



DAVID BREASHEARS

PHOTO ESSAY

From the Mines to the Glaciers

Coal energy fired China's explosive growth. But its emissions contributed to the melting of Himalayan ice. In photographs from a new exhibit, a picture speaks a billion words.

SUSAN MEISELAS & PHOTOGRAPHERS — FEBRUARY 15, 2024

ENVIRONMENT



Coal powered the Industrial Revolution. Coal fueled China's rise. But coal has also emitted the lion's share of carbon dioxide into the world's atmosphere, triggering what we now know as climate change. Despite efforts to pivot to sustainable energy, China still builds [six times](#) more new coal plants than all other nations combined.

The below photo essay is adapted from [COAL+ICE](#), an immersive photography and video exhibition at Asia Society in New York, which opened on Tuesday, and previous [iterations](#) of the exhibit. It traces a photographic arc from deep within Chinese coal mines to the melting glaciers of the greater Himalaya, by way of greenhouse-gas emitting factories. Through intimate portraits and vast altered landscapes, these photographs document the consequences triggered by our continued reliance on fossil fuels, and bring to life the environmental and human costs of climate change.

Curated by Magnum photographer Susan Meiselas and Dutch designer Jeroen de Vries, COAL+ICE was first developed by Asia Society's Center on U.S.-China Relations (co-publishers of the *China Books Review*) for exhibition at Three Shadows Photography Art Center in Beijing in 2011. The exhibition traveled across China, and was on display at the U.S. Ambassador's Residence in Paris during COP 21, then during the Global Climate Action Summit of 2018 at Fort Mason in San Francisco, and at the Kennedy Center in Washington, D.C., before coming to Asia Society.

We hope that you find the text and photographs both edifying and provoking.

— *The Editors*

Curator's introduction

Over the last decades, as the world looked to China as a producer of goods for the global market, the nation increased its demand for energy and, in turn, its dependency on coal. Our need for products is insatiable, but we rarely think about the consequences of our consumption. The world is ever-more interconnected, and our choices have a significant impact — regardless of whether it is visible to us now — on the global environment. Nowhere is this dynamic of cause and effect more evident than in the effect that the burning of coal has on climate change.

These are some of the issues that Orville Schell and I were thinking about as we set out on a road trip through Shanxi province, the heart of Chinese coal country, in the fall of 2006. We knew that we wanted to do a project together on the role of coal in China's economic development. Our original concept was simple: Orville would write and I would take photographs. Yet the journey surprisingly evolved into a series of COAL+ICE [exhibits](#).

In Shanxi, I felt that it was more important and appropriate to feature Chinese photographers than to make images of my own. I felt strongly that this story should be framed by Chinese rather than Western perspective. My hope was to uncover Chinese documentary photographers who had produced work over the last 30 years throughout China, finding historical and contemporary images that revealed conditions in both small and modern mines, honoring miners, that also captured the impact of coal mining on miners' lives and communities.

As we explored, I was impressed to find exceptional work by many highly committed photographers. Song Chao, who had worked as a miner himself, had taken a series of portraits in Shandong province that were already quite well known. Geng Yunsheng had done an extensive documentary essay on life in a small mining community in Yunnan province. Niu Guozheng focused on coal mining in his hometown in Henan province, all while working as a local police officer. Yu Haibo, who was shooting for a regional newspaper, proposed to do a series of portraits of miners with their families in Henan province.

Their images, and others', depicted work in Chinese coal mines and the lives of miners, but they also focused on the environmental impact of coal-powered plants, stressing the enormous demand for energy in China to power its growth and meet the world's consumption desires.

Meanwhile, Orville was also becoming deeply interested in the relationship between climate change and the fate of the glaciers throughout the Greater Himalaya. In the summer of 2007, his friend David Breashears, a photographer known for summiting Mount Everest five times, began to document melting glaciers. A collector of historical mountaineering photography, Breashears was familiar with the photographs that George Mallory had taken during a series of British expeditions to Everest in the 1920s. He climbed to the exact vantage points where Mallory had stood to take precisely matched images of Himalayan glaciers. His photographs show a dramatic loss of glacial ice mass and document the melt rate of this delicate high-altitude environment.

As these two parallel photography projects moved toward, we began to envision how they were connected in a "climate change arc" from coal mines around the world to the greenhouse gases polluting our atmosphere, by way of the factories that emit those fumes — warming our planet, melting our ice, and disturbing rivers and hydrological patterns downstream along Asia's great rivers.

This evolving exhibit has no intention to be authoritative, nor does it attempt to touch on every aspect of the coal industry and its impact on our daily lives or on the environment. It is an artistic initiative, not a scientific one. Its ambition to visualize climate change is ultimately to create a forum for an ongoing public dialogue about an immensely complex global problem at a critical moment in time. It is as urgent now as ever.

— *Susan Meiselas, adapted from COAL+ICE (Asia Society Center on US-China Relations, 2012)*

“ In recognizing that policy alone could not solve this crisis, we began

asking, how else can we go at this problem? One way was visually. If we could present something that was telling at the same time as beautiful, then maybe we could get people to look.

”

— Orville Schell

Part I: The Mines

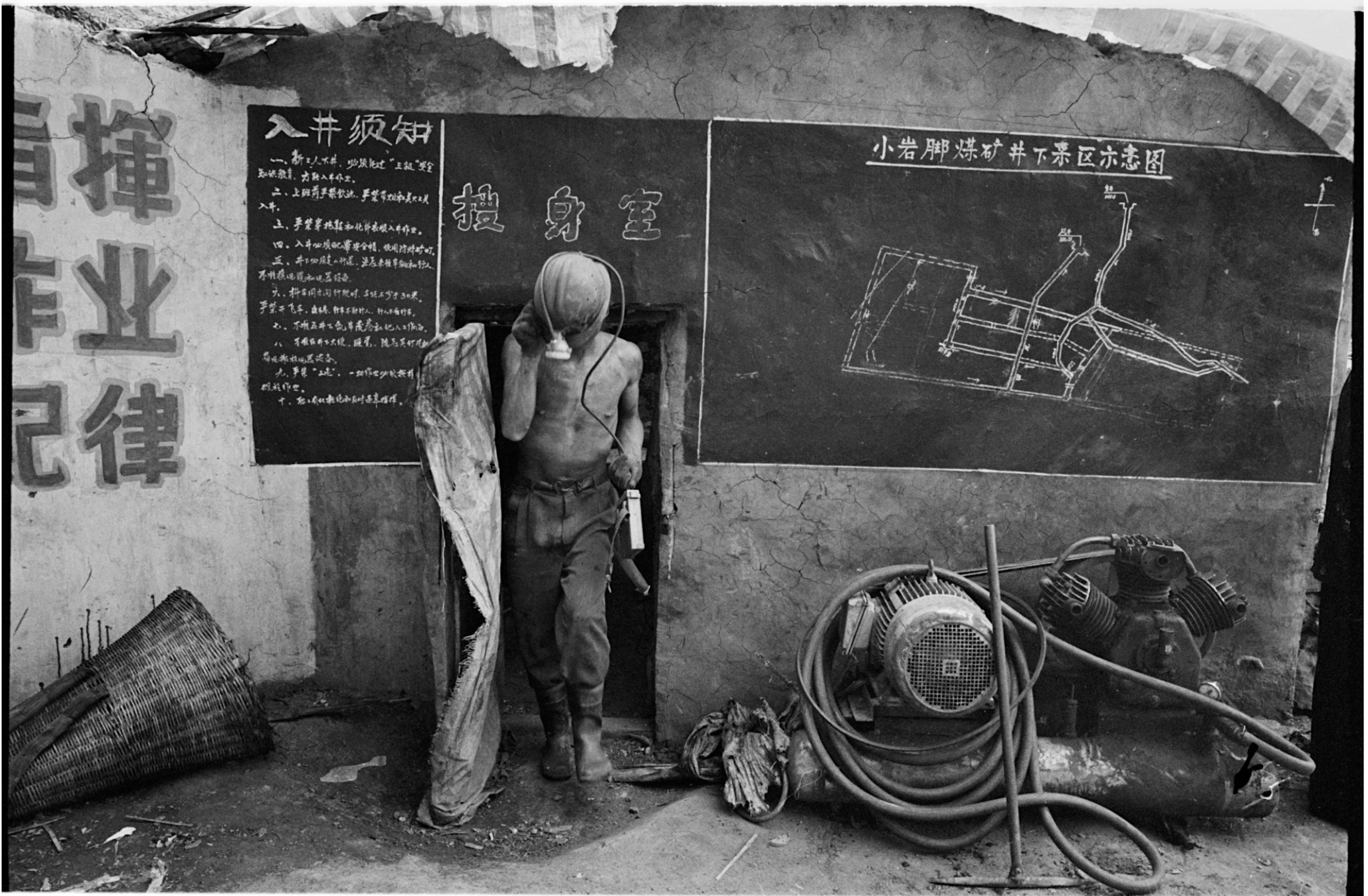
Coal miners have been photographed through the ages as both industrial heroes and *les damnés de la terre* (“the damned of the earth”). These images reflect China’s complex relationship to coal, throughout the decades: the country’s reliance on it to fuel economic growth; and its awareness of its harm on human life and our environment.



Miners at work in small coal mines (called “coal kilns” 煤窑 locally) in Yiliang county, Yunnan province, in 2001 (Geng Yunsheng)



A worker drags a basket of coal to fire a small furnace in Yiliang county, Yunnan province, in 2001 (Geng Yunsheng)



A miner emerges from a coal mine wearing a rudimentary gas mask, in Yiliang county, Yunnan province, in 2003 (Geng Yunsheng)



Miners wash the dirt and soot off, using buckets of heated water, in Yiliang county, Yunnan province, in 2003 (*Geng Yunsheng*)

“ I wanted to understand why, in the middle of China’s economic development, the miners still lived in such hardship and poverty. That made me want to see what the situation was like. ”

— *Geng Yunsheng*



Coal miners pose for portraits at a coal mine near Jining, Shangdong province, in 2002 (*Song Chao*)

“ The Chinese miner is not a cold, coal-mining machine — there are rich and delicate emotions and unique characters beneath each rough appearance. ”



Coal miners pose for a group photo after a day's work, at Pingdingshan, Henan province, in 2007 (Yu Haibo)



A coal worker at home with his wife and children, at Pingdingshan, Henan province, in 2007 (Yu Haibo)



A coal worker poses with his wife and infant son, at Pingdingshan, Henan province, in 2007 (Yu Haibo)

“ Each time a miner goes down the shaft, it deeply affects his wife and relatives. A lot of them had to live with this distress for decades. Their daily struggle, their attachment to their families, and their fate, are closely tied together. ”

— Yu Haibo

Part II: The Factories

Miasmic clouds, noxious gas plumes — we are familiar with these tropes of coal-fired power plants around the world. Once the “dark Satanic Mills” staining the English countryside in the early Industrial Revolution, in the 21st century they have most closely been associated with China. And the fumes rise ever up, and up.



Smoke emitted by a factory chimney is reflected in a pool of sewage water, at Tianhong Coking Plant, Henan province, in 2006 (*Niu Guozheng*)



Clouds of toxic yellow smoke are emitted when the pressure inside the furnace is too high, at Tianhong Coking Plant, Henan province, in 2006 (*Niu Guozheng*)



In the early morning, black smoke from factory chimneys gathers in the sky, forming a dark cloud at Tianhong Coking Plant, Henan province, in 2006 (*Niu Guozheng*)



On a snowy day, coal workers brave carbon dioxide gas when coal gangue spontaneously ignites, in Pingmei, Henan province, in 2002 (*Niu Guozheng*)



A female worker tries to extinguish mountains of spontaneously burning coal waste, in Pingmei, Henan province, in 2002 (*Niu Guozheng*)

“ Recording social development and progress is the main responsibility of a photographer. Taking these images does not mean much to me personally; it is just fulfilling the obligation of a photographer to society. ”

— *Niu Guozheng*





A state owned steel industrial complex in Benxi, Liaoning provine, 2007 (*Ian Teh*)

“ China has overtaken the U.S. as the biggest producer of carbon dioxide, and is also the number one producer of sulphur dioxide. 750,000 die prematurely in China each year, mainly from air pollution in large cities. ”

— *Ian Teh*

Part III: The Glaciers

It was not so long ago that the Greater Himalayas were viewed as a remote, frigid clime of little consequence, to which only the most intrepid adventurers were drawn. Their immensity evoked awe and even fear. But now these seemingly eternal and invincible aspects of our planet’s architecture are receding, and on the defensive.



British mountaineer George Mallory's photo of the main Rongbuk glacier of Mount Everest, Tibet, China, in 1921 (*George Mallory, courtesy of the Royal Geographical Society*)



David Breashears' recreation of Mallory's photo, at the exact same spot on the main Rongbuk glacier, in 2007 (*David Breashears, courtesy of GlacierWorks*)



Canadian surveyor E.O. Wheeler's photograph of Cho Oyu at the Kyetrak glacier, Tibet, China, in 1921 (*E.O. Wheeler, courtesy of the Royal Geographical Society*)



David Breasher's matched photo of Cho Oyu at the Kyetrak glacier, in 2009 (*David Breashears, courtesy of GlacierWorks*)

“ There in front of me I was holding Mallory's photo in black and white from 1921. I could immediately see the results. In fact the glacier we were looking at, the Main Rongbuk Glacier, had already melted 300 or 400 feet vertically in the span of 88 years. ”

— *David Breashears*



Matched images of the West Rongbuk glacier, Tibet, China, by George Mallory in 1921 (top) and David Breashears in 2008 (bottom)

Afterword: Message From the Glaciers

Not long ago, it would have seemed extreme for respected scientists to warn so overtly of environmental apocalypse. But now we quite regularly hear the likes of NASA's James Hansen warn that "continued 'business-as-usual' emission of greenhouse gases and black soot will result in the loss of most Himalayan glaciers this century, with devastating effects on fresh water supplies." Or we hear Chinese scientists, such as glaciologist Yao Tandong, bluntly caution that "studies indicate that by 2030 another 30% [of the Himalayan glaciers] will disappear; by 2050, 40%; and by the end of the century 70%," and that "the full-scale glacier shrinkage in the plateau regions will eventually lead to an ecological catastrophe."

Still, even as the scientific evidence of human impact on this defiant but delicate region piles up around us and we see these glaciers melt away before our eyes, we remain strangely reluctant to acknowledge how radically we have altered our relationship to the natural world.

Surely it is one of the great ironies of our age that even in the midst of the information technology revolution, which daily inundates us with vast quantities of information that are supposed to inform and liberate us, we are still unable to synthesize it so as to galvanize ourselves for action. There are many links in the chain of cause and effect that stretch from the coal mines to the melting glaciers of the Greater Himalaya to the Indian or Chinese peasant who relies on the waters of the Ganges or Yellow River to survive. We confront a very dangerous prospect, with no adequate effort under way to find the missing link between the knowledge that we already have and action.

– **Orville Schell** (*Arthur Ross Director, Center on US-China Relations, Asia Society*)

Text and images adapted from COAL+ICE (Asia Society Center on US-China Relations, 2012), and the COAL+ICE [exhibition](#) (February 13, 2024 – August 11, 2024, Asia Society Museum, New York) and its previous iterations. For further information, explore the exhibit [archive](#) and listen to Mary Kay Magistad's [COAL+ICE podcast](#).



Susan Meiselas is a documentary photographer based in New York. She has been the President of the [Magnum Foundation](#) since 2007, with a mission to expand diversity and creativity in documentary photography. In 1992 she was made a MacArthur Fellow, received a Guggenheim Fellowship (2015), and most recently the Deutsche Börse Photography Foundation Prize (2019). With Jeroen de Vrieshe she is co-curator of the [COAL+ICE](#) exhibition at Asia Society, produced by Leah Thompson, which gathered over 30 Chinese photographers to contribute images.