



Under the Dome

Investigating China's Smog

2015 • Running time 103 minutes • Directed by Chai Jing

See also: *Under the Dome- Excerpts* • Running time 25 minutes

Reporter Chai Jing's landmark film, *Under the Dome*, investigates the sources and impact of China's deadly smog. During her yearlong research for this self-financed film, Chai also visited London and Los Angeles to see how other countries have reduced air pollution through a combination of technology and law enforcement. China's efforts, Chai argues, are hampered by weak laws, lax enforcement, over-reliance on coal, corruption, industries that set their own pollution standards, and a disempowered population.

Initially supported by senior officials in the Ministry of Environment, the documentary was viewed online by an estimated 200 to 300 million people across the Chinese-speaking world in a single week before it was censored.

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Under the Dome: Investigating China's Smog



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***“For three days
straight, it was the only
topic on China’s social
media platforms.”***

—Yuan Ren, The Guardian

WHY I SELECTED THIS FILM

Under the Dome is in many ways a unique production. It is at once a personal story and a report of investigative journalism, a TED-style speech and a documentary film, a stark reminder of environmental reality and an emotional call to action. Its release in February 2015 triggered a tsunami of reactions in China. The then-minister of environmental protection, Chen Jining, publicly acknowledged the film, sending Chai a text message to thank her for “the admirable work” of raising environmental awareness. Chen Jining even compared the film to Rachel Carson’s *Silent Spring*.

However, less than a week after the film’s release, the Party’s propaganda department ordered that it be completely purged from the Chinese internet. Thus, *Under the Dome* demonstrates the impact a film could have in invigorating a nationwide environmental dialogue, but it also illustrates the real-world political challenges to environmental action in China.

The film is valuable for teaching because of the content of the film itself, as well as the broader context under which it was received and censored. The content of the film could be especially useful for classes in environmental journalism or science communications. Many features of the film are worthy of discussion: its use of personal vignettes, visualization of environmental data, animated presentation of information, and selective interpretation of specialized jargon, among others. While these techniques help produce a powerful narrative, some of them raise questions about journalistic ethics.

At the same time, the social and political contexts of the film’s reception provide a richly teachable moment for classes in environmental politics, contemporary China, or development and environment. With its rising middle class, tightened political control, and growing global footprint, contemporary China carries unusual weight for environmental social sciences. The film’s reception in China, including the public outcry it provoked, the censorship it endured, the awareness it fostered, and the information it disseminated, provides ample fodder for students of China and of the global environment.

SUGGESTED SUBJECT AREAS

Contemporary China	Environmental Sociology
Development	Global Environmental Politics
Environmental Governance	Journalism
Environmental Politics	Social Movements

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Environmental injustice does not just “happen”; it is the cumulative product of regulatory failure, fossil fuel monopoly, bureaucratic neglect, and a host of other structural conditions.

SYNOPSIS

Investigating smog

Reporter Chai Jing's landmark film, *Under the Dome*, investigates the sources and impact of China's deadly smog. During her yearlong research for this self-financed film, Chai also visited London and Los Angeles to see how these cities have reduced emissions through a combination of technology and strong enforcement. China's efforts, Chai argues, are hampered by weak laws, lax enforcement, over-reliance on coal, corruption, industries that set their own pollution standards, and a disempowered population.

In one example, Chai and a government inspector visit a steel producer in Hebei province and document excess levels of pollutants. Fines are levied, but months later the company has yet to pay. A provincial official explains to Chai that it is not possible to shut down such factories and sacrifice employment for the sake of the environment.

A call to action

In her conclusion, Chai urges individuals to take responsibility. She visits a construction site, a restaurant, and a gas station and persuades the people there to curb dust, gas fumes, and soot. She says, "This is how history is made. Millions and millions of ordinary citizens one day will stand up and shout, 'No, I'm not satisfied...I will do something this moment. Right now. Right here.'"

THE ENVIRONMENTAL JUSTICE FOCUS OF THIS FILM

The burden of harm

Under the Dome raises environmental justice questions on a number of fronts. First, certain places in China bear a disproportionately heavy burden of environmental harm. An unnamed little girl from rural China appeared twice in the film. When she was interviewed in 2004, she couldn't recall seeing much blue sky. Ten years later, she reached out to Chai because a nearby factory threatened to tear down her home, which stood in the way of the factory's expansion plans. Faced with the potential loss of shelter, the girl did not consider pollution and its health implications to be much of a concern any more. In many ways, the girl's experience illustrates the environmental predicament in much of rural China. Some places are dubbed "cancer villages" because of the high rates of cancer among villagers due to their exposure to toxic substances from industrial activities such as mining. (See Additional Resources below.) The film helps us recognize that domestic environmental injustice does not just "happen"; it is the cumulative product of regulatory failure, fossil fuel monopoly, bureaucratic neglect, and a host of other structural conditions.

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A global issue

Second, *Under the Dome* raises major questions about international environmental justice. The film makes many references to the Great Smog of London, air pollution in Los Angeles, and other noteworthy incidents of pollution and cleanup in modern world history. The underlying implication is twofold: that China's current experience with pollution is part of a normal growth path from dirty to clean development, and that China could draw lessons from tales of the past, thereby "leapfrogging" into an era of sustainability.

As China's top economic planning official, Xie Zhenhua, suggests in the interview with Chai, China could "substantially shorten the time" it takes to clean up the environment thanks to past experience from places like London and Los Angeles. However, that is a question rather than a fact. What Xie and Chai both miss is the global transfer of polluting industries from the West to the rest of the world. By the same token, the Chinese economic "miracle" has been contingent on the country's being the world's factory, which comes with both economic opportunities and environmental challenges.

For generations to come

Third, the question of intergenerational environmental justice looms large. Toward the end of the film, Chai gives a nostalgic account of the not-so-distant past. It was a romantic picture of Beijing: the blue sky, the pristine river, and the clear view of the mountains from afar. This nostalgic imagery is presented in stark contrast to what the next generation will most likely grow up with. Ending with an emotional punch, which is illustrated with the blue marble view of planet Earth, *Under the Dome* calls for planetary stewardship for all future generations to flourish.

Curiously, despite how all these different dimensions of environmental injustice are present in the film, the narrative places disproportionately heavy emphasis on the issue of intergenerational injustice. Chai Jing's personal story of her newborn daughter, which is a consistent thread throughout the film, resonates most powerfully with the audience in China. With the rise of the middle class, today's Chinese parents spare no effort to send their children to the best schools in the region, indulge them with the latest gadgets in the market, and feed them the most exotic foods in the world. *Under the Dome* issues a wake-up call to the rising middle class, cautioning them that the well-being of the next generation is threatened by a much bigger threat: pollution. It suggests that the harm of pollution could easily undo years, if not decades, of Chinese parents' hard work to provide better prospects for the next generation.



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An inconvenient truth

But the rising middle class is also inextricably linked to other dimensions of environmental injustice. China's consumer economy is what drives the burning of dirty coal in factories and the discharge of toxic water into rivers. The rising middle class is what undergirds China's increasing appetite for global commodities, from rare earth metals to red meat. Even when the film touches on automobile driving and its resultant pollution, the narrative quickly shifts away from private vehicles toward diesel-powered semitrailer trucks. The Chinese urban middle class is, in the larger scheme of things, both the victim and the perpetrator of environmental injustice. The film shies away from explicitly acknowledging such an inconvenient truth. Viewers of this film will benefit from fully interrogating the multidimensional problem of environmental justice.

BACKGROUND

How a reporter's story caused a sensation

Film director Chai Jing is a former reporter for China Central Television (CCTV). *Under the Dome*, financed by the director at an estimated cost of US\$160,000, was the product of a yearlong investigation into the sources and impact of worsening smog in China. The film was motivated, Chai has said, by the discovery that her daughter had developed a tumor in utero, which Chai believes was caused by pollution. (The tumor was removed after the birth and her daughter survived.)

The film was originally released online on February 28, 2015, by *People's Daily*, the official newspaper of the Communist Party, and on major video-streaming websites. The response was immediate. An estimated 200 to 300 million viewers watched the film online in the first few days.

In the following [interview with Chai Jing](#), published by *People's Daily* (PD) when the film was released, Chai called for a national campaign to clean up the environment. A few days later, the film was censored and removed from websites.

PD: When you left CCTV, why did you choose smog as a topic to focus on?

Chai Jing (CJ): This was not a planned project. At the time, my child was sick, and I wanted to spend some time with her and take care of her after I quit my job. I declined all job offers. While I was taking care of her, my feelings about the smog became more and more intense; my whole life was affected by it. Also, all of society was becoming more concerned about air pollution. Professional training and the instinct of a mother made me think

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it was necessary to answer these questions: What is smog? Where did it come from? What should we do about it? So I did this investigation.

PD: How did you think of making this public?

CJ: At first, I didn't. I just searched for sources on my own and asked experts, hoping to solve some puzzles. I retrieved satellite pictures of North China taken over the past 10 years. I could see that air pollution had existed for a long time. I live in Beijing, so why wasn't I aware of that?...As a member of the media, I feel deeply responsible, because I was in Beijing yet I felt nothing. I had done a number of reports on pollution, and I always felt as though pollution exists only when you see a chimney or a factory or a mine. So I was living in a big city and feeling nothing. Everyone learns out of ignorance.

Now that I am aware of it, as a member of the media, I have the responsibility to explain it to everyone. Not to sensationalize, not to dodge, but just to explain as clearly as possible. Because if people underestimate the difficulty and complexity of controlling pollution, they may lose patience and feel hopeless. If people treat the problem too lightly and leave it the way it is, that is even more unacceptable.

So if we explain the situation as clearly as possible, publicly, perhaps many people will change, as I did, and contribute something to improve air quality...China has promised to reach its peak carbon emissions around 2030. Now that the peak is set, we must aim in the direction of a green, low-carbon, circular economy and not continue down the road of GDP worship. A nationwide management system, energy strategy, and industrial structure will lead to change, which will hugely impact the lives of the common people.

"After a week of passionate public discourse over the film, the central propaganda department told websites to remove it."

—New York Times

KEY LOCATIONS AND PEOPLE

Beijing, China, and Hebei, Shanxi, and Jiangsu provinces

London, England, U.K., and Wales

Los Angeles, California, and the United States

Chai Jing – former reporter, China Central Television

Ed Davey – member of Parliament and U.K. secretary of state for energy and climate change

Fan Bi – deputy director general, State Council Research Office

Li Junfeng – director general for climate change, National Development and Reform Commission (NDRC)

Cao Xianghong – former chief engineer, Sinopec



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Rachel Carson (in passing) – author of *Silent Spring*

Tang Xiaoyan – professor, Peking University

Li Kungsheng – Beijing director, Vehicle Emissions Center

Wang Yuesi – researcher, Institute of Atmospheric Physics

Chen Zhiming – researcher, Hisun Biomaterials

Xie Zhenhua – deputy chief, NDRC

FILM CHAPTERS OR SEQUENCES

Highlighted sections are included in the selected excerpts

00:00	Introduction to smog Chai Jing describes the extent of smog in China and her concerns for the health of her child.
06:00	What is haze? Discussion of PM 2.5 (particulate matter with a diameter of 2.5 microns or less) and chemicals in smog and their impact on health. An animation is used to illustrate the action of black carbon.
12:30	Mortality rates due to pollution Impact of smog on the elderly and children; impact is cumulative. Surgeons remove a tumor.
17:30	Growth of the problem Satellite views and archival footage since 1980 show an increase of pollution over time. The increase in small particles poses a great health risk.
22:35	Sources of smog: coal A microscope reveals a variety of pollutants that increased globally from burning coal. Wales, a source of coal, suffered from smog. Archival footage shows the severity of smog. Crises lead to controls internationally, but Chinese consumption grows.
29:00	Documenting air quality in industrial regions; pointing out role and frequency of coal-fired power plants, the varying quality of coal burned, and the impact of ash and sulfur dioxide. Personal stories describe the impact on families.
39:00	Oil and gas Pollution from cars grows. Bike lanes in Beijing are not respected. Diesel trucks are a major problem. Inspections show pollution controls are missing and papers falsified. Ninety percent of trucks are missing equipment. Manufacturers fail to install equipment. Failure to enforce leads to counterfeiting in order to remain competitive.
48:50	Fuel quality is poor. Government fails to impose higher standards. Why does the petrochemical industry get to establish standards? Who sets standards in other countries? A brief history on the setting of fuel prices and standards in China.
58:00	Freighters in port or near shore produce as much pollution as half a million trucks. Sixty percent of the sulfur dioxide in Shenzhen comes from ships; planes also contribute. Undercover reporters investigate environmental compliance at diesel gas stations.
1:01:30	Subsidizing dirty industry A collage of comments by plant owners operating illegally and officials who fail to act. Chai Jing describes the money saved by polluters, calculates the cost of making a ton of steel, and questions government subsidies for polluting industries.

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1:07:45	A young girl contacts Chai Jing about the destruction of her home to make way for the expansion of a chemical plant. The same girl had been interviewed a decade earlier, when she said she had never seen stars or white clouds. Expansion of the plant is delayed as owner was taken away by the anti-corruption squad.
1:08:30	Urbanization is changing China. Eighty villages a day disappear. A construction collage shows rapid change in Chai's hometown from rural to urban. Overbuilding is wasteful and destructive. Twenty to 30 percent of the units sit empty. Chai checks into an allegedly five-star hotel that has no lights and no guests. A collage shows rapid and unsustainable urban growth.
1:14:30	How to reduce smog: cleaner transportation Beijing once had blue skies. An official says it will take time, pointing to the Great Smog in London during the 1950s. Chai counters with the example of Los Angeles, which has similarities to Beijing. Despite growth in traffic, emissions have been greatly reduced. Laws are enforced to a greater degree. U.S. pollution controls were contested by domestic automakers, who then lost half the market to imported cars.
1:23:25	Reduce coal; use natural gas As seen in archival footage, pollution in London dropped 80 percent in the first 10 years following regulation. Natural gas is promising. But monopolies and corruption are impediments to achieving clean air and energy security.
1:29:50	What can people do? Data sharing is promising. Chai shows an onscreen phone app as an example of citizens exposing polluters. (See Lifting the Veil on Polluters in China, also in this collection, for more information.) The revised Environmental Protection Act will allow environmental groups to sue polluters. An animation from Friends of Nature suggests "things you can do." Chai provides examples, reporting a construction site for dust, a restaurant for oil fumes, and a gas station for gas fumes.
1:38 40	Taking action feels good. Movements are built on the actions of people. A collage reviews the problems of and efforts in creating global change. Included are brief clips of Ma Jun (IPE.org), global activism, and protests against the Canadian tar sands.
	Chai concludes with remarks about her daughter and a message: we must protect the planet as we protect our children.
1:43:05	Credits End, 1:43:57.

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**China added
800,000 cars
in 2010 alone.**

DISCUSSION QUESTIONS

1. What are the greatest obstacles to reducing smog in China? How have other countries dealt with similar problems?
2. What are the constituent elements of smog, and how do they affect human health?
3. What are the similarities and differences between air pollution in today's China and during the Great Smog of London? What is the significance of the Great Smog of London in Chai Jing's overall narrative?
4. Is it possible to have economic development and environmental sustainability at the same time? What are some of the contradictions? What are the policy implications?
5. What is the significance of Chai Jing's personal story about her newborn daughter? What are the pros and cons of using personal vignettes in journalistic reporting? In environmental advocacy?
6. What episodes of environmental (in)justice do you recall from the film? What would it take to restore environmental justice in each of these instances?
7. Why do you think *Under the Dome* was censored in China? What could have happened had it not been censored?
8. What role should scientists play in environmental policymaking in China and elsewhere? How can scientific information be effectively used in environmental advocacy? What are some of the challenges in China? In your home country?

SELECTED EXCERPTS

Where time is short, three selected excerpts with a total running time of 25 minutes may be assigned for viewing out of class or screened in class. In these clips Chai Jing first documents the pollution emitted by cars and trucks and the government's failure to regulate the industry. She then asks what would have to change, to bring back blue skies over Beijing? How can individuals contribute? She concludes with a broad call to action to control pollution in order to protect the health of current and future generations.

Edited excerpts available for screening

See the video: Under the Dome- Excerpts • Running time 25 minutes

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QUESTIONS RELATED TO THE EXCERPTS

1. Who benefits from the services provided by diesel-burning trucks?
Who loses?
2. How has China's air pollution affected neighboring countries?
What are their responses?
3. What are individual citizens doing in China to cope with pollution?
What are the limits to individual action?

ACTIVITIES

1. Research the place of *Under the Dome* in the history of documentaries in China. You could start with this article in *Senses of Cinema*: [“300 million clicks: Under the Dome and the Chinese documentary context.”](#)
2. View two additional films in the Global Environmental Justice collection that show the impact of (activist) documentaries on public education and debate. How does the making and showing of Chai Jing's film compare to Wang Jiuliang's *Beijing Besieged by Waste* or Shi Lihong's short film *Voice of an Angry River*, which forms part of Gary Marcuse's film *Waking the Green Tiger*? Report back to the class using examples from several films.
3. Who “owns” China's pollution? View a short documentary in this collection titled *Lifting the Veil on Polluters in China*. Are other countries cleaner because they export their polluting industries to China and Southeast Asia? Should these countries—or companies—be held accountable for cleaning up China's smog? If so, how could this be accomplished? How is this an issue of environmental justice?
4. Research the response to the documentary and describe its reception by government officials, industry, and the [stock market](#) in China. Start with this [New York Times article](#) and the references cited in this [Wikipedia entry](#). Form an opinion on why it was censored and report to the class.
5. Explore the role of censorship of the media in China over time. How has it evolved in response to social media?
6. Research how the people of California dealt with the air pollution caused by wildfires. What are the similarities and differences between fire-triggered air pollution in California and the air pollution of China?
7. Explore air quality index (AQI) data on the website of the United States Embassy in Beijing. How has Beijing's air quality changed over time? How do Beijing's AQI readings compare with the World Health Organization's air quality guideline? How do they compare with those of other developing countries? Of your hometown?
8. Would you choose to wear a face mask if the air were polluted outside? Why or why not?

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ADDITIONAL RESOURCES

[China's Cancer Villages on Google Maps](#)

Kahn, Matthew E. and Siqi Zheng. 2016. *Blue Skies Over Beijing: Economic Growth and the Environment in China*. Princeton University Press.

Liu, Chung-En. 2018. "Understanding China's Environmental Challenges: Lessons From Documentaries." *Journal of Environmental Studies and Sciences*.

Lora-Wainwright, Anna. 2017. *Resigned Activism: Living With Pollution in Rural China*. MIT Press.

Pellow, David Naguib. 2007. *Resisting Global Toxics: Transnational Movements for Environmental Justice*. MIT Press.

