



WHAT A SAD ERA WHEN IT IS EASIER TO SMASH AN ATOM THAN A PREJUDICE.  
— ALBERT EINSTEIN

## The Indian EXPRESS

FOUNDED BY  
RAMNATH GOENKA

BECAUSE THE TRUTH INVOLVES US ALL

# Look east, act fast

India should join RCEP, but negotiate a better deal to safeguard its interests



V S SESHADRI

## THE NRC SPECTRE

BJP leaders are not serving any national interest by spreading panic that NRC will soon be implemented across India

THE PANIC SPARKED off by the spectre of NRC (National Register of Citizens) should serve a warning to politicians who have been talking about its implementation across the country soon. Across West Bengal, queues are lengthening outside government offices with people seeking the documents necessary for inclusion in the NRC; there have even been reports of suicide, reportedly due to "panic" and "depression" for want of papers. With the Assam experience fresh, where nearly 19 lakh people are out of the NRC and uncertain about their future, people in West Bengal are taking no chances. No assurance from Chief Minister Mamata Banerjee seems to convince a worried population, many of them having crossed over from East Pakistan and Bangladesh during Partition in 1947 and after the 1971 war, that the state has no intention to introduce an NRC.

Public anxiety is not surprising since senior functionaries of the BJP have been insisting that the NRC is a given. BJP President and Union Home Minister Amit Shah recently said: "The people of the country took a decision in 2019. We are here to bring the NRC, and those who are excluded will be sent out of the country after due legal process." Ahead of the general election, Shah infamously referred to illegal migrants as termites and said a BJP government would pick up infiltrators and throw them into the sea. The BJP functionaries have also introduced a communal angle in the citizenship debate by insisting that Hindus excluded from the NRC would be protected. Earlier this week, the BJP general secretary in charge of the party in West Bengal, Kailash Vijayvargiya said: "As national general secretary of BJP, I want to assure all of you that NRC will be implemented but not a single Hindu will have to leave the country. Each and every Hindu will be given citizenship." RSS supremo Mohan Bhagwat too has reportedly said that the RSS will stand by Hindus not listed in the final NRC in Assam and that Hindus anywhere in India need not worry. The Delhi BJP has turned shrill in its demand for NRC, following in the footsteps of the chief ministers of Haryana and UP.

The NRC was proposed for Assam in 1951 in the backdrop of the extraordinary political history of the region before Partition: The national in NRC does not indicate any national intent. And the idea of citizenship envisaged by the Indian Constitution does not discriminate on the basis of religion. The founding fathers of the republic also did not envisage that this country should close its borders to people fleeing political and economic turmoil. The BJP leadership is surely not serving national interest by erasing this history and whipping up anxieties over questions that can cause deep cleavages in the society.

## ON THE ROAD

Thomas Cook went under, but the old school travel agency model might yet survive

WHEN A 178-YEAR-OLD travel agency says, as it did in its slogan, "Don't just book it, Thomas Cook it", a particular confidence shines through. That consumer faith can be transposed onto an entity which understands your travel interests with a higher degree of perception. That was before the World Wide Web disrupted the tourism landscape. Thomas Cook did do its best over the years. But the old travel firm, Thomas Cook UK, which catered to approximately 19 million travellers a year across 16 countries, entered compulsory liquidation earlier this week. The company reportedly was \$2.1 billion in debt.

Factors such as Brexit have been stated as reasons compounding the firm's financial woes. However, the inability of the firm to adapt digitally is being highlighted as an example of how brick-and-mortar travel stores may lose relevance. Thomas Cook had upwards of 600 physical outlets — called "high street" stores in the UK for their prime location. That's a staggering amount of overhead expenditure, when a digital presence is almost free in comparison. The firm's overall approach stood at odds with an industry where Online Travel Agents (OTAs) and User-Generated Content (UGC) are crucial information sources. A 2018 World Bank report notes how, in 2017, TripAdvisor bookings alone made up US\$546 billion of global tourism spend. Online travel reviews on TripAdvisor, the report noted, "have grown to 660 million in 2018... A study by OTA Expedia and Comscore... found that in 2016, US travelers alone spent 8.7 billion minutes consuming digital travel content, a 41 per cent increase year-on-year."

Does this mean curtains for the travel agent as we have known? Yes and no. While high rentals and cost overheads make physical presence non-competitive vis a vis online portals, the information overload online and the yearning for an assuring human hand to sift through the data and make it simple may help trusted firms stay in business. For instance, a 2017-18 study by MMYG Global said 33 per cent of millennials in the US would prefer to hire travel agents in the next two years. Breaking down a 2019 industry report, TTG Asia, a leading Asia-Pacific travel-trade group, states how 42 per cent of travellers find the lack of human interaction frustrating, up from 38 per cent in 2018. At an international travel forum in May, Deloitte's lead partner travel, Alistair Pritchard, reportedly said a combination of factors, especially information overload, is going to ensure "the return of the travel expert". If not Thomas Cook, someone else might continue to Cook it.

## EIGENFACE CHIC

In the battle for privacy, war paint is proving to be the most efficient means of confusing facial recognition

AS PRIVACY CONCERNS grow over the rampant use of facial recognition technology on the street, and in shops and private spaces, the anti-face movement is catching up. It is a technology problem, and the solution was expected to be technological. Who would have expected the perfect hack to arrive in the guise of fashion? This week, as London Fashion Week closed, the Dazzle Club took a walk in London's King's Cross, wearing war paint that anonymised them in plain sight in the heart of the world's most camera-dense city.

The name is obviously a grateful nod to the technologist and artist Adam Harvey's CV Dazzle project, which exploits weaknesses in the OpenCV library for real-time computer vision. Facial recognition depends on Eigenfaces, the set of vector maps used in facial recognition, which are sensitive to factors like the distance between the eyes, and their relation to the corners of the mouth. With present technology, covering part of the face or wearing shades does not help. OpenCV simply works with what it can see, and ignores your pathetic attempts at concealment.

But weird makeup and hairdos which distort the apparent proportions of the face work. CV Dazzle is a set of blazes, patterns and cosmetics worn on the face to confuse cameras. But designers aren't satisfied with just thwarting facial recognition. They are culture jamming, too, choking the system with junk data and noise. The raddest strategy is clothes printed with the faces of celebrities, which divert the cameras from your face. They see Barack Obama, Janis Joplin, Che Guevara, even Elvis himself. They see everyone except you. As cameras become pervasive in India, we need local flavour. The nation where political workers wear the face of their leader also deserve camouflage gear. We'll take the Netaji T-shirt, thank you.

THE RCEP NEGOTIATIONS have entered the final phase. A ministerial level meeting earlier this month in Bangkok, following similar consultations last month in Beijing and a trade negotiating committee meeting currently in progress in Vietnam, all signal a quickening pace. Within India too, intensive stakeholder consultations have taken place. A track 1.5 consultation among RCEP countries held in Delhi on September 13 also saw many of the RCEP lead negotiators and their back-up think tanks interacting with their counterparts in India and industry bodies. Will the deal be finalised in time for the ASEAN summit meetings in Bangkok in November? And will India remain a part of it? Mixed signals continue.

Commerce Minister Piyush Goyal recently said that while the government would strive to protect the interests of a majority of industries, the overall discussion cannot be hijacked by one or two sectors. This is widely seen as declaring an intention to remain in RCEP and make it work for us. RCEP negotiations have been underway since 2013. Its significance for regional integration, even if most of the participating countries are already connected by bilateral FTAs, cannot be understated. At a time when global trade and the global economy are facing huge uncertainties, it could be a booster shot.

But will it work for India? That depends on what has already been negotiated and what can be achieved in the remaining time. But some essential points merit mention. And since India will bring significant additional value to RCEP, it should negotiate hard.

On the export front, India's export capacities and competitiveness in relation to the RCEP region are presently limited. Where they exist, duty reductions by partners require front-loading. This includes textiles, gems and jewellery, pharma, autos, some engineering and chemical items and certain agricultural and marine products. Export consolidation in them can take place in RCEP markets not covered by FTAs now. Even with existing FTA partners, if we can improve market access with deeper concessions such as in cotton yarn with Korea or on easier rules of origin with Japan for shrimps or for cut and polished diamonds, these would help. More important will be the easing of non-

tariff barriers. Side letters assuring fast track consideration for evaluation and access for our generics, already having approvals from USFDA or EMA, on the lines we have with Singapore, would be extremely important. While our exports of pharma items worldwide were \$13.28 billion in 2018-19, bulk of it were to advanced markets like the US (39 per cent) and EU (13 per cent). Exports to RCEP countries like Korea (0.1 per cent), Japan (0.4 per cent) and China (0.4 per cent) were paltry. If RCEP is promoting regional integration, these should rapidly rise. It would be critical to seek time bound approvals on safety for auto and other engineering items and certification of farm products on sanitary and phytosanitary grounds without delay. Here again, the wide divergence between acceptance of our products in other advanced markets and East Asia stands out. It is also essential to have an institutional consultative process on NTBs. An aggrieved member should be able to get NTB issues faced by it in any market peer reviewed and have the opportunity to persuade the RCEP collegium. On imports, there is an unease about RCEP among several segments of Indian industry. They need time to face more intense competition. China has market dominance in several sectors even without an FTA. Tariff phase-outs for imports, therefore, need to be longer than in the earlier FTAs and be extended to 15-20 years. Back-loading reductions would also be needed in certain areas. Strategic sectors like steel or non-ferrous metals, where RCEP countries like China have significant over-capacity, need to be carefully handled. Agriculture, sheltered in earlier FTAs, needs calibrated opening through use of tariff rate quotas on sensitive products as several RCEP countries are strong agricultural exporters. A reassuring safeguard mechanism in RCEP against import surges will be crucial. To be effective, it would be necessary to have tailored safeguard measures; one for agriculture, second for strategic sectors like ferrous and non-ferrous products having over-capacity and third for the remaining. Several FTAs globally do have separate safeguards including for autos and farm items. It can be asked, why enter RCEP with so many caveats? If we are not ready, why not

stay out? First, an initiative like RCEP which offers us the opportunity to economically integrate more closely with this dynamic region happens rarely and may not wait for us indefinitely. Even if quickly concluded, legal scrubbing and ratifications may lead to RCEP not being operational before 2021. Second, the rest of RCEP (barring perhaps CLM countries) is relatively more integrated than India. Only through such closer association can mechanisms like mutual recognition arrangements (MRAs) in professional services or equivalence of product standards can be developed. Third, Commerce Minister Piyush Goyal recently said that on the export front, the government is willing to take bold decisions and a trillion dollar of exports in the next five years is eminently doable. He added that this was essential if the target of a \$5-trillion economy has to be reached by 2025. If so, India needs easier market access that can be provided by FTAs like RCEP. Fourth, when a country signs a major FTA, more suitors line up not wanting to disadvantage their exports. If India can use this FTA dynamics to get candidates like the EU to show more flexibility, it should be welcome. Fifth, domestic export capacities alone will not be adequate even as they require scaling up to double our exports. Foreign investments, including in value chains will be needed and those relocating from China may show interest. Investors will be more persuaded if India has a wider FTA portfolio. World trade is increasingly routed through preferential arrangements. Foreign investors also look for ease of doing business and a predictable and stable environment. Otherwise, they will go and invest in other RCEP countries and target their exports to India. The recent drastic reduction effected in corporate tax rates, particularly for new manufacturing units, is a very timely and huge step. These need to be supplemented with other domestic reforms, particularly to facilitate labour intensive manufacturing. We should not be looking to alight from the RCEP bus, but to negotiate hard for a comfortable seat.

The writer is former Indian ambassador to Myanmar



KHALED AHMED

## THE MORBIDITY OF JIHAD

Pakistan has compromised its internal sovereignty by supporting non-state actors

TARIQ RAHMAN, DEAN at the School of the Liberal Arts and Social Sciences at the Beaconhouse National University, Lahore, has written the most comprehensive book on jihad, the religious war of Islam, exercising the minds of Muslims and non-Muslims alike. *Interpretations of Jihad in South Asia: An Intellectual History* (OUP) begins with the erstwhile but now ignored thinkers like Sir Syed Ahmed Khan and Maulvi Chiragh Ali who thought jihad was defensive war and not conquest to collect more jizya (poll-tax on non-Muslims).

This book looks at the lack of scholarly consensus on what jihad means, especially in the hands of radical organisations such as al Qaeda and the Islamic State. It takes 323 pages of the most absorbing scholarship to understand the radical jihad, springing mostly from the authority of Ibn Taymiyya (1262-1328) and culminating in the disputed hadith about Ghazwa-e-Hind, legalising and prompting an uprising against India in Kashmir.

The book rivets attention on the details of the phenomenon of extremism among Muslims that has ended up in jihad, killing more Muslims than non-believers. Pakistan has been the testing ground of theories of jihad that, some say, have been ordained in the Quran, which also lays down qital (killing) as an injunction. Pakistan has been the victim of the covert war which was supposed to be

directed at the infidels. This should be instructive, given the aimless bloodshed, unless Pakistan doesn't care about it.

In terms of governance, the jihadi state has to surrender internal sovereignty because private jihadi organisations have to be located in civil society and have to be exempted from municipal law in respect of their use of weapons and training. States can tolerate the diminution of external sovereignty — mostly owing to economic weakness — but they cannot survive the surrender of internal sovereignty. There can be no governance when the state is not sovereign, even internally. The problem of "extraterritoriality" has been the most pressing problem in Pakistan's governance under the doctrine of jihad.

More than 50 per cent of its territory was outside the municipal jurisdiction of the state since Pakistan had failed to bring the whole of Balochistan under the normal writ of the state and had preserved till 2018 the Federally Administered Tribal Areas (FATA) as a relic of the British Raj's "buffer" territory. Jihad created an extended "extraterritoriality" or "no-go areas" that assaulted the big cities of Pakistan. In the smaller cities, the entire administration may have been run by non-state actors, as happened in Toba Tek Singh when the champion of Pakistani jihad, Lashkar-e-Toiba, was the most powerful militia in the country.

Any discussion of law and order in Pakistan in the past has run headlong into the state's policy of (proxy) jihad. Because jihad was fought with mercenary troops, there was a sharing of the sovereignty of the state with jihadi leaders. There is resistance among politicians to the post-9/11 perceived policy of giving up jihad because the world increasingly equates jihad to terrorism through the FATF. There is apparently no realisation that jihad militates against governance above all.

Rahman wonders at the book's conclusion: "This study has concerned itself only with ideas about jihad. Perhaps the crucial question, not addressed here, is whether people are really influenced by these ideas? In short, is it because there are radical interpretations in circulation on the internet, among role models of the peer group, among friends and relatives, that people get radicalised? Or is it that they join for other reasons such as poverty, lack of education, mental illness, sexual frustration, or money?" Rahman takes note of Suhail Abbas, a Pakistani psychologist who examined 517 men in jail "for having attempted to go to Afghanistan to fight US troops". His conclusion was that all "jihadis" suffered from "psychological morbidity".

The writer is consulting editor, Newsweek Pakistan



## SEPTEMBER 28, 1979, FORTY YEARS AGO

### ECONOMIC OFFENCES

THE CHIEF MINISTERS' conference was divided on the question of the Central and state governments assuming fresh legislative powers to deal with economic offences, as suggested by Prime Minister Charan Singh, in his inaugural speech. Although some states like UP and Karnataka felt that a fresh legislation was called for, most others either opposed the suggestion or were reticent about it. It is possible that having sounded the chief ministers on the need for fresh legislation, the Centre might consider it as a fulfilment of its obligation and go ahead with its proposal for some kind of preventive detention law to curb economic offences.

### ONE-DAY POLLS

THE CONSENSUS AT the chief ministers' conference in New Delhi was against a one-day poll for the Lok Sabha election. The question will, however, be further discussed by the chief election commissioner at a meeting with the state chief secretaries before he takes a final decision. While the CEC has been insisting that polling be completed across the country in a single day, a large number of state governments have felt that it would not be possible for them to make arrangements for a one-day poll. The reason for this is the constraints of resources, particularly of law and order enforcement machinery.

### HINDU SUCCESSION ACT

SOCIALLY CONSCIOUS WOMEN and lawyers have come out strongly against the Haryana Bill amending the Hindu Succession Act to debar Hindu women from inheriting property from their parents. The Bill which was passed unanimously by the Assembly, however, has to go to the President for his assent. Lawyers, particularly women lawyers, when questioned on the subject were unanimous in terming the bill as a "retrogressive step," which amounted to discriminating on the basis of sex. Kapila Hingorani, a Supreme Court lawyer, pointed out that the most terrible repercussion of the Bill would be to strengthen the custom of dowry.



# 13 THE IDEAS PAGE

## The making of history

Modi Econ 2.0 has started with a big bang — the largest corporate tax cut in world history for new manufacturing firms. Surely this is just the beginning



NO PROOF REQUIRED  
BY SURJIT S. BHALLA AND KARAN BHASIN

ON SEPTEMBER 20, Finance Minister Nirmala Sitharaman announced one of the largest corporate tax cuts in world history. For all companies that don't avail exemptions or incentives, the new corporate tax rate was set at 22 per cent while for new manufacturing firms established after October 1 (and who start production before 2023), the corporate tax rate was set at 15 per cent. The prevailing corporate rate — 30 per cent. The relevant tax rate is with surcharges and cesses — this has been reduced from 35 per cent to 25 per cent (all firms) and from 35 per cent to 17 per cent (new manufacturing firms).

Analysts, commentators and economists have looked at these large, historical, tax cuts and debated whether they will have any impact on demand or GDP growth. A dominant belief is that this is a supply-side intervention and even if it were to have an effect on demand, it will be only after a considerable lag. Some are even opining that this is neither a supply nor a demand side intervention but instead a "gift" to the corporate sector; others believe that what is needed to revive demand and GDP growth are long-term structural reforms. According to them, only structural changes that kindle animal spirits, agriculture, quality of education, improved health-care, etc. matter for growth acceleration. (Add a structural change in weather as well).

These Godot experts believe India's time will come but only when Godot arrives — after much needed structural reforms. By definition, structural reforms mean policies that have not been in place, to date. Godot needs to answer as to how, and why, India managed to grow at 7+ per cent for more than a decade without structural change?

We believe that a large part of the recent Indian growth decline to 5 per cent is cyclical, caused by both global (trade wars) and domestic factors. A major contributor to India's growth sluggishness (and decline) are distorted domestic policies, particularly corporate tax rates (highest in the world) and real policy rates (highest in the world).

We go into details below, but we do want to make an Econ 000 point — cutting the corporate tax rates is both a supply and a demand intervention. Even the supply effect will likely not take long to materialise. On the demand side, there is the wealth effect, due to higher asset prices. Assume for a moment that the stock market rise is at least 15 per cent for the fiscal year from the close of trade on September 19 (Sensex at 36,000 and Nifty at 10,700). In one week, the stock market is up more than 8 per cent. We realise this is probably noise but the estimate of only an additional 7 per cent rise over the next six months is conservative. Each 1 per cent rise in market cap is approximately Rs 1.4 lc (lakh crore). A 15 per cent rise translates into an additional Rs 21 lc. Global estimates of wealth effect on consumption vary but a magnitude of .05 is reasonable, that is, the wealth effect can be expected to yield an additional [(0.05\*21) or 1.05 lc or] Rs 1,05,000 crore of consumption. [Note that we have completely ignored the



CR Sasikumar

wealth effect emanating from the likely stabilisation, and increase, in house prices]

An important additional demand effect is via additional investment. The sceptics (Godot fans?) will say that since there is excess capacity there will be no additional investment until demand magically reappears. Of course, this argument is close to tautological and as close to "Ganga gaye to Gangadas aur jamuna gaye to jamunadas". With this view, there is no wealth effect and no investment effect and no growth effect — at whatever time we are, we are at a standstill. This logic defies logic. There is bound to be an additional effect on investment.

We will report on cross-country results at a later date, but we do expect a 2.5 percentage point rise in real investment over the next two years. This will take real investment close to 35.5 per cent of GDP or less than 1.5 percentage points away from the peak of 36.8 per cent reached in 2011 Q3. Needless to say, this is additional demand, and additional GDP in the economy. And needless to add, but this investment increase is unlikely to occur if the RBI/MPC persist with the highest real rates in the world. Just like woman does not live on bread alone, investment is strongly affected by both tax rates and the cost of credit. The other policy shoe needs to fall for acche din to happen.

We can all speculate, and disagree, but there are some incontrovertible facts pertaining to FM Sitharaman's announcement of September 20. Indian (and world) history was made on that date. A reduction of 10 ppt reduction in the corporate tax rate (CTR) is only exceeded by Germany's 15.8 ppt reduction in 2001 and the US's 14 ppt reduction in 2018 (from 35 to 21 per cent). However, for new firms, the reduction of the CTR to 17 per cent (CTR of 15 per cent and surcharges, etc. of 2.2 per cent), an 18 ppt reduction, is the largest on record since 2000 (OECD database). Very likely, such a big reduction is the biggest reduction in the world, ever.

Some Indian economists have asked for a reduction in the CTR for a long, long, time. I say so with some expertise because in none of the traditional economists' pre-Budget consultative meetings over the last 22 years has the argument been made to cut the CTR. The discussion, argument, has always been to raise tax rates to keep the fiscal deficit down (this for more than 99 per cent of the

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participants). Earlier this year, only two economists argued for a cut in CTR — the same two also argued for a cut in the real policy rates. The rest said don't tinker, worry about the fiscal deficit, etc. And yes, some experts said the real policy problem pertaining to Indian GDP growth was that the exchange rate was overvalued. Note that these expert views were made at the time of the lowest real (and nominal) GDP growth in decades.

Hence, when the announcement was made on September 20, there were some who thought this was fake news! That is how much history was in the making.

A real perspective on history is provided via the OECD corporate tax database for close to 60 countries (since 2000). The data has 1,155 observations on CTR and 1,057 country-year observations on change in CTR. For countries with a population above 5 million (682 observations), there are only 161 observations of any change in the tax rate. Of these, 126 show a decline; only 34 show a decline of more than 3 ppt and only 14 countries cut taxes in any year by more than 5 per cent (Germany did it twice 15.8 ppt in 2001 and 10.6 ppt in 2008). Other countries in the club of a 10 per cent cut in CTR are France (2018), Hungary (2017) and Paraguay and Turkey (both in 2006).

India now joins this club of bold tax policy-makers — just 2 per cent of the total changes made in the 21st century. As we said earlier, while data are not easily available, this is possibly in all history, since tax increases, like death, have been a certainty. And large tax cuts have been rarer than the sighting of the blue whale. That is how historic is the decision made in Modi 2.0 and FM NS 1.0. The nation owes a strong debt of gratitude to these two masters of India's economic fate.

We want to end with a speculation. We believe that there is a strong possibility of a final corporate tax cut with the adoption of the direct tax code (DTC). The latter has to happen, and the most likely date is February 2020. The FM has left us with two corporate tax rates — 15 per cent (new manufacturing firms) and 22 per cent (all firms). Maybe the DTC compromise will be somewhere in-between — say 18 per cent for all firms?

Bhalla is contributing editor, The Indian Express. Bhasin is a New Delhi-based policy researcher. Views are personal

### WHAT THE OTHERS SAY

"Some Americans see China as a threat. Such mind-set has hindered the development of the bilateral relationship and caused substantial harm to the two sides' national interests."  
—GLOBAL TIMES, CHINA

## Making crime less dark

Crime data in India is short on information on victims and witnesses. Victimisation surveys can help



G S BAJPAI

THE TRUE EXTENT of crime in a society is seldom known. In times when evidence-based policing and data-driven policies are being advocated, the absence of exact data on crime could pose serious problems. In India, crime is under-reported and under-registered. The official picture with respect to crime in India is difficult to believe for several reasons. While popular perception associates many cities and states in India with crime, going by official statistics, the country has one of the lowest incidence of crime in the world. India's crime rate is 379.3 per 1,00,000 persons. Cases of dacoity, attempt to murder, robbery, rape and riot have gone down by 36.11 per cent, 16.26 per cent, 20.15 per cent, 0.78 per cent and 54 per cent respectively in 2018 as compared to the year before. Who will buy these statistics?

A major source of the problem lies in the manner in which crime data are collected and compiled. Crime data in India are collected and published by the National Crime Records Bureau (NCRB). The data reported in this publication is based on the crime reported to local police stations. Police stations getting information about crime is one thing and such incidents being recorded as an FIR is another. This is in addition to all kinds of pressures and obstacles on a complainant, especially when the nature of crime is that of sexual assault, domestic violence or when it involves family members, relatives or powerful people. The resistance put up by the police station personnel in registering such crimes or reducing the seriousness of incident is well documented.

The NCRB data fall short of expectations in many respects. For instance, it is short on information about crime victims and witnesses. The official statistics miss out on several key areas: The profile of victims, their personal characteristics, victim-offender relationship, FIR registration experiences, experiences of interacting with police, number of days and time taken in getting FIR registered, instances of intimidation, pressure experienced from the accused or associates including police, nature of injury, medical assistance, information about legal aid, compensation.

A victimisation survey is often seen as a solution to such shortcomings. While many countries have conducted victimisation surveys to supplement their official crime data, India has yet to make a start. Such surveys reveal details that are missed out by the local police. They describe how crime has impacted the lives of victims and convey their safety concerns.

These surveys gather information through personal or telephonic interviews with a set of people who represent the geographical and social correlates of a city or state over a period of time. The information thus collected may detail the victimisation suffered by a person but not recorded by the police for a variety of reasons. The other data which are generally collected in these surveys entail risk and vulnerability, perceptions about the local police and the views of people about the criminal justice system.

The Crime Survey for England and Wales (CSEW) measures the amount of crime by asking people about their experiences as crime victims. In the US, the National Crime Victimization Survey (NCVS) presents data that is collected from a nationally-representative sample of about 2,40,000 interviews on criminal victimisation, involving 1,60,000 persons in about 95,000 households. The data generated by such surveys are considered more reliable than the official statistics on crime and this is frequently used for various policy objectives. Such surveys are conducted by professionally-competent organisations and the state funds the processes involved in the generation of data. The European Crime and Safety Survey (EU ICS) is the most comprehensive analysis of crime, security and safety in the European Union. In 1987, the United Nations Inter-regional Crime and Justice Research Institute (UNICRI) launched the International Crime Victimization Survey (ICVS), which produces more comparable data across nations. These data are available in the public domain. The public in general is encouraged in all these countries by the state to participate in these surveys with an assurance about the confidentiality of the information they provide.

The data generated by the state in India, in contrast, doesn't inspire public confidence. There are enough reasons to demystify crime and the people's response to it in India. India-specific yardsticks, which the NCRB does not cover, could be evolved. However, there could be several challenges to such surveys. For example, people might not reveal more than what they have divulged to the police. Even then, it is still an endeavour worth attempting. Today, there are several methodological innovations to overcome the bottlenecks.

The government is expected to embark on the country's first victimisation survey soon. The complexity of this endeavour demands that it be assigned to an institution that specialises in criminology, victimology and criminal justice administration. Such a survey is not simply about data collection, it involves nuanced understanding of the facets of crime and victimisation and presupposes specialist knowledge. I hope the home ministry is listening.

The writer is professor and chairperson, Centre for Criminology & Victimology at National Law University Delhi and vice president of Victim Support Asia

### LETTERS TO THE EDITOR

#### THOSE WHO INSPIRE

THIS REFERS TO the article, 'You can't shop for teachers' (IE, September 26). The regimental approach of mass recruitment for teaching positions in any university might not be the best of ideas. Teaching as a profession should attract self-motivated individuals with not just the prescribed minimum qualification but inner passion. It requires individuals who can inspire their pupils and help in carving out a liberal space for learning and intellectual discourses. Part-time teachers who have the necessary qualifications should be considered for permanent absorption within the ranks over a period of time.

Sudip Kumar Dey, Kolkata

#### COMPROMISED COPS

THIS REFERS TO the editorial, 'Cop out' (IE, September 27). The UP police has been blatantly shameless in shielding Swami Chinmayanand from the rape charges levelled against him. Its efforts at diluting the case again reinforces the view about the police does the bidding of its political masters. Whether it is conducting allegedly staged encounters or protecting people in power, the conduct of the UP police leaves a lot to be desired.

Vijai Pant Hempur

#### RIGHTS OF ACCUSED

THIS REFERS TO the editorial, 'Exorcising third-degree' (IE, September 27). It is correct that we need an anti-torture law to prevent atrocities committed by police during the course of investigation. It is equally important to train the local police station personnel about scientific ways to extract information from the accused. The SHOs should be made ac-

#### LETTER OF THE WEEK

##### THE ROOT CAUSE

THIS REFERS TO the editorial, 'Vapourised' (IE, September 20). E-cigarettes are addictive and come with health hazards. As a measure to prevent health-related risks, banning nicotine products is not problematic. And to give the government the benefit of doubt, let's even assume that its intentions behind the move to ban e-cigarettes were genuine. But why not attack the root rather than the secondary cause? All cigarettes are injurious to health; the ones more injurious can stay, others must be banned.

Srishti Mathur, Ujjain

countable for the health of the accused. This would discourage them from taking recourse to violence and save innocents from getting tortured. Remember, the right to not be tortured is a part of the constitutional Right to Life.

Shishir Singh, Prayagraj

#### STATE AND TRUST

THIS REFERS TO the article, 'Why property rights matter' (IE, 27th Sept 19). The authors have gone to the nub of many ills of the country's economy and polity. They rightly point out that institutions engaged in governance must earn the trust of citizens.

Vinod Dhall, Gurgaon



SHIVANI NAIK

## Of sour grapes

The move to quit Commonwealth Games on flimsy grounds is unfair to athletes

IT NEEDED A Shah Rukh Khan film (*Chak De! India*, 2007) to put the focus on Suraj Lata Devi and Mamta Kharab — five years after India's 2002 Commonwealth Games (CWG) gold in women's hockey. India had beaten England for the CWG gold then, defeating Australia in the semifinals, and it wasn't a lightweight achievement.

Except, the Indian Olympic Association (IOA) boss, Narinder Batra, now calls the Commonwealth Games a "waste of time" because "the level of competition isn't high". His grouse is that India wins anything between 70 and 100 medals at the CWG, but just two at the Olympics — so the conversion is abysmal. India won 57 medals at the Asiad before the 2016 Rio Olympics, but no one talks of dumping that one.

The Indian men's hockey team has never won a CWG gold. Because, as Batra will notice, Australia tends to be very high competition. The event is not a waste if it has unearthed gems like Ashish Kumar and Dipa Karmakar in gymnastics. Saina Nehwal, Jwala Gutta and Ashwini Ponappa's first flush of finals' success also came at the CWG, followed by the World Championship and Olympic medals. Manika Batra, with her twin gold performance in table tennis, was a revelation at the CWG Gold Coast. Clearly, the gains — if not squandered — can convert

to Olympic success, if everyone concerned maintains perspective.

Here is where Batra's views are coming from: Sports like shooting, wrestling, weightlifting, and even badminton and table tennis, are low-hanging fruit at the CWG. They rake in a bunch of medals for India, though the player still has to make the effort of actually plucking that fruit. What needs to be painfully pointed out to the IOA, is that India has had little success to show in what are acknowledged as the Big 3 of sports — track & field, swimming and gymnastics. Hockey has repeatedly exposed India's weaknesses against high competition and a boxing medal isn't exactly a cakewalk. India chooses to stay blind to team sports like netball, basketball, beach volleyball and Rugby sevens. But that points to their blinkers, not the low competition available.

India goes medal-grabbing against low competition at the Asian Games too, hoarding gold medals by the dozen there, especially in athletics, and then zero at the Olympics. The takeaway can't be that we stop competing, especially when — except in badminton and tennis — Indian athletes are competition-shy throughout the year, and will even avoid trials if they can. Kabaddi used to be India's stomping ground against low competition, until Iran decided they'll have a mighty chuckle last year: It'll be foolish to say India should stop

going to Asiad.

At the heart of this outrageous idea of junking CWG altogether is the 2022 Birmingham CWG's decision to drop shooting from the programme, and India throwing a fit — offended that it'll drop down in the medals tally. "Colonial things" like having no Indian on 13 CWG committees are being mooted as possible reasons to evict a sport that does tend to be clunky and expensive with its infrastructure and, frankly, not quite a darling of television.

Glasgow, where Andy Murray was born, dropped tennis from its 2014 CWG programme, though it is the host nation's prerogative to pick their sports.

But it is in India's completely cynical reaction to shooting being dropped — attributing racism and colonialism to the decision — that the debate got really muddled. It might still be some brinkmanship ahead of the Commonwealth Games Federation chief's India visit in November, but it appears a plan is being made to basically sit at home with a mighty sulk.

Great sporting nations don't sulk. They get cracking on the new rules of the game, and prove a point on the sports field. This might be a good opportunity to make up for all the years of lagging behind in swimming, gymnastics and athletics — where high stan-

dards are available at the CWG; start building teams in more mainstream and popular sports; and, not remain myopic and hung up on medals that won't come this time around from shooting.

For non-Olympic squash players like Dipika Pallikal, Joshna Chinappa and Saurav Ghosal, the CWG is as big as it gets. And, the IOA might want to leave it to the likes of Rani Rampaul and Lalremisiami in hockey and cricketers like Harmanpreet Kaur, Jemimah Rodrigues to get on with their unfinished business with England. The hockey players have high standards — set 20 years ago by Suraj Lata's team — to match. And the cricketers (Women's T20 is set to debut at Birmingham) would want a shot at the inaugural CWG title, beating England in the finals hopefully. If Batra would only notice, India's men and women tend to be good at "colonial things" like settling scores on the field: Parupalli Kashyap was playing out of his skin against England's Rajeev Ouseph in the semifinals at Glasgow in 2014, before going on to win the finals. The IOA, meanwhile, was famously trying to secure the release of some reckless Indian officials who were caught by Scotland police authorities for some allegedly embarrassing activities. CWG is for the athletes.

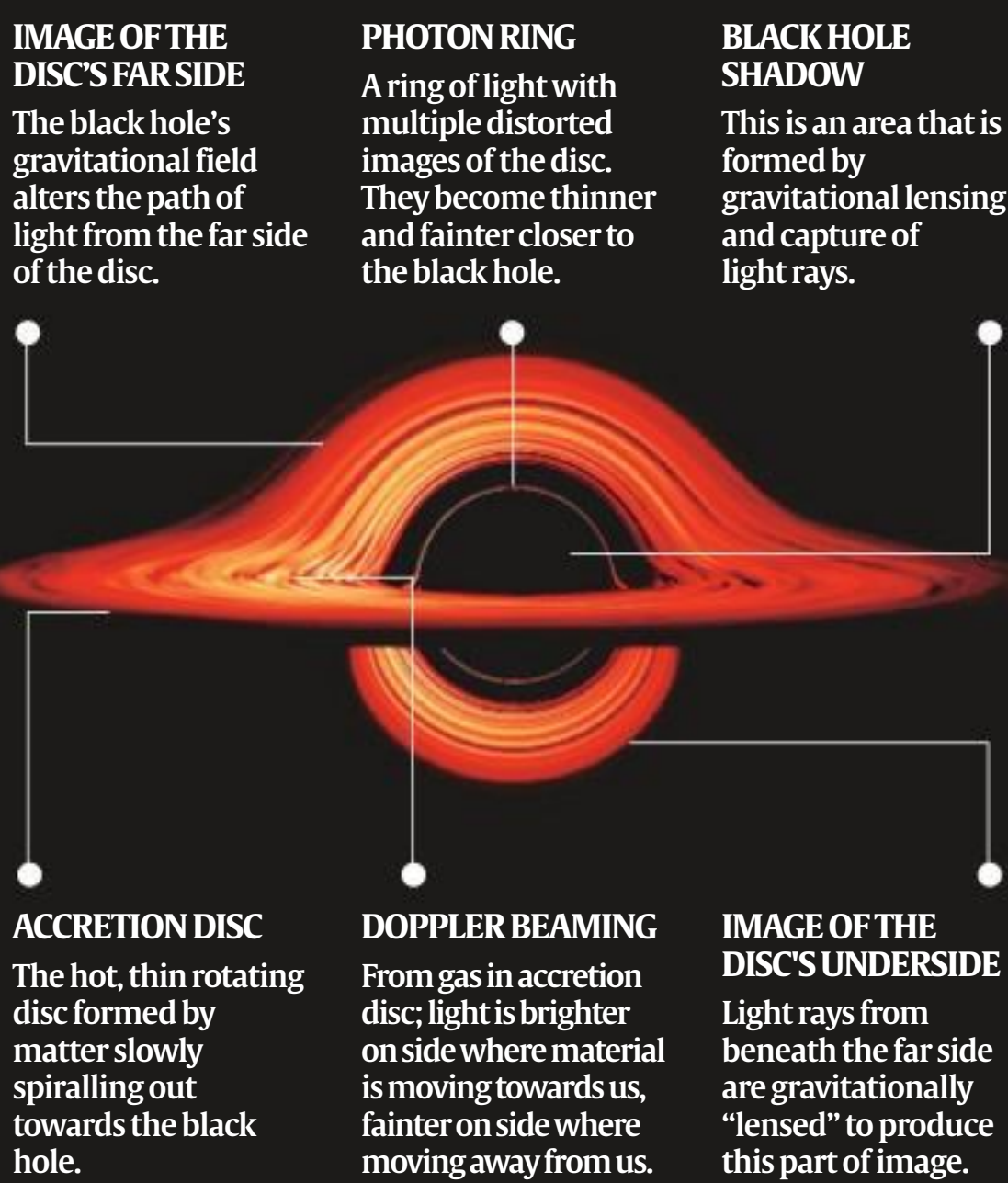
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**FACT CHECK, GROUND REALITY**

**HOW GRAVITY DISTORTS OUR VIEW OF A BLACK HOLE**

**WHEN LIGHT IS SKEWED**



Source: NASA

A NEW visualisation of a black hole, released by NASA, illustrates how its gravity distorts our view by warping its surroundings. The visualisation simulates the appearance of a black hole where infalling matter has collected into a thin, hot structure called an accretion disc (see illustration). The black hole's extreme gravity skews light emitted by different regions of the disc, producing the misshapen appearance, NASA explained in the release.

As magnetic fields twist through the churning gas, bright knots form and dissipate in the disc. In the area closest to the black hole, the gas orbits at close to the speed of light. The outer portions spin a bit more slowly. This difference stretches and shears the bright knots, producing light and dark lanes in the disk.

"Seen nearly edgewise, the turbulent

disc of gas churning around a black hole takes on a crazy double-humped appearance," NASA said. The black hole's extreme gravity alters the paths of light coming from different parts of the disc, producing the warped image. Exactly what we see depends on our viewing angle; the greatest distortion occurs when viewing the system nearly edgewise.

"Viewed from the side, the disc looks brighter on the left than it does on the right," NASA added. Glowing gas on the left side moves toward us so fast that the effects of Einstein's relativity give it a boost in brightness. On the right side, gas moving away becomes slightly dimmer. This asymmetry disappears when we see the disc exactly face on because, from that perspective, none of the material is moving along our line of sight.

**THIS WORD MEANS GOLDSCHMIDTITE**

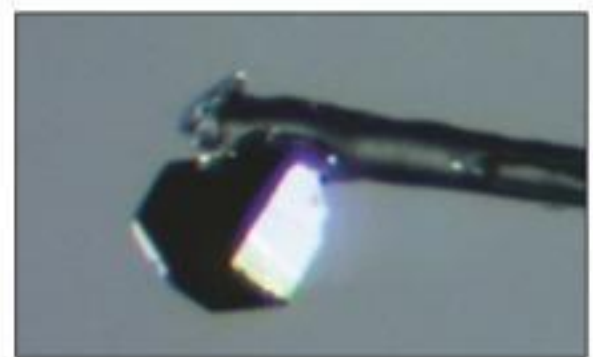
A new mineral from the Earth's mantle, found inside a diamond in South Africa. How important can it be?

A NEW, curious mineral has been discovered inside a diamond unearthed from a mine in South Africa. The mineral has been named goldschmidtite, after Victor Moritz Goldschmidt, the Norwegian scientist acknowledged as the founder of modern geochemistry. It has been described in the journal *American Mineralogist*.

Goldschmidtite has an unusual chemical signature for a mineral from Earth's mantle, according to the University of Alberta, a student of which discovered it. While the mantle is dominated by elements such as magnesium and iron, goldschmidtite has high concentrations of niobium, potassium and the rare earth elements lanthanum and cerium.

PhD student Nicole Meyer found a single grain of the mineral in the diamond, unearthed in Koffiefontein, South Africa. The university described it as dark green and opaque.

Though the mantle makes up about 80 per cent of the Earth's volume, very little is



**Tiny sample found inside diamond.**  
 Nicole Meyer/University of Alberta

known about it. Reaching the mantle is not easy; it is about 2,900 km thick and no attempt to drill into it has been successful. Diamonds hold clues as they are found up to 160 km beneath the surface, in the upper mantle. Diamonds that are unearthed were brought up closer to the surface, probably as a result of violent volcanic eruptions when the Earth was hotter, according to the *Smithsonian Magazine*.

**SIMPLY PUT QUESTION & ANSWER**

**Why latest IPCC report matters**

This one is on oceans, released this week. It adds to evidence in previous IPCC and other reports that call for urgent action to reduce emissions. A look at what various reports have said, and their significance

**AMITABH SINHA**  
 PUNE, SEPTEMBER 27

A NEW report on oceans by the Intergovernmental Panel on Climate Change (IPCC), released on Wednesday, has given further strength to growing demands for more aggressive climate action from world leaders, especially those representing the big emitters. The report has come close on the heels of a special climate change 'action' summit organised by UN Secretary General António Guterres in New York at the beginning of the annual UN General Assembly session, and has added to mounting evidence calling for urgent action to reduce greenhouse gas emissions.

**What are all these reports about?**

The latest report, on Ocean and Cryosphere, is the last in a series of three that the IPCC had been asked to produce to assess the impacts of climate change on specific themes. The first of these, examining the feasibility of restricting global rise in temperatures to within 1.5°C from pre-industrial times, was submitted in October last year. It was followed in August this year by a report on how land systems contribute to and are impacted by climate change.

In between, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), a IPCC-like scientific body that examines scientific literature on biodiversity, came up with a first-of-its-kind report on the state of nature and how it was being affected by climate change.

There have been other reports as well. The World Meteorological Organization produced a report this month that said that the period 2015-19 was the warmest five-year period on record, and that July this year was the hottest month on record globally.

On May 11 this year, global concentration of carbon dioxide in the atmosphere was measured to have crossed the 415 parts per million (ppm) mark for the first time ever. This concentration varies from day to day, month to month and season to season, and has come down from that peak now.

**What does all this mean?**

There is already a lot of irrefutable scientific evidence to suggest that human activities have been altering climate in a way that would have disastrous consequences for the planet. But the action being taken by the countries have



Wednesday's news conference in Monaco, where the IPCC presented the special report on the Ocean and Cryosphere in a Changing Climate Context. Reuters

been assessed to be woefully inadequate. These new reports seek to underline the enormity of the problem, and the urgency required to deal with it. At the same time, each of them emphasises that if proportionate action is initiated immediately, the most catastrophic impacts can still be avoided.

The IPCC special report on the 1.5°C goal, for example, said it was possible to keep the rise in temperature to within 1.5°C, but for that the world would need to bring down its greenhouse gas emissions to half of its 2010 levels by 2030, and to net zero by 2050. Net-zero is achieved when the total emissions is balanced by the amount of absorption of carbon dioxide through natural sinks like forests, or removal of carbon dioxide from the atmosphere through technological interventions.

Following this report, pressure has been building up on countries to commit to a net-zero target by 2050. Some countries have already announced their intention to achieve this target, but the most prominent emitters — China, US, India — have so far not done so.

The land report released in August said the various kinds of uses that land was being put to — forestry, agriculture, industries, urbanisation — had contributed about 5.2 billion tonnes of carbon dioxide every year between 2007 and 2016. During the same time, trees and forests absorbed almost 11.2

billion tonnes of carbon dioxide every year from the atmosphere. The sum total of these two processes meant that land, and the vegetation on it, was removing about 6 billion tonnes of carbon dioxide from the atmosphere annually.

It also pointed out that the global food system, which would include activities such as agriculture, cattle-rearing, food processing industry, energy consumed in these processes, and transportation of food items, could account for as much as a third of all greenhouse gases. It said nearly 25 per cent of all food produced globally was either lost or wasted. And even the decomposition of waste food released emissions.

The new ocean report noted that the global mean sea level had risen by 16 cm between 1902 and 2015, and that the rate of increase had doubled in the last one decade. The sea levels were rising because of thermal expansion of ocean waters due to rising temperatures as well as due to melting of glaciers and polar ice. It says that between 2006 and 2015, the Greenland ice sheet lost ice-mass at an average rate of 278 billion tonnes every year, while the Antarctic ice sheet lost a mass of 155 billion tonnes on an average every year. Snow over areas outside of these two regions, like the glaciers in the Himalayas, together lost an average of 220 billion tonnes of ice every year.

**Why so many reports now?**

It is not unusual to see the conversation around climate change picking up during this time of the year, in the run-up to the annual two-week climate change conference that takes place in November or December. But there are also other reasons for the sudden rise in attention to the climate debate this year. Last year's IPCC report on 1.5°C mentioned that humanity had barely 12 years to keep alive the hopes of restricting global temperature rise to within 1.5°C from pre-industrial times. This was contingent not just on immediate aggressive action from countries, but also on development of technologies that could remove carbon dioxide from the atmosphere. This report has instilled a new sense of urgency in climate conversations.

Next year, 2020, happens to be the transition year for the international climate regime, from the Kyoto Protocol to the Paris Agreement. The Kyoto regime has been a major underachiever in reducing greenhouse gas emissions. The Paris Agreement, in so far as it makes it mandatory for every country to initiate actions and not just rich and developed nations as under the Kyoto Protocol, is expected to deliver much better results. As required by the Paris Agreement, every country had already finalised and submitted a climate action plan, called Nationally Determined Contributions, or NDCs, in 2015. The NDCs currently submitted have targets or action plans for 2025 or 2030. The assessment of several NDCs has concluded that these actions were not adequate to achieve the global goal of keeping temperature rise within 2°C from pre-industrial times. But the NDCs have to be updated every five years, and the countries are scheduled to do it next year.

Those concerned about climate change are hoping that in the light of these reports, and growing fresh evidence, countries will show greater ambition when they update their NDCs next year. The Paris Agreement also provides for a review of all climate actions in 2023 to assess whether the individual actions of countries were adding up to what was required to achieve the goal. Countries can then decide what more needed to be done.

However, it is being argued now that 2023 might be too late for such an exercise. Therefore, a momentum is being built to nudge the countries to announce more ambitious actions before that. The move to get countries to commit to a net-zero target by 2050 is a part of these efforts.

**Soot found in placenta: is foetus at risk?**

**MEHR GILL**  
 NEW DELHI, SEPTEMBER 27

IN A recent study that raises concerns about the effects of air pollution on babies even before they are born, scientists have reported that particles of black carbon — commonly known as soot — have been found in the placenta of women, who had breathed these in during their pregnancies. The study, conducted by a team of Belgian researchers, has been published in the journal *Nature Communications*.

**The finding**

The placenta is an organ attached to the wall of the uterus. It allows life-sustaining oxygen and nutrients to pass from the mother to the foetus. It lies on either end of the umbilical cord and has two sides, the maternal and foetal side. The study found tiny

particles of black carbon accumulating on the side of the placenta that faces the foetus.

The particles were embedded in the placentas, implying that this had happened before the babies were born.

"We ruled out that our findings were just confounded by soot particles of the air which were on the surface of the placenta after birth," environmental scientist Tim Nawhort of Hasselt University, Belgium, told *The Indian Express* in an email.

Black carbon particles are a key part of particulate matter. It is one of the byproducts from the burning of fossil fuels such as coal, oil, petrol and wood. Because of their small size, particulate matter, including black carbon particles, can be easily inhaled and can pass through the throat and into the rest of the body.

Previous studies have established a connection between prenatal exposure to ambient air pollution and impaired birth out-

comes. None of the previous studies, however, had established that nanoparticles could cross the placental barrier as a result of inhalation in real-life settings.

**How the study was conducted**

The researchers chose 20 women in Northeast Belgium, 10 of whom were living in areas of high black carbon exposure and 10 in areas where exposure to black carbon was low. All the women were non-smokers. Additionally, five samples were taken from mothers who suffered miscarriages between 12 and 31 weeks of pregnancy.

For the first set of 20 women, the placentas were taken 10 minutes after the babies were born, and biopsies were carried out on both the maternal and the foetal sides. While black carbon particles were found in all samples, the amount varied by residential address — an average 9,500 particles per cubic mm for low-exposure areas and about 20,000 par-

ticles per cubic mm for high-exposure areas.

**Why it is a concern**

The placenta is the sole point of contact between the mother and the foetus, carrying oxygen and nutrients from the mother's blood supply to the foetus. Essentially, it is a temporary organ that keeps separate the mother's and the baby's blood supply, while also being a link between the two. The finding is a signal of the health effects that air pollution could have even before birth.

"Because the particles are at the foetal side of the placenta and this side interacts directly with the foetal blood flow, it is very reasonable to assume that the foetus is directly exposed," Nawhort said. He added that soot particles may cause DNA damage and air pollution in general can impact cellular ageing, cognitive development and can lead to lower birth weight.

Lower exposure to air pollution is the only way that the foetus can be protected, he said.

**Ranitidine under scanner: what is this drug, and should Indian users worry?**

**PRABHA RAGHAVAN**  
 NEW DELHI, SEPTEMBER 27

INDIA'S DRUG regulator this week began looking into concerns of potential cancer-causing substances contaminating popular acidity drug ranitidine. The move came over a week after the US Food and Drug Administration flagged the issue to American patients, some companies have suspended sales of the product worldwide, and some other countries have ordered recalls of the product.

**What is ranitidine, and how widespread is its use in India?**

Ranitidine, popularly known through brand names like Aciloc, Zinetac, Rantac and Rantac-OD, R-Loc and Ranitin, is an over-the-counter, prescription antacid used in the treatment of acid reflux and peptic ulcer diseases. It is commonly used to relieve acid-related indigestion and heartburn by decreasing stomach acid production. While other medicines like pantoprazole and omeprazole too treat these symptoms and are more commonly prescribed today, ran-

itidine is still widely used in India. "Ranitidine is a much older medication, but it was always thought to be a very safe drug because it has less side effects than the other drugs that patients use nowadays to treat these symptoms," said Dr S Chatterjee, senior consultant—internal medicine at Delhi's Indraprastha Apollo Hospital.

In the 12 months ended August 2019, the ranitidine molecule alone (excluding combinations it was part of) made nearly Rs 690 crore in sales, according to pharmaceutical market research firm AIOCD Awacs PharmaTrac.

**What is the problem?**

On September 13, the US FDA stated in a release that it had learned that some ranitidine medicines contained "low levels" of a substance called N-nitrosodimethylamine (NDMA). An environmental contaminant found in water and foods, NDMA has been classified by the International Agency for Research on Cancer as probably carcinogenic to humans, which means it has the potential to cause cancer. This is the same impurity that the US FDA had investigated in blood pressure drugs valsartan and losar-

**TOP 5 RANITIDINE BRANDS IN INDIA**

Brand	Company	Market Size
Aciloc	Cadila Pharmaceuticals	Rs 244.70 cr
Zinetac	GSK	Rs 209.10 cr
Rantac	JB Chemicals	Rs 153.10 cr
R-Loc	Zydus Cadila	Rs 28.40 cr
Ranitin	Torrent Pharmaceuticals	Rs 12.40 cr

*\*Moving annual turnover for the 12 months ended August 2019  
 Source: AIOCD Awacs PharmaTrac*



tan over the last year.

**How has India's drug regulator responded?**

India's top drug regulator Monday wrote to state regulators asking them to direct ranitidine active pharmaceutical ingredient (API) manufacturers to "verify their products and take appropriate measures to ensure patient safety". Drugs Controller General of India (DCGI) V G Somani, in his letter, asked states to inform him of action taken in this matter "at the earliest". So far,

the DCGI has not called for any halting of supplies, which means the ranitidine brands marketed in the country can continue to be sold until further notice.

APIs are the ingredients that give a medicine its therapeutic effect. According to industry sources, most of the world's supply of the ranitidine API comes from two Indian firms — Saraca Laboratories and SMS Lifesciences.

**Should consumers be worried?**

The DCGI has not clarified whether doc-

tors and consumers in India should use ranitidine with caution, nor has the US FDA called for individuals to stop taking the drug at this time.

"Although NDMA may cause harm in large amounts, the levels the FDA is finding in ranitidine from preliminary tests barely exceed amounts you might expect to find in common foods," stated the US FDA, adding it was evaluating whether these levels of the substance posed a risk to patients.

**How have companies selling ranitidine in India responded?**

At least two of the companies marketing top ranitidine brands here have decided to take precautionary measures like halting sales while investigations into their safety are in progress. This includes GSK, which publicly announced a voluntary recall of its Zinetac brand on Wednesday.

Torrent Pharmaceuticals, too, has "stopped the sales of this product" till it concludes a "detailed assessment" of its Ranitin. JB Chemicals, testing its Rantac and Rantac-OD, plans to take a final call on sales of products "once the results are out", according to the company's president, Pranabh Mody.

SMS is evaluating its ranitidine API to ensure it is "void of this NDMA impurity or are within permissible limits" and that it foresees "business as usual" until then.

According to GSK, the European Directorate for the Quality of Medicines (EDQM) has suspended Saraca Laboratories' certificate of suitability for its ranitidine API "with immediate effect." It is unclear what action Saraca is taking.

It is not clear at this stage either what Cadila Pharmaceuticals, which markets top-selling brand Aciloc in India, and Zydus Cadila, which markets 'R-Loc', are planning to do.

**How have other countries responded?**

While India and the US are still looking into the issue, regulators of around 15 countries are learnt to have called for recalls of ranitidine sold in their markets. These include Singapore, Canada, Italy, Denmark, Finland, Norway, Switzerland and Pakistan. Singapore's Health Sciences Authority has said the potential risk of nitrosamines like NDMA is associated with "long term exposure" and patients prescribed the drug for short term use "may continue with their medicine".