

Newspaper Clips

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SMOG ENGULFS CITY

Govt to act against farm fires in nearby states

BANNED It will also rope in IIT-Delhi to conduct a survey of air quality in Capital

Darpan Singh

darpan.singh@hindustantimes.com

NEW DELHI: The Delhi government has prepared an action plan to deal with the dense smog that has engulfed the Capital for more than a week now.

The government will take up the matter of paddy stubble burning, because of which Delhi's skies are being filled with toxic smoke, with neighbouring states. NASA satellite images have shown burning activity in Punjab and UP to remove paddy stubbles to prepare the fields for sowing of the wheat crop. The ban on such activity, however, is hardly enforced.

It will also rope in IIT-Delhi to conduct a survey of the air quality in the Capital to prepare a road map on how to bring down air pollution.

When temperature dips, wind speed goes down while humidity remains high. As pollutants do not spread, there is a toxic build-up in the form of smog. The situation worsens when the smog stays for a while as it traps emissions from vehicles and industries and particulate matter.

Since larger plans will take

time, for the time being, the government has decided to move against smoke-billowing vehicles and leaf-burning practices in the Capital as well as agricultural fires in Punjab and Uttar Pradesh.

"These decisions were taken at a meeting chaired by Bhure Lal, chairman of Supreme Court's environmental pollution (prevention & control) control authority," a senior official told HT.

Anumita Roy Choudhary of the Centre for Science and Environment (CSE), who was also part of the high-level meeting, said, "It was decided that the matter (of agriculture fires) will be taken up with the neighbouring states. On its part, Delhi will move against smoke-billowing vehicles and leaf-burning activities right now."

"The modalities (to check fires) are being worked out. Delhi's environment department may approach the Central pollution control board to get neighbouring states to act," said a government official.

Pollution levels in Delhi have been going up since 2006. At places, it's as high as eight times of the desirable limit.

THE ROAD AHEAD



■ The smog seems to be no deterrent to these football lovers of the Capital.

MOHD ZAKIR/HT PHOTO

■ Govt to take up the matter of paddy stubble burning with Punjab and Uttar Pradesh

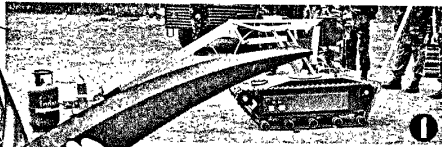
■ Delhi to rope in IIT-Delhi to conduct a survey of the air quality in the Capital and prepare a roadmap to check pollution

■ Agencies will crack down against smoke-billowing vehicles and leaf burning practices

■ These decisions were taken at a meeting chaired by Bhure Lal, chairman of SC environmental pollution control authority

IITs ON A MISSION

Indian Institutes of Technology are developing solutions for some of the most pressing issues facing the country



Science for society: 1. IIT Mumbai's RoVer can handle suspected explosives. 2 and 3. IIT Madras developed a twin-vehicle Mobile Eye Surgical Unit that can travel to rural areas and perform cataract surgeries on-site

Rahat Bano
rbano@hindustantimes.com

In the quiet corners of some of India's best engineering institutes, researchers are developing solutions for some of the most pressing issues facing the country. Their creations range from a skybus and a motorised arm to urinal traps and white clay disposable cups. We take a look at some of the work being done by the best brains in the country in the top institutes.

IMAGE: SAZAR

Accessible healthcare

Cataract is a leading cause of blindness in India, accounting for around half of all cases of reversible blindness. Recently, IIT Madras came up with a solution for cataract-related blindness in rural India where accessibility and limited infrastructure facilities remain a challenge. The institute, with Chennai-based Sankara Nethralaya as medical partner, has developed the first-of-its-kind Mobile Eye Surgical Unit (MESU) that can travel to



rural areas and perform cataract surgeries on-site. The MESU consists of two vehicles—a preparatory vehicle that houses a patient prep room, and a surgical vehicle that has an operation theatre, a sterilisation room and a scrub room (a special washing area for medical personnel). The IIT Madras team, with critical inputs from a Sankara Nethralaya ophthalmologist, designed a twin vehicle architecture to ensure that the MESU could travel through narrow roads and access remote places. "An innovative vestibule (a tubular structure) design connects the two vehicles together on-site to provide a

contiguous patient preparation and operation theatre similar to a modern surgical facility," as per official information.

"The self-sufficient MESU has on board systems for providing uninterrupted electrical power, sterile air, pure water and a stable mechanical platform," says Mohanasankar S, faculty, department of electrical engineering, IIT Madras. The pilot phase of the department of biotechnology-funded project was given permission by the Union Ministry of Health and Family Welfare. In the pilot stage, from December 2011 to March 2012, 486 surgeries were performed in rural



areas of Vellore district "without any postoperative complications," says Mohanasankar S. "Following its success, the ministry has given long-term approval for surgeries in the mobile unit."

RoVer for IEDs

A team from IIT Bombay recently developed a remotely operated vehicle for handling Improvised Explosive Devices (IEDs). As per official information, the RoVer has a manipulator arm which can handle and dispose of IEDs or any suspicious looking item. The size of a dining table (five feet long, 2.5 feet wide and 4.5 feet tall), the robotic vehicle can raise to a height of three metres

objects weighing up to 20kg at a distance of about three metres ahead of it. It can inspect below culverts while positioned on the surface, explains C Amarnath, professor, department of mechanical engineering, IIT Bombay, who led the team which developed it. It is "capable of negotiating all terrains including built-up areas with stairs and obstacles," has a

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IIT panel for hike in UG fees

NEW DELHI: A committee of the directors of the premier Indian Institutes of Technology has recommended increase in annual tuition fee of undergraduate students to Rs 90,000 from 2013 as against the current Rs 50,000.

The recommendation of 80 per cent hike in fee will be placed before the full council of the IIT, the highest decision-making body of the technology and engineering schools, for a final decision on January 7.

The decision by the standing committee of the IIT at its meeting in Mumbai on Monday was yet another attempt to raise the fee structure. The earlier Anil Kakodkar Com-

mittee, set up by the government to study the roadmap for the autonomy and future of the IITs, had recommended in January, this year, that the fees be raised from Rs 50,000 per annum to Rs 2 to Rs 2.5 lakh per annum.

However, with the decision on the hike pending for over a year, the standing committee of the Council, which includes directors of the seven older IITs, held the latest meeting. The Kakodkar Committee suggestion of steep hike too came up for discussion. If Monday's suggestion is accepted, it will act as interim arrangement until the Kakodkar Committee recommendations are finalised

and implemented. The recommendation of the standing committee may not be applicable to students from socially and economically weaker sections.

Loan scheme

In order to help out the students, a special loan scheme is being worked out in arrangement with the banks.

The major reason for the recommendation for steep hike in fee is that the engineering education is already highly subsidised and top-notch institutions such as IITs should get financial independence from the government.

DH News Service

Justified revision

The recommendation of a committee of Indian Institutes of Technology (IIT) directors for an upward revision of the fees paid by students in these premier institutions makes sense for many reasons. IITs provide the best technical education in the country but the fees charged by them are heavily subsidised. They are much less than the prevailing fees in other engineering institutions in the private and government sectors. Management schools charge almost three times the fees being paid by IIT students. The fees in IITs are so low because they have not been revised periodically. There is no reason to keep them stagnant because graduates from these institutions get the best education and do not find it difficult to find well-paying jobs after completion of their studies.

The IIT directors' proposal is to increase the fees from the present Rs 50,000 to Rs 90,000 next year. A committee appointed by the government under former Atomic Energy Commission chairman Anil Kakodkar had recommended a steeper hike in fees last year. The

committee's report is likely to be implemented in stages. The main aim of the upward revision is to make the IITs financially self-reliant. Dependence on their own resources will help them to improve standards and to provide better facilities for students. There are 15 IITs now, up from the five a few years ago, and more are being set up. The government has made huge investments in them as they need better infrastructure and facilities than other technical institutions. These investments have to continue. But students can also bear a fair share of the cost as they stand to receive better education.



There is no case for fear that the proposed hike will adversely affect students from weaker backgrounds. The committee has recommended that those from socially and economically backward sections be exempted from the fee hike. A special loan scheme is also being devised to help other students who can repay the loan after completing their courses. The Kakodkar committee had also recommended that needy and deserving students may be awarded scholarships or loans without collateral security requirements. Even otherwise the terms for granting of educational loans have been generally liberalised and banks cannot refuse to give them on specious grounds. Financial independence and more autonomy will help the IITs to serve the students and the nation better.

A much needed fee increase

The standing committee of the Indian Institutes of Technology (IITs) Council, the highest decision-making body of the technology and engineering schools, has recommended a steep 80% increase in fees for undergraduate studies. While this proposal will not come into force any time soon, it is bound to lead to a divisive debate. Those opposed to it will argue that such increases could deter meritorious, but poor IIT aspirants, and those favouring it

will say that engineering education is already highly subsidized and top-notch institutions such as IITs must be financially independent from the government to maximize their productivity and efficacy. The general neglect of India's college education and the paucity of state, industry and private funding for research unambiguously shows that a fee hike is entirely justified.

The most expensive component of top notch teaching institutions is salaries. Today, India's

universities cannot retain their faculty members unless they can offer a research environment that is at least comparably as challenging and remunerative as institutions in developed countries. The typical IIT graduate generally directly joins industry at salaries fat enough to rapidly repay the cost of undergraduate education; usually less than ₹200,000 (one-tenth of what such education costs in a foreign university) and a fraction of the starting salaries that these

graduates command. A significant number of graduates also pursue advanced studies at foreign universities and the money they spend on their education abroad only helps overseas institutions or Indian banks that lend to such students.

Either way, the Indian institutions don't stand to gain or even meet their costs. Several studies have shown that a seat at the IITs is overwhelmingly restricted to the relatively well-off. This isn't because they are inherently smarter than the general population, but rather because they have parents and benefactors who can afford to send them to

good schools, engage private tutors and, at the very least, access student loans from banks. As far as the modern structure of the IIT entrance examination goes, a Ramanujam-like impoverished genius, who without formal training, can beat these exams—and then become a victim of a fee hike—is unfortunately a wishful myth. Affordable and quality education is fundamental to a country's progress, but this cannot be reduced only to the arena of an undergraduate engineering course.

Should IITs be allowed to raise fees steeply? Tell us at views@livemint.com

IIT accessibility at risk

THE DECISION of its standing committee to approve a whopping 80 per cent hike in tuition fee for undergraduate programmes — from ₹50,000 per annum to ₹90,000 per annum — at the elite Indian Institutes of Technology (IITs) seems a move in haste.

While the panel has pointed out that students from the Scheduled Castes/Tribes and Other Backward Classes will not be affected by the move, the quantum of the hike is certain to hit students and candidates from non-reserved categories hard, especially since many of them belong to the not so well-off classes. This is reason for the IIT Council to shoot down the move.

The proposal of the last Human Resource Development Minister, Kapil Sibal, regarding IIT students reimbursing their alma mater after they found a job was a sound one. The

National Academic Depository Bill that facilitates such a mechanism is pending in Parliament and there is no reason why it cannot be passed quickly in Parliament given its non-controversial nature.

In the meanwhile, the Union government must help the IITs meet their financial obligations, which have shot up on account of inflation. In a nation that is terribly short of quality institutions, the IITs must slip neither on quality nor on accessibility.

Doubts over foreign education providers bill

Different people expect different things to happen after the change of guard at the HRD ministry in New Delhi

HT Education Correspondent

■ heducation@hindustantimes.com

Different people expect different things to happen after the change of guard at the human resources development ministry in New Delhi. For AK Gosain, professor of civil engineering, IIT Delhi, the HRD ministry under the leadership of Pallam Raju “has a pronounced focus on linking jobs to education. This will essentially translate to two things — greater focus on vocational education and strengthening of industry academic partnerships both for teaching and research.”

Rani Kumar, dean, All India Institute of Medical Sciences, expects a mixed bag. “The new HRD Ministry seems forthcoming in terms of impending bills on higher education. However, the bills might take time materialising since the new ministry under the leadership of Pallam Raju is conscientious about thoroughly reviewing the grass root realities before implementation.” She adds, “The foreign education providers

bill now seems a distant possibility. The somewhat apprehensive attitude of Pallam Raju when it comes to collaboration with foreign players might have not-so-positive ramifications even in the landscape of international student and faculty exchange programmes.”

Jayaprakash Gandhi, a Tamil Nadu-based career consultant, too, says that the foreign education bill is expected to get “delayed” at least till the next elections. Gandhi says that the country “should have more universities without diluting the quality.” The ministry is likely to become “flexible,” allowing more institutions (deemed universities) to grow as opposed to what the case was earlier, he says. “More deemed universities will come up.”

In addition to this, research in science and technology is going to get a boost, he says. “I expect R&D institutes to get huge funding from the ministry.” According to Gosain, application-based scientific disciplines such as nanotechnology might get a significant fillip.

Come Friday, no more smog in Delhi, say scientists

Peculiar meteorological conditions supported by long-range transport of pollution from neighbouring states like Punjab are attributed as reasons for smog

SC EXPRESSES CONCERN

NEW DELHI: The Supreme Court expressed concern over the rising pollution and smog in the national capital on Tuesday and decided to deal with it. 'We are concerned with the level of smog in the city. Everyday we are hearing about the rising level of pollution in the city. We will deal with the matter,' a bench headed by Chief Justice Altamas Kabir said. The observations were made during the hearing of a matter relating to the waste of the Bhopal gas tragedy at the Union Carbide plant.

OUR CORRESPONDENT

NEW DELHI: Some respite seems to be coming to the capital's people suffering from breathing problem as the smog enveloping the city past few days is likely to lift by Friday, scientists said on Tuesday.

According to scientists at the Indian Institute of Tropical Meteorology (IITM), Pune, the smog has settled over the national capital due to the drastic increase in fine particulate pollution level suspended over Delhi skies.

The data obtained by the SAFAR (System of Air quality Forecasting and Research) - India's first air quality prediction system consisting of eight automatic air quality monitoring stations - projected that smog will continue to remain over Delhi for the next two days and will lift by 9 November.

Scientists attributed the

smog to peculiar meteorological conditions supported by long-range transport of pollution from neighbouring states like Punjab. They ruled out any role of Cyclone Nilam in it.

The data revealed that the most toxic pollutant PM2.5 (fine particulate matters of size less than 2.5 micrometres) level started to increase from around 100 ug/m3 on 26 October, which was already in the moderate range, and reached to a critical level of 400 ug/m3 on Nov 5, Sunil Peshin, incharge of SAFAR, said.

This is the second time in this year that Delhi is under pollution threat and Diwali is yet to arrive. The last time dust storm hit Delhi was in March.

'This increasing trend will continue for at least two more days and will touch a level of 450 ug/m3 and then likely to descent from 9 Nov

ember to reach very poor category from critical level,' SAFAR programme director Gufran Beig from IITM, Pune, said.

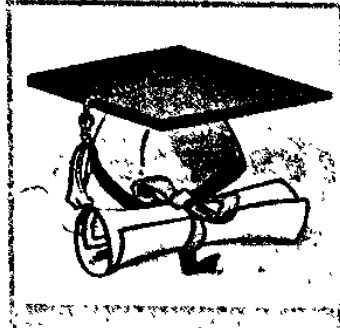
According to scientists, the reason for drastic increase in particulate pollution level is purely the peculiar meteorological conditions supported by long-range transport of pollution from neighbouring states.

'This pollution episode has nothing to do with local emission which is always blamed. The westerly disturbances until about October 22 have inducted lot of moisture into Delhi's atmosphere which resulted in bringing down temperature and drastic increase in humidity from October 25 onwards,' said Beig. The clouds of pollutants emerging from seasonal crop residue burning from neighbouring Punjab and Haryana regions was another for the smog.



उच्च शिक्षा के रोड़े

काफी उम्मीदें जगाते हुए राजनीति में आए शशि थरूर की मंत्री के रूप में पहली पारी अनचाही वजहों से चर्चा में रही। लेकिन बतौर शिक्षा राज्यमंत्री अपने पहले ही वक्तव्य में जो बातें उन्होंने कही हैं, उनसे आने वाले दिनों में कुछ नई हलचलों के संकेत मिलते हैं। हाल के एक चर्चित सर्वेक्षण, दो कमेटियों की रिपोर्टों और कुछ उद्योगपतियों के बयानों का हवाला देते हुए उन्होंने कहा कि भारत में उच्च शिक्षा की हालत अच्छी नहीं है, और जल्द ही इसे सुधारने के जतन नहीं किए गए तो यह छात्रों के अलावा देश के लिए भी भारी पड़ेगा। थरूर की बात में एक ऐसा हिंट भी था कि उनकी मिनिस्ट्री विदेशी विश्वविद्यालयों का भारत में आना आसान बनाने के लिए हर संभव कोशिश करने जा रही है। यह कोई नई बात नहीं



पहले बिल पास कराएं

है, हालांकि मंत्रालय अगर इसका कोई रास्ता खोज पाए तो यह जरूर एक नई बात होगी। देश का केंद्रीय मानव संसाधन मंत्रालय पिछले बारह-चौदह सालों में अलग-अलग वजहों से लगभग हमेशा ही चर्चा में रहा है। मुरली मनोहर जोशी से लेकर अर्जुन सिंह और कपिल सिब्बल तक इसमें रहते हुए लगातार कुछ न कुछ ऐसा कहते-करते रहे कि रिपोर्टिंग के लिए मीडिया को भरपूर मसाला मिलता रहा। यह संयोग ही है कि इस सूची में सबसे नई एंट्री मारने वाले पल्लम राजू की गिनती यूपीए के सबसे समझदार और कामकाजी, लेकिन साथ ही सबसे कम बोलने वाले मंत्रियों में होती रही है। शशि थरूर और जितिन प्रसाद के रूप में उन्हें दो काबिल राज्यमंत्री भी मिले हैं। लेकिन मानव संसाधन मंत्रालय की यह ताजातरीन टीम और कुछ करने से पहले क्या इस मंत्रालय को इसकी बड़बोली छवि से निजात दिला पाएगी? इसमें कोई शक नहीं कि बतौर शिक्षा मंत्री कपिल सिब्बल ने कुछ महत्वपूर्ण काम किए हैं। हाई स्कूल के स्तर पर बोर्ड इन्तहान की सदियों पुरानी परंपरा खत्म करना उनके ही वश की बात थी। मेडिकल, इंजीनियरिंग जैसे प्रफेशनल कोर्सेज के लिए कॉमन एंट्रेंस टेस्ट के मामले को भी वे काफी दूर तक ले गए। लेकिन उनकी ये पहलकदमियां आदेश-निर्देश के स्तर तक ही सीमित थीं। शिक्षा के ढांचे में कोई वास्तविक बदलाव संसद में कानून बनाए बगैर संभव नहीं है, और हकीकत यह है कि फॉरेन युनिवर्सिटी बिल से लेकर टेक्निकल एजुकेशन बिल तक कुल सात जरूरी शिक्षा विधेयक तैयार होकर एक असें से संसद की लाइब्रेरियों की धूल फांक रहे हैं। यह सिर्फ कहने की बात है कि इन विधेयकों के अटके रहने की मुख्य वजह संसद में लगातार हो रही हंगामेबाजी है। देश के कोने-कोने में सक्रिय शिक्षा माफिया की पकड़ देश की सारी पार्टियों पर है, और इन बिलों के अटकने की सबसे बड़ी वजह खुद यूपीए के भीतर सक्रिय दक्षिण भारत के मेडिकल-इंजीनियरिंग माफिया हैं। पल्लम राजू इन बिलों को पास कराने और थरूर के वादों को अमल में उतारने का कौशल दिखा सके तो नई पीढ़ी इसके लिए उनके प्रति कृतज्ञ रहेगी।