

Enforcing a ban will not end the menace of stubble burning, say researchers

'Farmers must be educated on its monetary costs'

JACOB KOSHY
NEW DELHI

Only educating farmers about the monetary costs of burning stubble can address the environmental crisis triggered every year in Punjab, says a team of Swiss and Indian researchers who interviewed 600 farmers over two years. Burning stubble, the rice chaff left over after harvesting, is linked to winter air-pollution in the State as well as down-wind Delhi.

According to the team, the government's efforts — earmarking funds for specialised farming equipment

(for straw management) or enforcing the State-led ban on the practice — are unlikely to solve the problem.

Farmer cooperative groups — a key link between the government and farmers — ought to be playing a more active role in educating farmers, say key authors associated with the study.

Cheap solution

"The main message is that farmers are not to blame (for the pollution crisis)," says Max Friedrich, a post-doctoral researcher at the Swiss Federal Institute of Aquatic Science and Technology (Eawag). "There are deeper causes beyond economic incentives or awareness about the health consequences of burning at play."



Burning issue: A file photo of a worker burning paddy straw or leftover stubble on the outskirts of Mohali in Punjab. • AKHILESH KUMAR

On average, about 20 million tonnes of straw are generated in Punjab, and they barely have two to three weeks to dispose them of and prepare the fields for the next crop. Hence the

popularity of deploying stubble-burning as a quick and cheap solution.

For about a decade now, the Delhi and the Centre have held this practice responsible for the abysmal air

quality in the capital in winter.

In 2013, the National Green Tribunal issued a directive to Punjab, Haryana and Uttar Pradesh asking them to ban stubble burn-

ing. The Environment Ministers of these States as well as top officials at the Centre declared a "zero tolerance" policy on the burning of stubble, which has been estimated to contribute anywhere from 7% to 78% of the particulate matter-emission load in Delhi during winter.

The Centre has spent about ₹60 crore in subsidising farm equipment via village cooperatives to enable farmers to access them and avoid stubble burning. In 2018, Punjab had disbursed about 8,000 farm implements to individual farmers and set up 4,795 custom hiring centres, from where such machinery could be leased. The cost of hiring these machines was

about ₹5,000 an acre, as *The Hindu* has previously reported.

Mixed results

However, the success of these efforts has been mixed, even though stubble-burners in 2018 were fewer than in 2017 and 2016, according to satellite maps by independent researchers.

In their interviews, the researchers found that farmers who had bigger landholdings were more likely to burn straw; those who used combine harvesters (for cutting the straw) as opposed to manual labourers were more likely to engage in burning; and those who burnt or didn't burn were equally aware of the steps and procedures required to

abstain from burning, said Dr. Friedrich. On average, the input costs of farmers who burned straw were about ₹40,000 per acre and those who didn't were about ₹25,000 per acre but the incomes of those who burned and those who didn't were closer — about ₹60,000 and ₹50,000 respectively.

"There needs to be greater participation by village cooperatives in being able to impose social norms that would dissuade burners," said Banalata Sen, an independent public health professional, associated with the study, coordinated by Ranas Mosler (affiliated to Eawag), the Centre for Sustainable Agriculture (CSA), Hyderabad and Kethi Virasat Mission (KVM), Jaitu, India.

IN BRIEF



Petrol price cut by 7 paise, diesel dips 8 paise

NEW DELHI
Petrol prices declined by 7 paise across the metropolitan cities on Thursday after remaining unchanged for the last two days, data from the Indian Oil Corporation's website showed. In Delhi, petrol was priced at ₹72.71 per litre, down from ₹72.78 on Wednesday. In Kolkata, Mumbai and Chennai, price of the fuel was at ₹74.79, ₹78.33 and ₹75.52 per litre respectively. **IANS**

Renowned artist Haku Shah passes away at 85

NEW DELHI
Renowned artist Haku Shah, best known for his themes of tribal and folk art, passed away on Thursday following a cardiac arrest at his home in Ahmedabad. He was 85. Shah was also a cultural anthropologist. He carried out extensive field research and documentation on rural and tribal arts and crafts, traditions and folk lore, and established a tribal museum at Gujarat Vidyapeeth. **PTI**

Maoists 'apologise' for killing school teacher

MUMBAI
Days after a school teacher was killed by Naxals in Maharashtra's Gadchiroli district, the rebels have issued a letter calling it a mistake, the police said on Thursday. Yogendra Meshram was killed because he was suspected to be a policeman but he was "innocent", the letter said. Meshram, teacher at a municipal school at Korchi, was shot dead by Naxals at Kombda Bajar on March 12. **PTI**

Dry days



Tough times: A boy drags his goats on the bed of Jaypur dam, in Aurangabad on Thursday. The drought situation in Maharashtra is likely to get severe as dams are left with less than 32.88% water stock of the total storage capacity. • YOGESH LONDHE

Now, NEET score is valid for three years

MCI clears the long-existing confusion about the validity of the entrance test

BINDU SHAJAN
PERAPPADAN
NEW DELHI

The National Eligibility-cum-Entrance Test (NEET) score is valid for three years for Indian students wanting to pursue undergraduate medical courses abroad.

Clearing the long-existing confusion about the validity of the NEET score, a notification by the Medical Council of India — Board of Governors stated: "Result of NEET shall be valid for a period of three years from the date of

declaration of result, entitling a candidate to pursue MBBS or equivalent medical course including pre-medical/language course, if any, followed by MBBS or equivalent medical course."

Foreign degree

About 7,000 students from India opt for foreign medical degrees annually.

The notification further said that these regulations may be called the "Eligibility Requirement for Taking Admission in an Undergrad-

uate Medical Course in a Foreign Medical Institution (Amendment) Regulation, 2019."

Meanwhile, these latest amendments are to come into force from the date of publication in the official Gazette (March 14).

Last year, the Medical Council of India, in its March notification, said: "Indian Citizens/Overseas Citizen of India intending to obtain primary medical qualification from any medical institution outside India, on or

after May 2018, shall have to mandatorily qualify the NEET for admission to MBBS course, besides fulfilling the eligibility criteria for admission to the MBBS course prescribed in the Regulations on Graduate Medical Education, 1997."

The Medical Council got 18,383 applications in 2017-18 against 10,555 applications in the previous year. The Council issued 14,118 eligibility certificates in 2017-18, compared to 8,737 in 2016-2017.

Cash-strapped Jet cuts more domestic flights

Service from Delhi to all metros, except Mumbai, cancelled

ADITYA ANAND
MUMBAI

After pulling out of Abu Dhabi, Manchester and Hong Kong over the past 48 hours, Jet Airways on Thursday slashed its domestic schedule by cutting departures from Delhi to all metro cities, except Mumbai.

A look at the schedules from Delhi showed that, on Thursday, there were no domestic departures to Bengaluru, Hyderabad, Chennai and Kolkata. The cash-strapped airline has also stopped accepting bookings for the Mumbai-Hong Kong flight beyond March 22. The Delhi-Hong Kong service was cancelled overnight.

The Naresh Goyal-led Jet is facing its worst financial crisis, with debt exceeding \$1 billion. The carrier, which is struggling to stay afloat, has delayed payments to banks, suppliers, and aircraft lessors — resulting in some of them moving to terminate lease deals and take back their aircraft.

Domestic flights

On Thursday, Jet cancelled 73 of its 117 departures from Mumbai. Similarly, in Delhi it operated only 31 of the 106 published departures.

Of the 31 flights from Delhi, 20 were operated using Boeing 737-800 aircraft. Of these, 7 were to Mumbai, 3 to Amritsar, 2 to Kathmandu, 2 to Dehradun and one each to Pune, Dhaka, Kochi, Srinagar, Singapore and Bangkok.

"Flights to Bhopal, Udaipur, Chandigarh, Jaipur, etc., were operated using



Critical period: The Naresh Goyal-led Jet Airways is facing its worst financial crisis, with debt exceeding \$1 billion.

Pilots write to PM

ASIAN NEWS INTERNATIONAL
NEW DELHI

The pilots of financially-strapped Jet Airways have urged Prime Minister Narendra Modi and Civil Aviation Minister Suresh Prabhu to instruct the airline's management to release their pending salaries.

"We fear that the airline is on the verge of collapse. This will leave thousands of people unemployed. It will change the dynamics of

aviation as fares will increase due to a reduction in capacity, and travelling public will face major inconvenience," said the National Aviators Guild, the registered trade union of Jet Airways' Indian pilots.

"The pilots and engineers are now almost three months behind salaries and facing a lot of financial hardships with no relief in sight. Our repeated pleas to the management have gone unheard," read the letter.

the ATR 72-500 fleet," an airline official said, speaking on condition of anonymity.

From Bengaluru, Jet operated only 3 flights: one each to Mumbai, Delhi and Amsterdam. "We have cancelled 26 flights out of Bengaluru," the official said.

At Chennai, 16 departures were cancelled. Of the four flights that operated, 3 were to Mumbai and one to Paris. From Hyderabad, two flights were operated to Mumbai, compared with the 6 departures it normally operates.

In Kolkata, 8 out of 10 departures were cancelled, with just one each to Guwahati and Mumbai taking off.

Flights to airports like Mangalore, Kozhikode, Thiruvananthapuram, Bhub, Coimbatore were not being operated, data showed.

Jet's services to Amsterdam, Paris and London have not been hit. All flights are available for booking through the entire schedule and are operating normally.

Nirav spends Holi in overcrowded U.K. jail

He may have to share cell with another male prisoner, with little time out

PRESS TRUST OF INDIA
LONDON

Fugitive diamond merchant Nirav Modi, wanted in India on charges of fraud and money laundering, spent Holi behind bars in one of England's most overcrowded jails on Thursday, a day after a U.K. judge rejected his bail application.

The 48-year-old was arrested by Scotland Yard on Tuesday and presented before district judge Marie Malon at Westminster Magistrates' Court in London on Wednesday.

The judge remanded him in custody till March 29, after which he was transferred to Her Majesty's Prison (HMP) Wandsworth in south-west London.

Harsh conditions

The overcrowding pressures of the jail may mean he will share a prison cell with any of its around 1,430 male prisoners.

Modi, one of India's richest men, accustomed to high-life and celebrity circles around the world, will be faced with some harsh con-



Nirav Modi

ditions at the prison. During the most recent inspection carried out in February-March 2018, the Victorian-era jail was found by U.K. Chief Inspector of Prisons Peter Clarke to be "one of the most overcrowded in England and Wales" and filled with many men with drug or mental health problems.

Self-inflicted deaths

"Despite six self-inflicted deaths since the last inspection, it was concerning to find that not all staff were carrying anti-ligature knives, that no staff would enter a

Mamata lauds journalist

INDO-ASIAN NEWS SERVICE
KOLKATA

West Bengal Chief Minister Mamata Banerjee on Wednesday refused to give any credit to the Narendra Modi-led government for the arrest of fugitive diamondaire Nirav Modi in London.

"This is a ploy of the BJP. The credit must go to the

London Telegraph journalist who exposed Nirav Modi. It is a got-up match. No credit goes to the BJP government," she told reporters at the State secretariat. The arrest was a "strike" by the BJP ahead of the Lok Sabha election. There would be a number of such "strikes" during the election, she said.

ter, told the court in support of Modi's bail application.

However, Modi's defence team's efforts to establish his credibility as a lawful U.K. resident who had no intention of jumping bail and fleeing were strongly objected to by the Crown Prosecution Service (CPS), arguing on behalf of the Indian authorities.

The judge in the end ruled in favour of the Indian authorities, concluding that the diamondaire had "substantial grounds" to fail to surrender, and remanded him until the next hearing, scheduled for March 29.

Where Holi is 'sung,' not merely played

Festival infused nationalism in Assamese folk music

RAHUL KARMAKAR
GUWAHATI

Holi is 'played' in most parts of India. But the festival is 'sung' in a part of Assam, where it goes by another name: Doule Utsav.

The wellspring of the festival at Barpeta in western Assam is Barpeta Satra, a Vaishnav monastery that Madhabdev established in 1583. Madhabdev was the prime disciple of Srimanta Sankardeva, the saint-reformer who inspired the Bhakti movement in Assam around the time Guru Nanak, Kabir and Chaitanya Mahaprabhu did elsewhere in India.

Madhabdev wrote a few Doule songs such as *Faku khele karunamoy* (The Lord full of compassion plays Holi) and *Dolai Gobinda paramanande* (Krishna plays Holi blissfully) for ritualistic celebration of the festival.



Rhythmic beats: Women dancing as they celebrate Holi in Guwahati on Thursday. •PTI

songs they sung in the celebration of colours were influenced by Bengal's folk music. "Traders those days used to sail on the Brahmaputra to Dhaka and other Bengal ports. They introduced Holi songs borrowed heavily from Bengali. More than a century ago, a group of nationalist poets, writers and musicians began writing Assamese Holi songs. As their music became popular, the Bengali-influenced songs disappeared," Priya Ranjan Das, a cultural activist in Barpeta, told *The Hindu*.

Poet Ambikagiri Raichoudhury, writer Prasanna Lal Choudhury and musician Purushottam Das played a major role in the linguistic changeover. "Their songs attained great popularity, giving Barpeta two categories of Holi songs — folk and monastic — that people sing while playing with colours," he said.

The folk songs have no place in the Barpeta Satra where the monastic songs accompany rituals that make Doule last three or five days, depending on the Hindu month — Chaitra or Faagun — and planetary positions.

BJP MLA shot at in Uttar Pradesh

PRESS TRUST OF INDIA
LAKHIMPUR

A BJP legislator in Uttar Pradesh was shot at in Lakhimpur Kheri district on Thursday, the police said. Lakhimpur MLA Yogesh Verma suffered a bullet injury on the leg when an unidentified person shot at him around 3 p.m. Mr. Verma was rushed to a hospital, where his condition was stated to be out of danger, the police said.