



The Stories of the Great Smog of India

Interview with Siddharth Singh

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KENNEALLY: There are many stories about the air pollution that has enshrouded Delhi since last month. Most of those stories, though, repeat only the basic facts. In October, on an annual schedule, a blanket of smog covers the Indian capital. The contamination in the air from burning crops, fireworks set off for Diwali celebrations, and of course, automotive exhaust is extremely hazardous to the health of the nearly 30 million people who live in the metropolitan region. And the problem gets worse every year.

Welcome to Copyright Clearance Center's podcast series. I'm Christopher Kenneally for Beyond the Book. According to an estimate reported in Time magazine, breathing Delhi's polluted air for a single day is equivalent to smoking at least 25 cigarettes. Siddharth Singh, a columnist, author, and policy analyst for the International Energy Agency, has never smoked, yet he developed a serious smoker's cough just from living in Delhi. As he sought to understand his own ailment, Singh learned that more than 1 million people die every year in India from smog-related diseases. His personal story moved him to write *The Great Smog of India*, published a year ago by Penguin Random House.

As dangerous as the Delhi smog is for its citizens, Singh's book is – please pardon the image – a rare breath of fresh air. He has told only one story, though, and now he is urging his compatriots to take pens and keyboards to tell more stories, their own stories, about the Indian pollution crisis. Siddharth Singh joins me now from Delhi. Welcome to Beyond the Book, Siddharth.

SINGH: Thanks very much, Chris. Thanks for having me here. Although Delhi has absolutely terrible air today, it's an absolute pleasure to join you today.

KENNEALLY: Well, that is the problem, because Delhi has bad air almost every day. We hear about the crisis in air pollution in the region every year in October and November, but there's very rarely even a good day air quality-wise in Delhi.



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SINGH: That's absolutely true. In the last few years, we've only had a handful of really good clean air days. For the most part, the average pollutant levels remain quite high, and it becomes really bad at this time of the year, which is around the wintertime.

KENNEALLY: As we follow this story from outside of India, we wonder how everyone is coping with this problem. The politics and the policies are a personal issue for many people. It was a personal issue for you, because you developed a very serious cough from the air congestion. So this cough led you to begin to wonder what else was wrong, how others were suffering, and that opened the doors to this book that you worked on.

SINGH: Absolutely. In fact, moving on from my own personal story, I wanted to understand what the stories are of the people who are dying. The statistic of 1.2 million people dying every single year is quite staggering. But then the question are, who are these people? Where are they? What are their stories? Why aren't we hearing more about them? That was the human interest story that I wanted to explore. Of course, the book goes beyond this human interest story, and I talk about the history of our energy system, the history of our industry, the history of our agricultural economy, and how we actually got here. Why is 2019 worse than 2018? Those are the kind of the questions I wanted to eventually look at.

KENNEALLY: As for me, and I think for our audience, we're very interested in hearing your thoughts about those particular stories. I pursued this interview because we have done a series of interviews over time with Prashasti Rastogi in the German Book Office in Delhi and gotten to know her and imagined the people that we have spoken with confronting these problems and wonder how the publishing industry, how authors and book editors are responding. It surprised me to learn that your book, *The Great Smog of India*, was really the first of its kind.

SINGH: That's true, and that actually surprised me, too. In fact, I was personally looking for a book to understand the issue. I've been a researcher of energy and climate policies for the past almost 10 years now. I wanted to find an easy place for me to understand how we got here. I had access to a lot of reports, a lot of scientific journal articles. I personally knew the experts and the scientists who worked on various aspects of the issue, including particulate matter pollution, including physics and chemistries of batteries, including economists. I could have personal chats with them. I could read those journal articles. But through all of this, I really wanted one place, like one story that could put all of this together. I couldn't find that. And that, in fact, drove me to write this book.



KENNEALLY: So that is a really important start to all of this, but in your view, it is really only a start. What I think you are urging is to get beyond the typical headlines about the air quality in Delhi, and really across India, and to look at these various other types of stories, and there's just a really remarkable range of suggestions you have here, because you see that this is very much a layered story. Talk with us about some of those layers. This is a story of conflicts – conflicting business interests, conflicting political interests, interests that pit working people with the owners of industry, and so forth.

SINGH: Absolutely. It's a multilayered story. In my book, because it's the first of its kind, I had to talk about all the various sectors of the economy. I had to talk about all the various facets of human society. Therefore, I could not get into the depths of each of these layers, but in fact, there are so many stories.

Just as an example, in the year 2000, when the Supreme Court declared that some of the polluting industries will have to move out of Delhi into less-polluted, non-residential areas, it led to riots. The labor class, the workers of these particular industries who went onto the streets, obviously they were egged upon by the owners of these industries. But eventually there was violence, because people did not want these polluting industries to leave their own neighborhoods. While air pollution may have been bad, the loss of jobs, the loss of their livelihoods, was even worse.

These are the kind of fractures, these are the kind of conflicts, that we see in various aspects of India's fight against air pollution – and not just air pollution, also water pollution, also soil pollution. But these stories have not been told in the manner that they should be. There have been some media reporting on the issues. But to form a comprehensive narrative to understand where these fractures come from, how we can overcome them, what the history of these fractures are, those are the kind of stories we need to hear more about.

KENNEALLY: It's a story of industrial pollution, but there is a really important aspect to this which concerns agriculture – agricultural policy, the practices of farmers. So this isn't just an issue of polluting automobiles, but it is also a problem of the way that farmers practice farming.

SINGH: Absolutely. At the heart of this story is how the farming practices, especially in the states of Punjab and Haryana, which are states to the northwest of India – how these practices have led to a situation where every year in October and November,



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millions of farmers end up burning agricultural residue. Now, it may seem like burning agricultural residue is a practice that has been going around for hundreds of years, but that's not the case. It's only a story that started about a few decades ago – handful of decades, perhaps less than four or five decades. This happened primarily because of India's own need to be secure when it comes to its food supply. We had a situation only until the 1970s when India used to rely on food aid. Now, India's a food surplus country.

So what were the choices that led us to the situation we are in today? There's an overarching government policy called the Green Revolution. The Green Revolution did a lot of things for the Indian agricultural economy. Obviously, it made India food-secure also. But along with it came several other aspects and several other practices that has made agriculture in India less sustainable. That is the story of Indian agriculture, and I don't think it's been told in this form just yet. There's a book to be written about this. My hope is that somebody takes up this challenging task soon.

KENNEALLY: Indeed. So politics and policy is so important to this story, Siddharth Singh. The Indian government plays a tremendous role in all aspects of the economy in India. The legislation that gets passed, the policies that get made in Delhi, they have an impact, as well.

SINGH: Absolutely. It's a story that we see play out year after year. There are several major states in this part of the country where pollutants originate from, and the policies of these respective states influence the economies and influence the pollutants from these states. Obviously, there are no political boundaries that are respected by the winds, so you find that pollutants travel from state to state, impacting people much beyond their legislations – or much beyond their jurisdictions.

So in this situation, we see the chief ministers or the heads of the governments of these respective states called out every year in the media. We have a situation where there's a to and fro between the central government and the state government. We have a situation where in local political elections, some states talk about the issue, and others completely ignore it. And in the midst of all of this politics is how the administration responds to the issue. Every government institution, be it a small agency, a small municipal corporation, or a huge ministry, they all have only a small role to play in the larger problem. What we really need is someone or something – some institution that can bring together all of these little agencies and ministries, all of these politicians, into a single platform to talk about the issue.



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Unfortunately, that has not happened. What we really need is a Paris agreement, but for air pollution in India. That is the challenge that politics of the country faces.

KENNEALLY: Well, you yourself are an energy analyst. You understand that particular sector of the economy especially well. How does India generate power, and how does that matter to the pollution problem?

SINGH: Power generation in India is at the heart of India's air pollution problems. Of course, when India became independent, less than 10% of India's households had access to electricity. India had to electrify its populations and its villages very rapidly. So we went to whatever was available to us in the most inexpensive and most cheapest and most abundant form, and that was coal. So India's power generation largely comes from coal today, and this coal is obviously highly polluting. In fact, there are technologies that could make coal less polluting, but we are not even able to afford that because of the nature of India's power political economy.

For these reasons, we have been locked into a situation of high air pollution and low costs. We will need to find a way around this problem while still ensuring access to the people. Remember that India finally got to a situation of universal power access only in the year 2019, and most of the households still don't have appliances beyond a single light bulb and a charging point or something of that nature.

So the big challenge for India now is how do we ensure that every household has access to, for example, cooling or heating or other forms of energy which is taken for granted in much of the world, while still ensuring that we don't pollute? That is the key energy challenge. Again, it's an issue that has not been written about enough, so we would love to see a story around how India can decarbonize its future electricity supply.

KENNEALLY: Well, if it's a story, we always wonder, of course, how this story will end. I guess I have to ask you in conclusion, Siddharth Singh, about whether you think there's potential for a happy ending here. I happen to be speaking to you today from Los Angeles, just a week or so after the height of the fires that blanketed this city with a dark shroud of smog of its own. Around the world, nations, communities, are concerned about the future. There's a sense that things are not going very well here on this planet. Do you think that in Delhi, there's an opportunity to rescue the city, to rescue the citizens from this pollution? Or are they, if you will, condemned by it?



SINGH: I'm pretty hopeful about the situation. Although air pollution has been increasing year after year, there are certain sectors and certain activities which we have been able to decarbonize, which we have been able to clean up. Those stories are the success stories that we need to replicate across the economy.

To give you a couple of examples, although stubble burning is a huge problem, and it has been growing, one of the states involved in this problem, the state of Haryana, has been able to substantially reduce agricultural fires this year. They did it by a mix of innovative government policies and public awareness campaigns.

Similarly, take the case of electricity. In India, we were able to ensure over 30 million LED bulbs replaced older incandescent bulbs. This has led to a situation where we have reduced emissions the equivalent of 1.5 million cars every year.

So my point is that when we see successes across several of these subsectors of the economy, we see how it is possible to decarbonize and to clean up our air. My hope is that somebody's able to bring together all these success stories and replicate it in other sectors of the economy.

KENNEALLY: Siddharth Singh, author of *The Great Smog of India*, thank you for joining me today on *Beyond the Book*.

SINGH: Thanks very much for having me, Chris.

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