solving, in students.

In SIH, problem statements under various themes are shared by several industries and ministries. For these problem statements, teams of students from various colleges and universities in India develop conceptual solutions, prototypes and products, and further test them. This hackathon happens in multiple stages. In the first round, the teams are shortlisted based on the description of their solutions for the problem identified. In the second round, the teams are shortlisted based on the short videos of the prototypes they have developed. This evaluation is also done by the industry or organisation that provides the problem statement.

In the final round, the shortlisted teams are invited to one of the Nodal Centres depending on the problem statement and indulge in building products for close to 5 days.

National foundation to help boost research focus at IITs

July 9, 2019 https://economictimes.indiatimes.com/industry/services/education/national-foundation-to-help-boost-research-focus-at-iits/articleshow/70136345.cms

Direct involvement of ministries through the foundation will make research more relevant and directed towards applications, said directors and deans of leading IITs.

That's why the acceptance rate at the DST is only about 15%," said Rao. He said it is also likely now that more money will be available in the system.

Indian Institutes of Technology's expanded research focus is expected to receive further boost from the government's proposed research foundation, which will integrate funds from different sources.

Direct involvement of ministries through the foundation will make research more relevant and directed towards applications, said directors and deans of leading IITs.

The outcome will, however, depend on the amount of funds available.

"The creation of the foundation is a good move, so is the involvement of ministries," said V Ramgopal Rao, director, IIT Delhi. "But how much money gets pooled will decide how effective it is."

The Aim

Proposed National Research Foundation (NRF) to strengthen research ecosystem in India

NRF will assimilate research grants from various ministries independent of each other

Funds available with ministries will be integrated in the foundation; supplemented with additional funds

The creation of the foundation is a good move; so is the involvement of ministries. But how much money gets pooled will decide how effective it is.
— V Ramgopal Rao, Director, IIT Delhi

The budget presented on Friday proposes to set up a National Research Foundation (NRF), which will fund, coordinate and promote research in the country. The objective is to strengthen the overall research ecosystem.

The NRF will assimilate the research grants being given by various ministries independent of each other. Focus will be on identified thrust areas relevant to national priorities and basic science, without duplication of effort and expenditure.

The funds from ministries will be integrated NSE -1.50 % in the research foundation and will be supplemented with additional funds.

While industry experts and academicians view this as a move to boost the research environment in the country in general NSE 0.13 % , leading IITs, which have both the wherewithal and infrastructure to carry out research, could potentially be one of the major beneficiaries of the proposal.

"This integrated approach is a logical and efficient move. It will benefit the entire research ecosystem in the country and the IITs, which have reached a certain level of efficiency in utilising research funds, will surely benefit from it," said AK Mishra, dean, academic research, IIT-Madras.

"Currently, the ministry of human resource development (MHRD) allocates some money to the IITs for research but other ministries don't get involved in the activity," said Rao.

The main funding agency for IITs is the Department for Science and Technology (DST). Faculty members come up with ideas, submit proposals and then the DST funds those.

But the findings of the studies don't really get implemented on the ground and the ministries are never the stakeholders in IITs, Rao said. "As a result, there is a disconnect between what the society requires and what the faculty members are actually carrying out as research."

In the 2018-19 academic session, IITs saw an unprecedented increase in the number of research scholars graduating with a doctoral degree. India's top engineering institutes that are focusing on changing their image from undergraduate engineering colleges to research-focused institutes witnessed a 50-100% jump in successful PhD graduates over the last five years.

Among the factors that led to this were multiple sources of on-campus financial assistance, apart from government funding. This includes alumni donation and industry-funded research.

"The number of proposals being submitted has gone up quite significantly because of the number of newer institutions but the funding has not gone up proportionately.
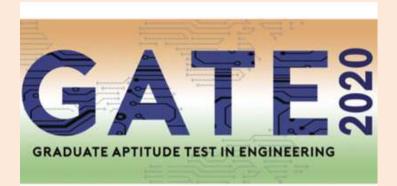
That's why the acceptance rate at the DST is only about 15%," said Rao. He said it is also likely now that more money will be available in the system.

"Right now research is fragmented... If NRF works, what will happen is that when it comes to research requirements across ministries and any initiation to do research in any specific area, they will find out institutes focusing on that area and call them, instead of each ministry trying to do something on its own," said Narayanan Ramaswamy, partner and national head for education and skill development, KPMG in India.

"We don't see funding as much of a constraint at the IITs but more can be done in fundamental research," said the dean of one of the top IITs.

GATE 2020 exam dates released; check eligibility, application fee and other details here

July 9, 2019 https://timesofindia.indiatimes.com/home/education/news/gate-2020-exam-dates-released-check-eligibility-application-fee-and-other-details-here/articleshow/70138269.cms

The Graduate Aptitude Test in Engineering (GATE) will be conducted by the Indian Institute of Delhi (IIT-Delhi) in February 2020.

GATE is a joint test conducted jointly by the Indian Institute of Science (IISc), Bangalore and the seven Indian Institutes of Technology (at Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) for admission to Master's/Doctoral programs offered by these institutions and other Government agencies.

GATE score is also used by many other private colleges and institutions for admissions. Further, many Public Sector Undertakings (PSUs) consider GATE scores for recruitment process.

GATE 2020 Exam

The GATE 2020 exam will be conducted for 25 subjects. The exam is conducted at various cities across India, as well as, in six cities outside India. The exam is conducted in a Computer Based Test (CBT). The GATE evaluates comprehensive understanding of the candidates in various undergraduate subjects in Engineering/Technology/ Architecture and post-graduate level subjects in Science. The GATE scores are valid for three years from the date of announcement of the results.

GATE 2020 Important Dates

Event	Day	Date
GATE Online Application Processing System (GOAPS) Website Opens	Tuesday	3rd September 2019
Closing Date for Submission of (Online) Application (through Website)	Tuesday	24th September 2019
Extended Closing Date for Submission of (Online) Application (through Website)	Tuesday	1st October 2019
Last Date for Requesting Change of Examination City (an additional fee	Friday	15th November 2018

will be applicable)

Admit Card will be available in the		
Online Application Portal (for printing)	Friday	3rd January 2020
GATE 2020 Examination	Saturday	1st February 2020
Forenoon: 9:30 AM to 12:30 PM (Tentative)	Sunday	2nd February 2020
Afternoon: 2:30 PM to 5:30 PM (Tentative)	Saturday	8th February 2020
	Sunday	9th February 2020
Announcement of the Results in the Online Application Portal	Monday	16th March 2020

GATE 2020 Eligibility Criteria

Candidates having following education qualification can apply for GATE 2020 exam

Bachelor's degree in Engineering/Technology (4yrs after 10+2 or 3yrs after BSc/Diploma in Engineering/Technology) (final year students can also apply)

Bachelor's degree in Architecture (5yrs course)/Naval Architecture (4yrs course) (final year students can also apply)

Bachelor's degree in four year program in Science (BSc) (final year students can also apply)

Master's degree in any branch of Science/Maths/Statistics/Computer Applications or equivalent (final yrs students can also apply)

Four-year Integrated Master's degree (Post BSc) in Engineering/Technology (final year students can also apply)

Five-year Integrated master's degree or dual degree in Engineering/Technology (those in 4th/higher year can also apply)

Five-year integrated M.Sc. or Five-year integrated BSc/MSc dual degree (final year students can also apply)

Candidates with qualifications obtained through examinations conducted by professional societies recognized by UPSC/AICTE as equivalent to BE/BTech can also apply. Those who have completed section A of AMIE or equivalent of such professional courses are also eligible

GATE 2020 Application fee

Examination centres in India
Application fee for SC/ST/PwD/Female candidates

Rs 750 if applied on or before September 24, 2019

Rs 1250 if applied during the extended period

Application fee for all other candidates

Rs 1500 if applied on or before September 24, 2019

Rs 2000 if applied during the extended period

Examination centres outside India
Application fee for Addis Ababa, Colombo, Dhaka & Kathmandu candidates

US$50 if applied on or before September 24, 2019

US$70 if applied during the extended period

Application fee for Dubai and Singapore candidates

US$100 if applied on or before September 24, 2019

US$120 if applied during the extended period

IIT design helps rural women in fabrication of beads

July 8, 2019 https://www.thehindu.com/news/national/other-states/iit-design-helps-rural-women-in-fabrication-of-beads/article28323846.ece

Omwati of Bharatpur's Bailara village inspecting the improved version of tulsi mala beads machine.

New apparatus has increased production and added innovative features for designing, polishing

Rural women engaged in the fabrication of tulsi mala beads in Rajasthan's Bharatpur district have received support from a technical design intervention by the Indian Institute of Technology, Delhi, which has helped improve their old machines. The new apparatus has increased production two-fold and added innovative features for designing and polishing.

Hundreds of women in Bharatpur district's Kaman, Deeg, Nadbai and Sewar tehsils have been earning their livelihood since long by making tulsi malas which are supplied to the temple towns such as Mathura, Vrindavan, Nandgaon and Barsana, situated nearby. Regular religious events also ensure a good demand and consumption of tulsi malas throughout the year.

IIT-Delhi's Rural Technology Action Group (RuTAG) took up a project with the help of the Bharatpur-based Lupin Foundation in 2012 for improving old devices used by women and evolved a new machine. In its latest initiative, RuTAG has made major changes in the apparatus by enhancing its speed, added new features and helped in its operation with a comfortable sitting posture.

Lupin Foundation's executive director Sita Ram Gupta told The Hindu on Monday that the new machines have been designed with wooden boxes, in which other tools could also be kept, while a state-of-the-art technology had been used to add the utilities of designing and polishing. RuTAG has offered the machines to women of the region at a subsidised price of ₹5,500 each.
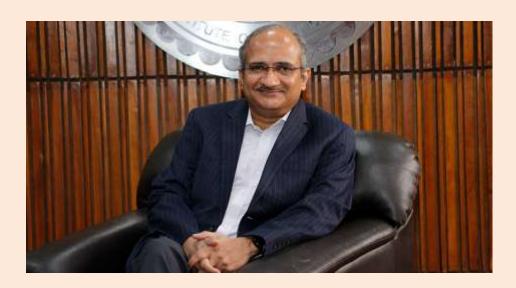
Trained in IIT

A woman entrepreneur, Omwati, from Bailara village of Nadbai tehsil, underwent training in IIT-Delhi in the use of new apparatus and passed on the skills to other women. RuTAG presented machines to Ms. Omwati and Lupin Foundation's in-charge of women's empowerment programmes, Salho Hembrom, at an event in New Delhi last month.

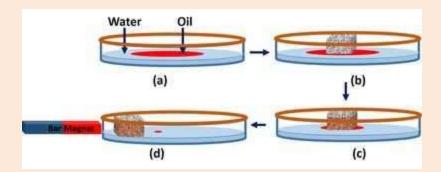## International Aeration is the Need of the Hour: V. Ramgopal Rao
July 8, 2019 http://bweducation.businessworld.in/article/International-Aeration-Is-The-Need-Of-The-Hour-V-Ramgopal-Rao/08-07-2019-172969/

Indian Institute of Technology (IIT)-Delhi is the eminent and distinguished institute representing the country on the world stage with a primary focus on scientific and technical subjects. The institute has a strong entrepreneurship cell that aims to augment the efforts of budding entrepreneurs. IIT Delhi has been critically acclaimed across borders for its renowned alumni holding internationally successful positions. In an exclusive interaction with BW Education, V. Ramgopal Rao - Director of IIT Delhi, discusses about the new initiatives carried by the institute to address the mushrooming issues faced by the higher education sector in the country.

IIT researchers find "solution" to oil spills

July 4, 2019 https://timesofindia.indiatimes.com/home/education/news/iit-researchers-find-solution-to-oil-spills/articleshow/70075904.cms

IIT Delhi may has found a solution to the menace of oil spilling. A team of researchers at the institute have developed a hydrophobic material that can separate oil from water and help in extracting the oil out. The material developed by IIT in the past few months attaches to the oil molecules and turns it magnetic; easy enough for the oil to be removed by a magnet.

According to IIT Delhi due to a rapid increase in use and transport of oils over the years, oil spillage and leakage accidents are occurring frequently worldwide.

The pollution by oil leaks contains many hazardous molecules including aromatic hydrocarbons and cyclo-paraffins, hence the removal of oil spilled over water and has become an important issue for protecting the environment.

To deal with this pollution with oil leaks, IIT Delhi researchers Neeraj Khare and Sandeep Munjal have come out with an invention "that relates to a novel reusable and stable super-hydrophobic (repelling water) and super-oleophilic (affinity to oil) carbon based nanocomposite for efficient separation of oils from oil-water mixture.

Khare, speaking to TOI explained that the carbon fibre based nanocomposite developed by IIT-Delhi

has low density porous structure and has been synthesized in natural cotton with embedded magnetic nanoparticles.

"Because of that it quickly absorbs oil but does not absorb water. When introduced in the oil spillage on water, the product absorbs oil drops instantaneously. And since it is magnetic in nature the nanocomposite material can be used to remove oil from the oil-water mixture making very efficient to remove oil spilled over the water surface on a large area," Khare said.

He added that since the nanocomposite is synthesised from cotton, it is porous and spongy nature, "so the soaked oil can be extracted from it by just squeezing it and it can be reused."

He further added that the nanocomposite is so effective that one گرام of it can attract 90 grams oil.

Khare stated that in the last few years, there have occurred many large oil spill incidents throughout the world, including Montara oil spill of Australia, Deep water horizon at the Gulf of Mexico and the Xingang Port oil spill were the most alarming.

"The marine atmosphere is the most affected due to such incidents, and the spill may have impact on marine life in many ways and kill the fishes. Oil spilled over water floats like a mat on the water's surface with the thick sludge, which reduce oxygen levels in the water and prevents the penetration of sunlight into the water." Due to all these challenges and issues, the removal of oil spilled over water and other organic chemical leakage in water has become an important issue "and our invention of carbon based nanocomposite can provide effective solution to this problem," the researcher who has been working on the invention for several months, claimed.

He informed that a major oil spill that took place in Chennai on January 28, 2017, and it took weeks to remove the sludge that spread along the coastline. "If our nanocomposite was available back then, the impact of the oil spillage would ahvr been minimal as we could have used large quantities of it to to absorb the oil instantaneously," he claimed.

IT-Delhi has already patented the product with the government of Indian and will be approaching the government and members of the industry to acquire their invention and utilize them.

Global varsity ranking jury must have Indians too: HRD Ministry

July 4, 2019 https://www.outlookindia.com/newsscroll/global-varsity-ranking-jury-must-have-indians-too-hrd-ministry/1568183

Questioning the methodology adopted by Quacquarelli Symonds (QS) to arrive at its world university rankings, the Human Resource Development (HRD) Ministry has decided to recommend to the agency that it include at least 10 per cent Indian members in its jury.

The London-based company, which is one of the most sought-after for judging educational institutes standards worldwide, released the 2020 edition of world university rankings last month where just three Indian universities made it to top 200.

"We would be making suggestions to QS on its methodology to reach global ranking of the universities. We feel the QS jury is biased towards the western countries. Hence, it should have 10 per cent Indians on its panel," a senior ministry official told .

He added that the decision to make suggestions was taken during a meeting of HRD Minister Ramesh Pokhriyal ''Nishank'' with the heads of Indian Institutes of Technology, Bombay and Delhi and the Indian Institute of Science, Bangalore. The three universities have featured in top 200 of the world university rankings table.

For the QS World University Ranking, institutes are scored on six basic parameters - academic reputation, employer reputation, faculty student ratio, citations per faculty, international faculty, and international students.

Officials said that reputation of an institution accounts for 50 per cent of the marks - an area where the Indian universities lose out the maximum number of marks - due to the absence of Indian representation at QS'' panel.

V. Ramgopal Rao, Director, IIT-D said that during the meeting with HRD Minister, he raised concerns about the transparency in the mechanism for the world university rankings of QS. He added that though the perception about a university accounts for 50 per cent of the total marks, there are not enough Indian participants in the UK or the US to rate Indian universities.

"Several parameters adopted for ranking the universities are not relevant to Indian institutions. For example, IIT Delhi has 80 per cent faculty possessing foreign degrees but as per the QS parameters, international faculty is described as teachers who hold non-Indian passports. Also, since the IITs are regulated by the HRD Ministry, they do not have the autonomy to recruit international faculty," he said.

Another issue is that of conflict of interest. "Increasingly many private institutions are getting featured in the world university rankings are those to whom QS is also providing consultancy services to improve their rankings. They should ideally carry a disclaimer that no business interests have been involved while arriving at the rankings," he said adding the IIT-D will soon be writing to the HRD Ministry pointing out these issues.

As per the 2020 edition of the QS World University Rankings, IIT-Bombay stood at 152nd position, IIT-Delhi at 182nd position and the IISc at 184th rank. Apart from the three, IIT-Madras, IIT-Kharagpur, IIT-Kanpur and IIT-Roorkee are also among the top 400 institutes.

The Delhi University marginally improved on its last year''s rank of 487 and is placed at 474 in the latest rankings.

The global rankings table continues to be dominated by the US, which holds the top ten positions with universities such as MIT, Stanford and Harvard.

HRD Minister Ramesh Pokhriyal felicitates IITs, IISc heads for securing top 200 QS rank

July 3, 2019 https://www.indiatoday.in/education-today/news/story/hrd-minister-ramesh-pokhriyal-felicitates-iits-iisc-heads-for-securing-top-200-qs-rank-1560936-2019

The ministry is taking various steps to promote research and innovation and prepare young scientists in the country," said Union HRD Minister Ramesh Pokhriyal.

Dr Ramesh Pokhriyal Nishank (Image: Twitter handle@DrRPNishank)

Union Human Resource Development Minister Ramesh Pokhriyal 'Nishank' on Tuesday felicitated the heads of Indian Institute of Technology, Bombay and Delhi and the Indian Institute of Science, Bangalore for securing rank in top 200 of QS World University Rankings.

HEI should focus on research and innovation:
He said all higher educational institutions should focus on quality, research and innovation. The research should find the solutions to the problems of society at all levels and contribute to the overall development of the nation, Nishank said.

"Research and innovation is a foundation in making developed and prosperous new India. The ministry is taking various steps to promote research and innovation and prepare young scientists in the country," he added.

The senior officials of the Ministry also had a brainstorming session with the representatives of QS World University Rankings on improving ranking of the Indian Educational institutions at the global level.

No Indian university among top 100:
This year, three Indian institutes - IIT Bombay, IIT Delhi and IISc Bangalore have found place among the top 200 in the prestigious Quacquarelli Symonds (QS) World University Rankings.

Four IITs among the top 400 institutes:
IIT-Madras, IIT-Kharagpur, IIT-Kanpur and IIT-Roorkee are also among the top 400 institutes. IIT-Guwahati, ranked 491, saw a decline in its ranking since 2019 when it was placed at 472.

The Delhi University improved on its 2019 rank of 487 and is placed at 474 in the latest rankings.

However, IIT-Delhi saw a decline in its ranking from 172 to 182. Even IISc slipped from its earlier rank of 170 to 184 this time. Other universities that figure in the rankings are Jamia Millia Islamia, Jadavpur University, Aligarh Muslim University, Hyderabad University, Calcutta University and Mumbai University.

Will recharging Yamuna floodplains end Delhi's water woes?

July 3, 2019 https://www.indiatoday.in/india/story/delhi-water-crisis-aap-arvind-kejriwal-yamuna-floodplain-recharge-1561359-2019-07-03

Small ponds will be made, and when Yamuna overflows during Monsoon, the overflowing water will fill these ponds. Water will then percolate down and it will spread leading to an increase in the water table of these areas.

Most of the land in Yamuna floodplain gets submerged when huge amount of floodwater is released from up-stream states

HIGHLIGHTS

- AAP in Delhi intends to initiate groundwater recharging this monsoon itself

- Due to some constraints, the work will be on an experimental basis given

- Arvind Kejriwal said that the project will solve Delhi's water crisis

  Delhi government's ambitious project to recharge Yamuna floodplain gets cabinet nod.
  Delhi Chief Minister Arvind Kejriwal said that the project will solve Delhi's water crisis and make the city future ready in terms of water conservation.

  "In Delhi we keep reading that the water table is depleting fast. We want to end water shortage in Delhi," Arvind Kejriwal said.

Aaam Aadmi Party government in power in Delhi intends to initiate the groundwater recharging this monsoon itself, given the time constraint, this time this work will be on an experimental basis.
The project would only proceed full steam next year after the pilot sudy results are out.

"The result of the pilot study will help us form a clear idea about the success of this project, though the report of the project consultant and IIT [Indian Institutes of Technology] Delhi indicates that this project will be a big success, since the Yamuna has a vast floodplain and has a big potential for water conservation." Arvind Kejriwal said.

HOW WILL IT WORK?
Water will be conserved in stretches from Palla till Wazirabad on a completely eco-friendly basis.
No construction or use of cement will be involved and regular flow of Yamuna will not be touched at all.

Small ponds will be made, and when Yamuna overflows during Monsoon, the overflowing water will fill these ponds. Water will then percolate down and it will spread leading to an increase in the water table of these areas.

"The good thing in Delhi is the flow of water from Yamuna slope is towards the city and not the other way round, therefore conservation of rainwater is possible. Had the slope been towards Yamuna, then the rainwater would have flown towards the river. The project consultant has also indicated the sites where conservation is possible," Arvind Kejriwal said.

A man paddles his handmade boat across the river Yamuna.

Arvind Kejriwal also mentioned that the Delhi government will require the concurrence of some central government agencies, about which the Union Jal Shakti Minister Gajendra Singh Shekhawat was informed in the recent meeting with him.

LAND WOES
The land belongs to farmers and the Delhi government will use this land on rent.

To negotiate with the farmers, the Delhi government has formed a five-member committee and has asked the committee officers to give their report by Monday.

It is proposed to take land on lease from the land owners for the initial period of three years. The land will be utilised to retain excess spill over floodwater in farm ponds, shallow ponds, recharge structures through non-invasive interventions so that groundwater could be recharged and its levels could be improved.

Most of the land in Yamuna floodplain gets submerged when huge amount of floodwater is released from up-stream states.

However, water recedes into the river within few hours.

This project targets retention of floodwater for few days naturally using non-invasive interventions. Only the excess floodwater which spills into the farmlands in the floodplain area during monsoon will be retained without affecting natural course of Yamuna or interfering with the interstate water sharing agreement, according to the Delhi government.

A man uses a hand-pump to collect water for bathing on the banks of the river Yamuna in New Delhi.

The Delhi government has already taken steps to conduct a detailed conceptual and technical study to ascertain the feasibility of sites for creation of such shallow reservoirs/water bodies on the land available in the floodplain of Yamuna between natural course of the river in the non-monsoon season and the Right Marginal Embankment (RME).

Most of the land in this region gets submerged in water during monsoon season rendering it un-useful for the farmers.

Yamuna river enters Delhi near Palla village after traversing a route of about 224 km. Due to depleting groundwater levels in Delhi, water availability in the territory of Delhi is an issue of serious concern, especially during the lean summer months from April-June.

Palla Well Field is a perennial source of supply of water to North Delhi.

Several studies conducted by National Institute of Hydrology and IIT Delhi have laid emphasis that the stretch of Yamuna floodplain in Delhi has a very high recharge potential.

A boy rides a boat as seagulls fly over the waters of the river Yamuna early morning in New Delhi.

The floodplain comprising of 97 sq km of area in Delhi offers a good scope for development of groundwater resources subsequent to the storage of monsoon waters on the floodplain itself, the Delhi government said.

Under the Yamuna water sharing agreement, out of the 580 million cubic metres (MCM) of monsoon season flow allocated to Delhi, about 280 MCM goes unutilised due to lack of storages.

Water expert, environmentalist and founder of Sweccha India Vimlendu Jha said, **"It's not important what we do but how we do. Focus on encroachment, groundwater table and tubewells being banned is a long-term measure. But groundwater recharge is localised. Also, if they are planning to dig ponds on agricultural land, they will need to figure out the feasibility of that as well."**

Climate change behind weather's extreme mood swings in India
July 3, 2019 https://economictimes.indiatimes.com/news/politics-and-nation/modi-condems-akash-vijayvargiya-incident-says-vip-brats-have-no-place-in-bjp/articleshow/70037669.cms?utm_source=ETMyNews&utm_medium=ASMN&utm_campaign=AL1&utm_content=9

Experts say past decade's trend of intense bursts of rainfall caused by global warming to continue.

The deluge that swept Mumbai this week is part of an ominous trend of extreme weather events including short bursts of devastating rain after a dry patch — phenomena whose frequency is rising because of climate change, scientists say.

India is seeing more extreme weather, with the past decade being the warmest and driest ever, which includes the very rare instance of successive droughts in 2014 and 2015, but this period has also seen several instances of short bursts of torrential rain which flooded Mumbai in 2005, Uttarakhand in 2013, Kashmir in 2014 and Kerala in 2018.

This year, the southwest monsoon began late in Mumbai, leaving it relatively dry for a month, but the rainfall city received within the span of two days was what it normally gets in the entire month of June. "Due to global warming, frequency of rainfall as well as temperature extremes are increasing, and will go on increasing in the future," said SK Dash, former head of the Centre for Atmospheric Sciences, IIT Delhi, adding that scientific models are required to assess the relationship between climate change and a particular weather incident.

Global warming triggers intense bursts of rainfall because higher temperature increases the moisture-holding capacity of the atmosphere.

The Intergovernmental Panel on Climate Change (IPCC), a UN body had earlier noted that both droughts and floods were expected to increase in the subcontinent. This is particularly bad for farmers as they suffer from dry patches as well as floods, while statistically the rainfall may appear close to normal over a period that includes both extremes like in parts of Maharashtra in recent weeks.

'**Need to be Ready for Such Conditions'**

Dash said Mumbai has been vulnerable because it is located on the coast, but on the whole, the country must be ready to face such extreme phenomena.

"There should be preparedness in the future because these incidents are only going to get more frequent," Dash said.

Official weather data suggests that India has become much hotter in recent years. According to the India Meteorological Department (IMD), 2018 was the sixth warmest year in India since the weather office started maintaining records in the beginning of the last century. "It may be mentioned that 11out of 15 warmest years were during 2004-2018. Past decade (2001-2010/2009-2018) was also the warmest decade on record," IMD had observed.

In the cast of Mumbai, heavy rainfall is common, said M Mohapatra, IMD's director general of meteorology. "Every year during July and August, we get heavy rainfall at least two to three times. Last year, it was during August. In 2005, it was on July 26. It's natural. Mumbai is in such a geographical position that once there is an active monsoon condition, it will get extremely heavy rainfall," he said.

Earlier, Brihanmumbai Municipal Corporation (BMC) chief Praveen Pardeshi had blamed climate change and Mumbai's geographical location as an island city for water logging.