

Living with Air Pollution in a Post-Corona World

*Like the delicate mesh of grandma's crochet, the SARS-CoV-2 virus that causes Covid-19 is intricately intertwined with air pollution, the two knitted together in a secret code, research from Italy¹, Germany² and the United States³ is beginning to unveil. More than ever before, the clear blue skies are telling us that it is time to grasp the opportunity to clean the air we breathe, says **Jyoti Pande Lavakare**, **journalist and co-founder of clean air non-profit Care for Air**. Jyoti's book **Breathing Here is Injurious to Your Health**, on the human cost of air pollution, will be published by Hachette India in September 2020.*

When I heard American pulmonologist Dr Nicholas Marks in an NPR podcast describe the lungs as “these exquisite machines, containers of air that just kind of blow life-giving oxygen into the blood through a thin wall, a membrane”, I understood immediately what he meant by the “poetry of the lungs”. Almost exactly two years ago, I had watched helplessly as my mother, a trained classical music vocalist, struggled to breathe in the terminal stages of the lung cancer that consumed her. In those moments, breathing - an involuntary, effortless activity I'd always taken for granted - embodied this poetry. In my mother's case, it became an elegy.

It is the thinness and suppleness of our lung walls that enables them to expand and contract and pass oxygen smoothly and makes breathing so effortless.

“What's so elegant about it is that that membrane is so thin and delicate,” Dr Marks explained in the podcast. It was this delicate membrane that Dr Marks worried about when he first heard about

¹[COVID19_Position Paper_Relazione circa l'effetto dell'inquinamento da particolato atmosferico e la diffusione di virus nella](#)

²[Assessing nitrogen dioxide \(NO2\) levels as a contributing factor to coronavirus \(COVID-19\) fatality](#)

³<https://projects.iq.harvard.edu/covid-pm>

Covid-19, because what Covid-19 does is inflame that membrane, making the thin, delicate walls of the human lungs very thick.

“Suddenly, the lung gets really stiff. And instead of it being really easy to get enough oxygen in, now, suddenly, it requires tremendous work to do it.” Sometimes that even leads to patients needing a ventilator to breathe for them.

It's not just Covid that affects human lungs this way. Many respiratory diseases do – including those triggered by air pollution, like doctors said my mother's lung cancer was. The only difference is that some of those diseases may not be as immediately lethal as Covid-19 and, more importantly, they don't spread in bunched up clusters, overwhelming doctors and hospitals at once. But their naturally flatter curve doesn't mean they kill fewer people. In fact, air pollution kills many more. It is just that the diseases it triggers are non-communicable: cardio-vascular diseases - hypertension, heart-attack, stroke; lung and respiratory diseases; cancers; diabetes; obesity; and cognitive and mental illnesses; among others.

According to World Health Organisation (WHO) estimates, air pollution causes around 7 million premature deaths globally.⁴ Covid has caused the deaths of 227,051 individuals until 30 April⁵. If Covid is a visible, viciously virulent, insanely infectious pandemic, killing swiftly and mercilessly, air pollution is its invisible, non-communicable evil twin, killing unhurriedly, under the radar, but equally ruthlessly. It is a non-communicable disease (NCD) pandemic in slow-motion, matching – if not surpassing – the cataclysmic fury of SARS-CoV-2.

Air pollution affects our lungs insidiously, indirectly, gradually. But its effects are equally horrific, the morbidity and mortality of the diseases it triggers much higher. In fact, even when it doesn't actually trigger disease, air pollution ends up compromising and weakening the human lungs, making us more vulnerable to respiratory viruses like the SARS, MERS and now the novel-corona virus, the SARS-CoV-2, which causes Covid-19.

⁴ [Air pollution](#)

⁵ [Total confirmed COVID-19 deaths](#)

In a first clear link between long-term exposure to pollution and Covid-19 death rates, a new study⁶ done by Harvard University's T.H. Chan School of Public Health has shown that coronavirus patients in areas that had high levels of air pollution before the pandemic were more likely to die from the infection than patients in cleaner parts of the United States. "An increase of 1 $\mu\text{g}/\text{m}^3$ in PM2.5 is associated with an 8% increase in the COVID-19 death rate," the cross-sectional Harvard report⁷ said. "Even a small increase in long-term exposure to PM2.5 leads to a large increase in Covid-19 death rate, with the magnitude of increase 20 times that observed for PM2.5 and all-cause mortality. The study results underscore the importance of continuing to enforce existing air pollution regulations to protect human health both during and after the Covid-19 crisis," the report concludes. PM (particulate matter) is a mix of organic and chemical particles that can aggravate respiratory illnesses when inhaled. PM2.5 refers to the size - 2.5 microns or smaller, which can cause graver irreversible health ailments. What is of greater concern for us is that the study was conducted in the U.S., where pollution is nowhere as close to the appallingly high levels that Indian cities experience.

Another paper⁸ - by Leonardo Setti of the University of Bologna and his colleagues from universities of Bari, Milan and Trieste (first highlighted by the *Economist*⁹) - indicates that reducing air pollution may reduce the rate of infection from the SARS-CoV-2. In this study, Dr Setti and his associates found themselves wondering why (even allowing for time lags caused by its arrival in different places on different dates) SARS-CoV-2 seemed to spread much faster in Italy's north—specifically in the wide plain that forms the valley of the Po—than in other parts of the country. Their hypothesis? That the catalyst was pollution—specifically, small airborne particles that might carry the virus on their surfaces. These are usually far more abundant in the Po valley than elsewhere. In the paper, the researchers cited previous research that suggested that influenza viruses, respiratory syncytial viruses and measles viruses can all spread by hitching lifts on such micro-particles. And they make a good case

⁶ [New Research Links Air Pollution to Higher Coronavirus Death Rates](#)

⁷ [COVID-19 PM2.5](#)

⁸ [COVID19_Position Paper_Relazione circa l'effetto dell'inquinamento da particolato atmosferico e la diffusione di virus nella](#)

⁹ [Airborne particles may be assisting the spread of SARS-CoV-2](#)

that, allowing for a 14-day delay caused by SARS-CoV-2's incubation period, the daily rates of new infections in the Po valley correlate closely with the level of particulate pollution.

An alternative explanation for this correlation might be that, rather than carrying the virus themselves, airborne particles increase susceptibility to infection in those who encounter the pathogen by some other means. Either way, though, a reduction in airborne-particle levels may be a second way, independent of reduced human contact, in which lockdowns will help stop the virus from spreading. So, yes, reducing air pollution could be another way of reducing the spread of Covid-19, because not only are people living with poor air quality more susceptible to this disease, but also airborne particulate matter can potentially facilitate spreading the virus.

In addition to these studies, more research is emerging which proves that people living in highly polluted cities are likely to have compromised respiratory, cardiac and other systems and are therefore more vulnerable to Covid-19's impact.

A study¹⁰ that links higher Covid-19 morbidity and mortality to air pollution in northern Italy provides evidence that people living in an area with high levels of pollutants are more prone to developing chronic respiratory conditions that provide fertile ground to any infective agent. This study adds that prolonged exposure to air pollution leads to a chronic inflammatory stimulus, even in young and healthy subjects, and concludes that the high level of pollution in northern Italy should be considered an additional co-factor of the high level of mortality recorded in that area.

Evidence from older studies conducted during the SARS outbreak in China also validates this.

One study¹¹ by researchers at the UCLA's School of Public Health¹² showed that patients with SARS

¹⁰ [Can atmospheric pollution be considered a co-factor in extremely high level of SARS-CoV-2 lethality in Northern Italy?](#)

¹¹ [Air pollution and case fatality of SARS in the People's Republic of China: an ecologic study.](#)

¹² [SARS Death Rate Doubles In Polluted Cities](#)

were more than twice as likely to die from the disease if they came from areas of high pollution. The same seems true of Covid-19: the more dirty air you are exposed to, the sicker you are likely to get.¹³

In short, every day, emerging research shows new linkages between air pollution and respiratory viruses such as SARS-CoV-2, crocheting them together in a denser, tighter web. Covid-19 is a new disease, but recent research already show three direct interlinkages: i) that people are more likely to contract respiratory diseases like Covid if they live in polluted areas (because high levels of pollution lower the body's natural defences against airborne viruses); ii) that Covid will affect people more severely if they suffer from pre-existing pollution-triggered diseases (those with heart disease, asthma, chronic obstructive pulmonary disease and diabetes are more likely to get more severely ill, requiring intensive care and intubated ventilation - and thus more likely to die); and iii) that the current levels of air pollution that Covid patients are exposed to will add to the severity of the disease, leading to greater chances of hospitalization and death. A fourth interlinkage - that microparticulates act like tiny Ubers that SARS-CoV-2viruses hitch a ride on to proliferate the spread of the disease - is still in the process of being validated.

In India, Public Health Foundation India president Prof Srinath Reddy told BBC News¹⁴ "If air pollution has already damaged the airways and lung tissue, there is reduced reserve to cope with the onslaught of coronavirus." The same BBC report quoted Dr Maria Neira of the WHO as saying that countries with high pollution levels, many in Latin America, Africa and Asia, should ramp up their epidemic response preparations.

On 24 April 2020, the Centre for Research on Energy and Clean Air, registered in Finland, summed up existing research that validates these interlinkages in a compendium¹⁵ even as fresh research continued

¹³ [Q&A: A Harvard Expert on Environment and Health Discusses Possible Ties Between COVID and Climate](#)

¹⁴ [Air pollution linked to raised Covid-19 death risk](#)

¹⁵ [How air pollution worsens the COVID-19 pandemic](#)

to trickle in. Air pollution and Covid are interlinked in more ways than one, and the study of these connections remains dynamic - we are likely to discover even more as investigations pick up speed. Essentially, all emerging research points to air pollution being “one of the most important” contributors to Covid-19 deaths in four countries of Europe with nearly 80 per cent of Covid deaths in 66 administrative regions in France, Spain, Italy and Germany occurring in their most polluted regions.

Breathing – an involuntary, almost lyrical activity, critical to our very existence. Yet, as a race, we haven't cared much for what the air we breathe in contains. Chemical pollutants. Microbiological pollutants. Gaseous pollutants. Microparticulate solid pollutants.

Even venomously high levels of these haven't worried us enough to push firmly for change. As long as we were only dying gradually from the effects of these pollutants, as long as no one has been able to prove direct causality, we haven't much care. This, despite knowing that air pollution may compromise not just our lungs, but almost all our organs, because microparticulates like PM2.5 are so tiny that they enter our bloodstream, thus travelling to every organ and causing oxidative stress and inflammation, long considered important features of disease processes initiated by pollutants.

If genetics are the loaded gun, air pollution pulls the trigger on many diseases. In fact, if data scientists plotted an epi-curve¹⁶ similar to the one we are seeing for Covid-19 (the one we are being asked to help flatten by social distancing, staying indoors and the lockdown) they would find a naturally flatter killer curve for air pollution, but one that would cover a much larger area in terms of actual death. This would be even larger if disability and disease triggered by dirty air were added on.

All this, just by breathing.

¹⁶ <https://www.nytimes.com/article/flatten-curve-coronavirus.html>

Meanwhile, there is another brighter, more aesthetic connection between Covid-19 and air pollution. A silver lining, if you will. This one involves stopping the human race on its thoughtless tracks via lockdowns across air sheds, across geographical, political and social boundaries - and it is this.

We're suddenly seeing clear, blue skies, and breathing clean outdoor air, even in our densest cities and towns; experiencing hidden beauty - spectacular views which were always there, just shrouded in thick, unhealthy smog.

All at once, the air smells fresh, fragrant. Without micropollutants occluding its rays, sunlight dazzles. Birdsong is back. Animals, big and small, rare bird sightings, even fish - dolphin tales abound - all creatures which had retreated due to the relentless advance of man's economic progress and greed are returning to habitats they were forced to abandon as lockdowns cage humans, limiting their encroachments. Water bodies are turning blue again, rippling clean, without chemicals frothing at their edges, reflecting limpid, cerulean skies. The night sky has turned magical, with faraway stars glittering gloriously, their luminosity unhindered by a haze of pollutants. Across the earth people witnessed the 8 April supermoon, its pink luminescence clearly visible without any telescopic aid, glowing and smiling at an earth that looked like it was healing.

In India, especially, where 13 of the world's 20 most polluted cities by concentration of particulate matter are in the Indo-Gangetic plains, the near-complete lockdown has succeeded in lifting this malevolent shroud of polluted air.

More specifically, in north India, three weeks of lockdown cleaned the air enough for people in Jalandhar to see for the first time in 30 years the majestic snow-capped peaks of the Dhauladhar mountains, a part of the Himalayan range about 214 kilometres to the north. Astonished residents of this heavily industrialized and congested city took to social media, posting photographs and marveling

at the sight on 3 and 4 April.¹⁷ On 4 April, the district recorded an Air Quality Index (AQI) of 52 micrograms per cubic meters¹⁸, the best it has seen in the past decade, a Punjab Pollution Control Board (PPCB) official said.

As recently as 30 April, the dusty, mofussil town of Saharanpur in Uttar Pradesh's sugar and paper industry belt woke up to the breathtaking sight of the snowy Himalayan peaks of the revered Gangotri glacier over 200 km away as the AQI dipped below 50.¹⁹ (Incidentally, Saharanpur doesn't have its own air quality monitoring station and has to depend on Muzaffarnagar for it.) Like Jalandhar, stunned Saharanpur residents, an entire generation of which had simply grown up hearing stories of such views from their elders for whom this used to be a common sight, posted admiring pictures on social media. Pictures of the Kanchenjunga peak also emerged from Siliguri, West Bengal on May 1, as did an almost surreal photo of Mount Everest from Singhwahini village 205 km away in Bihar near the Indo-Nepal border, posted by the village gram panchayat mukhiya, Ritu Jaiswal on May 4²⁰, making these rare sightings almost commonplace.

Not just the polluted Indo-Gangetic plain, but also across the country others posted equally spectacular pictures and videos of clean lakes, chirping birds, clear, empty roads, postcard-blue skies, buzzing bees, bright green spaces and sparkling rivers, a regenerating planet coming delightfully alive to nature's divine orchestra and harmonious colours.

Along with revealing nature's obscured beauty that shimmered beneath, the coronavirus-induced lockdown has proven to even the most vocal deniers and disbelievers of air pollution's man-made origins that air pollution truly exists and it is almost completely anthropogenic in nature. These are the same people whose sceptical looks and raised eyebrows militate against the over 70,000 scientific studies that link dirty air with disease, disability and death, research that proves that air pollution

¹⁷ [People in India can see the Himalayas for the first time in 'decades,' as the lockdown eases air pollution](#)

¹⁸ [Jalandhar air quality best in a decade, AQI recorded at 52](#)

¹⁹ [Saharanpur wakes up to Himalayas, visible from town after 30 years as AQI dips below 50 | Meerut News](#)

²⁰ [‘Surreal’: Photo claiming Mt Everest visible from Bihar village goes viral](#)

affects every organ in the human body.²¹ The fact that they are in denial about the fact that breathing polluted air kills us faster, accelerating our inevitable demise, ironically doesn't exempt them from the health harm caused by air pollution. It can't be emphasized enough that, essentially, if you're not breathing clean air, you are dying faster.

Delhi's own pollution level on 22 March, when a day-long nation-wide curfew was imposed by Prime Minister Narendra Modi (nicknamed Janta curfew in an official document), came down by 44 per cent, compelling the Central Pollution Control Board (CPCB) to issue a 20-page report²² that documented significantly reduced air pollution in at least 85 cities across India in the very first week of the nationwide lockdown beginning March 24. The Press Trust of India (PTI) reported that 92 cities with CPCB monitoring centres recorded minimal air pollution.²³ Whatsapp groups of clean-air evangelists and activists tracking pollution traded PM2.5 numbers as low as 8 in some parts of Delhi, while some in Gurgaon said their low-cost sensors had captured a 1, sending a virtual cheer through the groups. The U.S. space agency National Aeronautics and Space Administration's (NASA's) satellite data showed that air pollution over northern India plummeted to a 20-year-low for this time of the year.²⁴ That the air quality of major urban centres dropped from near-apocalyptic levels before the pandemic to near-pristine in a matter of weeks demonstrates another important fact: that pollution is reversible, and that such a reversal can, in fact, be effected very quickly.

Admittedly, this unintended silver lining of clean, breathable air comes attached to the dark cloud of catastrophic economic, social and mental cost the lockdown has caused. People have been compelled to stay indoors, productivity has plummeted as factories have shut and services frozen. Daily-wage migrant labour has had to reverse-migrate to rural areas as families have slid back into poverty. Supply

²¹ [Revealed: air pollution may be damaging 'every organ in the body'](#)

²² <https://www.cpcb.nic.in/air/NCR/jantacurfew.pdf>

²³ [India's 90 Cities Record Minimal Air Pollution Due To COVID-19 Lockdown](#)

²⁴ [Air Pollution Levels In North India At "20-Year Low" Amid Lockdown: NASA](#)

chains have faltered as the Indian Railways, in an unprecedented move, for the first time in history, has stopped operations around the country. The massive impact on livelihoods and the global economy that these severe restrictions have brought about will likely take years to subside. The question is, however; how do we retain the silver lining even after the Covid-inspired dark cloud rolls away? The only way to sustainably reduce emissions is not through painful lockdowns, but by putting the right energy- and climate-related policies in place.

For those who rarely step out without N-95 or N-99 masks to protect themselves from microparticulate pollution, the irony of finally being able to breathe clean outdoor air without a mask but being forced to stay indoors because of the very lockdown that has cleaned the air isn't lost. For those who promote wearing masks mainly to make the invisible problem of air pollution visible, the SARS-CoV-2 virus has done more than decades of campaigning could have. Face masks are now ubiquitous.

Importantly, what this lockdown has also done is given air pollution researchers and data scientists an opportunity to monitor, record and parse how air pollution levels have responded to a situation of almost complete stoppage of economic activity and what we can learn from this for the future.

"This is a model scientific experiment," NASA scientist Robert Levy said about the lockdown and its effects on pollution in the same news report that noted lowest pollution levels in 20 years:²⁵ "We have a unique opportunity to learn how the atmosphere reacts to sharp and sudden reductions in emissions from certain sectors. This can help us separate how natural and human sources of aerosols affect the atmosphere."

"The reductions we have seen correspond to the cessation of vehicular traffic, construction activity, industrial activity and brick kiln operations, but for the first time we also have an opportunity to study India's background levels of PM and other gases, and the influence of meteorological factors," climate change media portal CarbonCopy quoted Dr Sagnik Dey, associate professor at the Centre for Atmospheric Sciences, IIT Delhi, as saying²⁶.

²⁵ [Air Pollution Levels In North India At "20-Year Low" Amid Lockdown: NASA](#)

²⁶ <https://carboncopy.info/newsletters/lockdown-improves-the-view-but-will-it-change-the-vision/#air-pollution>

Air pollution scientist and Care for Air adviser Dr Sarath Guttikunda, who runs 3-day pollution forecasts via his UrbanEmissions research group blog analysed measurements of individual pollutants that make up India's AQI on the first day of the extended period of the lockdown (15 April to 2 May 2020), to understand what caused these changes. Each of the pollutants has a unique story to tell, he writes²⁷ - local PM2.5 levels proving that at least 70% of pollution is locally generated, the dramatic fall in NO2 reflecting that its main source is vehicular exhaust, its sharp fall in turn allowing ozone levels to rise, since NOx "eats" Ozone....

But more than the blue skies and spectacular views, more than a chance to prove that pollution is anthropogenic and reversible or conduct model scientific experiments on interlinkages between air pollution and Covid-19, what the lockdown has proven beyond the shadow of a doubt is that, if the government truly has intent, it is fully capable of reducing air pollution in India by a large margin. From the recorded audio-messaging that played on every mobile phone before the ring-tone in the early days of the SARS-CoV-2 spread, to using technology and its enormous muscle to track and trace individuals all over the country, the Indian government has demonstrated that it has every tool in place and - with similar intent - is capable of not just spreading awareness, but also lowering emissions at source, encouraging behavioural changes and penalizing polluters at both the individual and industry levels.

The effectiveness of the government's measures on the Covid-19 public health disaster was validated by a recent telephone survey by India's NCAER National Data Innovation Center, which showed a high understanding of social distancing and support for the lockdown despite considerable hardships.²⁸ The government's use of science and evidence-backed information as the backbone, and mobile and

²⁷ [Data Analysis: How Has the Lockdown Changed the Pollution Over North India?](#)

²⁸ <https://indianexpress.com/article/opinion/columns/coronavirus-india-covid-19-lockdown-ncaer-social-distancing-sonalde-desai-santanu-pramanik-6369957/>

data technology as tools to spread awareness in a targeted way, made lockdowns more effective in India's model of democratic, decentralized governance. Going forward, these same tools can easily be used to tackle air pollution, especially now that we know that the lethality of dirty air can extend to communicable diseases like Covid-19, exacerbating its spread and severity.

But that will depend on the government's intention.

As the government prepares a stimulus package to reinvigorate a stalled economy, this is the time for all decision-makers - legislative, corporate, elective, political executive - to reimagine and redefine a greener and more sustainable path towards economic growth. This is the time to course-correct, to collectively grasp the opportunity of re-prioritizing the sort of growth and progress that is truly important for our nation and its people, one that is in harmony with our environment, rectifying earlier mistakes.

“The big question is whether government stimulus measures lead to pollution levels rebounding above the levels before the crisis, like it happened after the 2008 financial crisis,”²⁹ says Lauri Myllyvirta, lead analyst at CREA. The report quoting him in the Guardian also says that signs from China, which is coming out of the other side of the coronavirus outbreak and where lockdowns are loosening up, are not positive.. “For the first four weeks after the Chinese new year holiday in late January, when the coronavirus outbreak was at its worst, pollution levels fell 25% across the country. But since early March, levels of nitrogen dioxide pollution have begun to inch back up as the country gets back to work with factories, businesses and power plants re-opening and traffic returning...Indeed, the fear among environmentalists and residents is that, rather than attempting to maintain the low levels of pollution in the world's biggest capitals, when industry and cars kick back into action post-lockdown, the situation will go back to square one, and perhaps even worsen, as people and industry attempt to make up for the lost months,” it reports.

But thankfully, that may not be the only truth.

²⁹<https://www.theguardian.com/environment/2020/apr/11/positively-alpine-disbelief-air-pollution-falls-lockdown-coronavirus>

Europe, U.K., Japan and other enlightened cities and countries are making a push for a greener revival. Early opinion polls and pledges to dramatically reduce the footprints of cars by some of Europe's top city mayors suggest this time, it may be different. Public opinion in Britain appears to want a radical response to climate change, one implemented with the same urgency as that given to the fight against Covid-19. British research company Opinium recently polled 48 per cent of the public agreeing that the government should respond "with the same urgency to climate change as it has [to] Covid-19."³⁰ Already, Guiseppe Sala, the mayor of Milan has led a call for stimulus spending to navigate a more sustainable path towards economic growth as hard-hit Italian cities recover from the blow of the Covid-19 pandemic.³¹ "If designed properly, using shared knowledge and expertise from cities across the globe, these stimulus packages can foster resilience within our economic and financial systems, while also creating truly sustainable means of protecting public health, reducing inequality, and preserving the global ecosystems we all depend on," he said. Milan has also announced one of Europe's most ambitious schemes, reallocating street space from cars to cycling and walking, in response to the coronavirus crisis³².

Paris mayor Anne Hidalgo has been even more emphatic, vowing that returning to a Paris dominated by cars after lockdown ends 11 May is "out of the question".³³ Hidalgo has been leading a radical overhaul of the city's mobility culture since taking office in 2014 and sounds even more determined to maintain her anti-pollution and anti-congestion measures even as cities rethink transportation policies to avoid Covid-19 transmission. "I say in all firmness that it is out of the question that we allow ourselves to be invaded by cars, and by pollution. It will make the health crisis worse. Pollution is

³⁰<https://www.independent.co.uk/environment/climate-change/coronavirus-climate-crisis-uk-government-poll-environment-a9467371.html>

³¹ <https://news.trust.org/item/20200416100907-dhry9/>

³² <https://www.theguardian.com/world/2020/apr/21/milan-seeks-to-prevent-post-crisis-return-of-traffic-pollution>

³³ [Paris Has a Plan to Keep Cars Out After Lockdown](#)

already in itself a health crisis and a danger — and pollution joined up with coronavirus is a particularly dangerous cocktail,” she told the Paris City Council on 28 April.

Denmark and Holland, already criss-crossed by vast networks of bike lanes, are inspiring other European cities seeking to get their economies back on track after the devastation caused by the Covid-19 pandemic. Bike use is being encouraged as a way to avoid unsafe crowding on trains, buses and other shared public transport. Cycling activists from Germany to Peru are trying to use the moment to get more bike lanes or widen existing ones³⁴.

Japan has gone a step further, with its environment minister Koizumi Shinjiro reaffirming his country’s allegiance to the United Nation’s Paris agreement on climate change, promising a green recovery from the Covid pandemic with renewed focus on electric mobility and solar power.

“Now is the time to unite, to save lives, save the Paris agreement, and save our planet,” he said.³⁵

This is exactly the sort of environmental priority that Indian leadership, local, state and central, ought to be aiming for.

In fact, even before choosing a greener path, (and independent of the spread or containment of Covid-19) the first thing we must do is hold our government accountable to existing environmental norms. Unfortunately, even that doesn’t seem to be happening, as the Indian government, in its zeal to revive the economy, is proposing watering down its own environmental norms.

India cannot, under any circumstance, roll back on existing environmental protective measures. Civil society must ensure that the government does not use the pandemic as an excuse to relax hard-won rules and enforcements that lower emissions at source. Activists are already concerned about the government’s proposal to amend its Environmental Impact Assessment (EIA) notification during the course of the lockdown, when it won’t lend itself to adequate public scrutiny. At a time when we should be doing more to take care of the environment and strengthen environmental laws, the Ministry of Environment, Forests and Climate Change has released a draft EIA Notification 2020 that weakens its

³⁴ [Cycle power: Bikes emerge as a post-lockdown commuter option](#)

³⁵ [Japan_KOIZUMI_Shinjiro](#)

more stringent 2006 rules. It is open for comments from citizens only until 23 May, a narrow window right in the midst of the biggest pandemic we're witnessing, when people's engagement with it may be enervated, inert.

The EIA has far-reaching effects on India's forest and environment protection and current proposals include shortening timelines for environmental clearances, increasing validity of mining and riverbed related projects, and expanding the list of projects exempted from getting environmental clearances or no longer requiring public consultation. The proposed notification also suggests post-facto approval of projects³⁶ begun without environmental clearances, doing away with individual environmental clearances for projects within industrial complexes, all of which will only lead to poorer compliance and adherence to environmental standards. It also makes no mention of individual accountability, which will inevitably increase the chances of environmental violations and degradation.

A year-long investigation by IndiaSpend has revealed how India is ripping apart its environment for business, opening up wildlife sanctuaries and national parks to roads, railways, mines and industries by weakening its own regulations.³⁷ The report analyses data that shows India has approved over 270 projects in and around its most protected areas including biodiversity hotspots, in the six years since July 2014. "At the same time, the Centre has watered down environmental safeguards, prompting stakeholders to warn that such interference not only imperils habitat and ecosystems, but also endangers public health," the IndiaSpend analysis says.

The WHO has been warning for years that habitat destruction is changing the patterns of infectious diseases, including a growing number of zoonotic diseases like Covid-19. "The chance of coming in contact with zoonotic diseases increases when humans enter biodiversity hotspots," IndiaSpend warns.

Other more recent approvals too have been made in haste, disregarding environmental impact, like the April environmental clearances for infrastructure projects in 11 states that were hurried through via

³⁶ [Undemocratic Evasion of Environmental Responsibility](#)

³⁷ <https://www.article-14.com/post/how-india-is-ripping-apart-its-environment-for-business>

videoconferencing.³⁸ The usual route of direct meetings allows officials to scrutinize maps and locations, and clarify details in real time, but there has been no scope for such careful consideration in this decision. An environment ministry panel has also recommended an automatic extension³⁹ of forest clearance for government-owned mines, whose lease period got a 20-year extension. Perhaps the fact that India's environment minister also holds charge of the ministry of heavy industries and public enterprises may have something to do with this?

Even the courts have proved complicit - the Supreme Court recently extended the deadline for selling leftover stock of cars with BS-4 engines, which are more polluting than vehicles equipped with the cleaner BS-6 engines, and were to be phased out by March 31. The pandemic may have worsened the automobile sector's troubles in the midst of transitioning to stricter emission norms from 1 April this year, but that does not warrant that emission norms be relaxed.

Fears that this virus will make people perceive public transport as unsafe and cause a behavioural shift towards private vehicle ownership may counter falling demand to some extent, but the same fear will limit the demand for buses, trams and other public and shared mobility like Ubers. Instead, the pandemic should serve as a point to embark on a path to cleaner urban transport, whether private or public, bicycles or electric cars. The AQI numbers during lockdown, accompanied by clear blue skies make a compelling case for cleaner transport, and should finally settle the debate between electric mobility and conventional internal combustion engine vehicles. Struggling automakers are sure to make a strong case for an industry-specific fiscal stimulus despite the writing that has been on the wall for years. This is the time to choose an even faster transition to e-mobility and work out a plan to fund the re-skilling of workers towards the manufacturing of electric vehicles (EVs).

³⁸<https://www.thehindu.com/news/national/apex-wildlife-panel-holds-virtual-conference-clears-infra-projects/article31292163.ece>

³⁹<https://www.hindustantimes.com/india-news/covid-19-env-min-panel-for-automatic-extension-of-forest-clearance/story-e6W7xbhu5b16xidB855rHK.html>

At the same time, the government must accelerate the switch from thermal to renewable energy, especially as the latter continues to become relatively more economical. With the current demand for power at an all-time low, this is the best time to close down old thermal power plants that do not meet emission standards. Experts believe shutting down such plants would largely improve air quality. But the government's ongoing indecision has confounded activists and industry. Despite increasing evidence that coal continues to remain more expensive relative to renewables, the government continues to subsidize it. A report published by Carbon Tracker⁴⁰ in mid-April states that 51 per cent of the country's coal power costs more to run than building new renewables and that almost a quarter of the planned 66 GW thermal power capacity will enter the market with negative cash flow.

Now that everyone has experienced for themselves what clear blue skies look, feel and smell like, and how polluted areas could see higher additional deaths due to Covid-19⁴¹, there should be even greater motivation to find and implement solutions that keep emissions under control.

Campaigners and environmentalists are concerned about which way things will go. Will we slip back to old, polluting habits? Will we start burning more coal, buying more conventional cars, constructing more buildings, ploughing through our natural resources once again after the pandemic recedes because we have to revive the economy and catch up on our GDP targets? Or will we be able to course-correct, carve out a new normal where the air we breathe isn't taken for granted, and policies like the National Clean Air Programme (NCAP) are implemented successfully even while the government partners with industry to bring the economy back on track.⁴²

⁴⁰ [Countries to risk over \\$600 billion on dirty coal power post Covid-19 pandemic: Carbon Tracker](#)

⁴¹ <https://www.theguardian.com/environment/2020/apr/20/air-pollution-may-be-key-contributor-to-covid-19-deaths-study>

⁴² <https://www.ndtv.com/india-news/coronavirus-updates-indias-90-cities-record-minimal-air-pollution-due-to-covid-19-lockdown-2202486>

Coming back to the silver lining, the significant drop in pollution levels is now undeniable and visible for all to see, even the stolid naysayers. While the abrupt economic shutdown that it has taken to achieve this can never be a substitute for a concrete, thought-through plan to lower emissions from all sources, experiencing clean air, breathing, seeing and smelling it, should make it everyone's new, desirable aspiration. In fact, the Covid-19 pandemic demonstrates that the NCAP shouldn't just be seen as an environmental policy aimed at improving living conditions, but a mission of national importance aimed at improving public health and thus the overall productivity of the country.

Devising policies that stimulate robust economic activity while also coordinating real action to clean India's air won't be easy. This sort of sustainable growth path will require coordination between and within all the states, as well as several levels and agencies of the government and civil society. It will require mindful economic restructuring and thinking out of the box, incorporating the ideas of fairness and restorative and regenerative justice. If there's one lesson that the response to the Covid-19 pandemic has left us with, it is that even the most extreme measures fall firmly within the realms of possibility if they can inspire both political will and public support. Political will bends to public demand – and, henceforth, a more aware public is more likely to demand better healthcare, which includes cleaner air and water, along with economic growth.

Covid-19 has brought with it unprecedented threat to human existence and our lives, at once delicate as gossamer and strongly resilient. But it also presents an extraordinary opportunity, a chance to thrive, instead of merely survive. As we wait in this liminal bardo-like state between the earth's exhalation and inhalation, between the pre-corona and post-corona world, the past and the future, in collective, indefinite limbo for a rebirth into a new normal, we have a chance for a fresh awakening, re-calibrating to a better, fairer, more balanced world. Like the Zoom waiting room, our current bardo has forced us into contemplation, an invaluable gift, if we use it well, to listen to our inner voice.

The lockdown-caused blue skies have shown us that we may yet have another chance to repair the damage we have done to our environment. We must ensure that the growth path we choose this time is greener, fairer and more climate-friendly. It is imperative to choose sustainable development over pure economic growth. We cannot mortgage the future of our young. But if the young themselves don't make the right choices, voting with their wallets as well as their ballots, demanding to balance healthy profits with a healthy planet and healthy people, this second chance will be lost and future generations will be forced to pay the compounded price for past follies.

If we don't grasp this opportunity to reimagine growth, reset to a new normal, rebuild climate-smart, healthier and more equitable cities, and take a more sustainable path to growth, we will have lost our last chance to make amends with nature and be forever doomed to suffer ill-health and perhaps a final apocalypse, whether it is through nature's fury - earthquakes, floods, wildfires, famine - or an even more viciously virulent virus than SARS-CoV-2. And, this time, the poetry of our lungs, will become its own final requiem, just as it did for my mother.