

China Exports Pollution to U.S., Study Finds

By Edward Wong

New York Times, Monday, Jan 20, 2014

BEIJING — Filthy emissions from China's export industries are carried across the Pacific Ocean and contribute to air pollution in the Western United States, according to a paper published Monday by a prominent American science journal.

The research is the first to quantify how air pollution in the United States is affected by China's production of goods for export and by global consumer demand for those goods, the study's authors say. It was written by nine scholars based in three nations and was published by Proceedings of the National Academy of Sciences, which last year published a paper by other researchers that found a drop in life spans in northern China because of air pollution.

The latest paper explores the environmental consequences of interconnected economies. The scientists wrote that "outsourcing production to China does not always relieve consumers in the United States — or for that matter many countries in the Northern Hemisphere — from the environmental impacts of air pollution."

The movement of air pollutants associated with the production of goods in China for the American market has resulted in a decline in air quality in the Western United States, the scientists wrote, though less manufacturing in the United States does mean cleaner air in the American East.

Jintai Lin, the lead author of the paper, said in an interview that he and the other scientists wanted to examine the transborder effects of emissions from export industries to look at how consumption contributes to global air pollution.

"We're focusing on the trade impact," said Mr. Lin, a professor in the department of atmospheric and oceanic sciences at Peking University's School of Physics. "Trade changes the location of production and thus affects emissions."

Powerful global winds called westerlies can carry pollutants from China across the Pacific within days, leading to "dangerous spikes in contaminants," especially during the spring, according to a news release from the University of California, Irvine, where one of the study's co-authors, Steven J. Davis, is an earth system scientist. "Dust, ozone and carbon can accumulate in valleys and basins in California and other Western states," the statement said.

Black carbon is a particular problem because rain does not wash it out of the atmosphere, so it persists across long distances, the statement said. Black carbon is linked to asthma, cancer, emphysema, and heart and lung disease.

"Los Angeles experiences at least one extra day a year of smog that exceeds federal ozone limits because of nitrogen oxides and carbon monoxide emitted by Chinese factories making goods for export," the statement said.

Using a modeling system called GEOS-Chem, the scientists estimated that in 2006, sulfate concentrations in the Western United States increased as much as 2 percent, and ozone and carbon monoxide levels also increased slightly because of the transportation of pollutants from emissions that resulted from the manufacture of goods for export to the United States. Because the Eastern United States has a much denser population, the outsourcing of manufacturing to China still resulted in "an overall beneficial effect for the U.S. public health," even if Western states suffered, the scientists wrote.

The amount of air pollution in the Western United States resulting from emissions from China is still very small compared with the amount produced by sources in the United States that include traffic and domestic industries.

The study's scientists also looked at the impact of China's export industries on its own air quality. They estimated that in 2006, China's exporting of goods to the United States was responsible for 7.4 percent of production-based Chinese emissions for sulfur dioxide, 5.7 percent for nitrogen oxides, 3.6 percent for black carbon and 4.6 percent for carbon monoxide.

The interdisciplinary research project was begun two and a half years ago by scholars in Britain, China and the United States. The group included economists as well as earth and environmental scientists. The methodology applied various analyses and modeling to the Chinese economy and to the earth's atmosphere and weather patterns.

The scholars who gave emissions estimates for China's export industries, a significant part of the country's economy, looked at data from 42 sectors that are direct or indirect contributors to emissions. They included steel and cement production, power generation and transportation. Coal-burning factories were the biggest sources of pollutants and greenhouse gases, which contribute to global warming.

In recent years, scholars have been studying the impact of China's total emissions on global air pollution and warming. Residents of nations in the path of winds carrying pollutants from China have grown alarmed at what they believe to be deteriorating air quality in their countries because of that pollution. In Japan, for instance, an environmental engineer has attributed a mysterious pestilence that is killing trees on Yakushima Island to pollutants from China.

Alex L. Wang, a law professor at the University of California, Los Angeles, who studies Chinese environmental policy, said after reading the new paper: "This is a reminder to us that a significant percentage of China's emissions of traditional pollutants and greenhouse gas emissions are connected to the products we buy and use every day in the U.S. We should be concerned, not only because this pollution is harming the citizens of China, but because it's damaging the air quality in parts of the U.S."

Mr. Lin, the report's lead author, said he hoped that the research would stimulate discussion of adopting consumption-based accounting of emissions, rather than just production-based accounting.

Exports accounted for 24.1 percent of China's entire economic output last year, down sharply from a peak of 35 percent in 2007, before the global financial crisis began to weaken overseas demand even as China's domestic economy continued to grow. The 2013 number takes into account economic data that was released on Monday.

Economists caution that this does not mean that a quarter of the economy was dedicated to producing goods for exports, since China still does a lot of reprocessing instead of making exports entirely itself.

But the proportion of China's exports that are made in China has risen steadily in recent years as many companies move more of their supply chains, instead of just having final assembly work done here. So the overall percentages of economic output might not by themselves be fair indicators of the importance of exports to the Chinese economy.

Chinese exports to the United States sagged in 2009 because of the global financial crisis but have resumed vigorous growth. By China's method of counting, which includes only direct shipments from mainland Chinese ports to the United States and excludes goods that travel by way of Hong Kong, Chinese exports grew to \$368.5 billion last year from \$252.3 billion in 2008. By contrast, China imported only \$152.6 billion worth of goods directly from the United States.

The United States, which does include goods briefly transiting Hong Kong in its trade figures with mainland China, has shown even larger American trade deficits with China for many years, because Chinese companies use Hong Kong heavily for exports but much less for imports.

China's industry exporting air pollution to U.S., study says

By Tony Barboza

Los Angeles Times, Monday, Jan 20, 2014

China's export industry is responsible for dirty emissions that are blowing across the Pacific Ocean and contributing to smog in the United States, a new scientific study says.

About one-fifth of the pollution China spews into the atmosphere comes from producing goods for export to the United States and other countries, according to the paper by a group of scientists

that was published Monday in the Proceedings of the National Academy of Sciences. Winds blow pollutants from Chinese power plants and factories across the Pacific in about six days, where they boost levels of smog in the United States.

Los Angeles and parts of the eastern U.S. experienced at least one extra day of smog that exceeded federal health standards for ozone in 2006 as a result of emissions from export manufacturing in China, the study found.

"Rising emissions produced in China are a key reason global emissions of air pollutants have remained at a high level during 2000–2009 even as emissions produced in the United States, Europe, and Japan have decreased," the scientists wrote. "Outsourcing production to China does not always relieve consumers in the United States — or, for that matter, many countries in the Northern Hemisphere — from the environmental impacts of air pollution."

Nine scientists in the United States, China and the United Kingdom used data from 2006 to quantify how much of the air pollution reaching the U.S. West Coast from China is from the production goods for export to the United States and other countries. Scientists followed the path of air pollutants, including sulfur dioxide, nitrogen oxides carbon monoxide and black carbon, through the atmosphere to gauge their effects on air quality in the United States.

While the United States has reaped some of the benefits of outsourcing -- cheaper cellphones, televisions and appliances and big declines in air pollution -- rising emissions in China have paralyzed cities there with severe smog.

The paper is a reminder that U.S. demand for cheap imports from China has a way of blowing those environmental problems back at us, said Steve Davis, an Earth system scientist at UC Irvine and co-author of the study.

"It's sort of a boomerang effect," he said.

Davis expressed hope that the findings would be used by world governments working to craft international agreements to limit emissions of carbon dioxide that are driving climate change as well as short-lived air pollutants that are responsible for poor air quality around the globe.

"We need to move beyond placing blame for who's creating these emissions and realize that we all have a common interest in reducing the pollution," Davis said.

Since the 1990s, scientists have known that pollution from China is carried across the Pacific by westerly winds and that it worsens air quality along the U.S. West Coast. Those emissions contribute only slightly to U.S. smog levels, which are overwhelmingly caused by local emissions from vehicles, factories and power plants.

"We shouldn't take an alarmist perspective," Davis said. "Los Angeles air quality is not going to be what it was in the 70s or 80s because of this."

Soda Fire prompts air warning

Fire near Springville could burn for weeks

Visalia Times Delta, Tuesday, Jan 21, 2014

If allergies have gotten worse or it's just plain harder to breathe, you may be feeling the effects of the Soda Fire, which in recent days has burned through more than 500 acres of the Sequoia National Forest.

And chances are you'll be feeling the effects of smoke from that fire for a few more weeks, as the U.S. Forest Service intends to let it burn out rather than fight it.

By mid-afternoon Monday, the fire that was first spotted Jan. 14 in the morning in the Golden Trout Wilderness, about 20 miles northeast of Springville, had burned through an estimated 587 acres.

Paul Gibbs, a Forest Service spokesman said the fire is in a remote of the forest area with narrow, steep canyons.

In fact, he said, it's so remote that the fire wasn't spotted by a hiker or federal staff in the area. A Forest Service technician doing maintenance on the agency's Web cameras spotted the image of smoke in the distance caught by a camera mounted at the lookout station on Bald Mountain, Gibbs said.

Fire crews would have a difficult time accessing the fire because a series of trails leading to it are blocked by smoke and ice.

Despite this, conditions on the ground actually are good because the fire is burning in about a 1,200- to 1,400-acre section of the forest surrounded on all sides by ice and snow.

Because of that, and the difficulty of accessing the fire, Gibbs said the Forest Service has chosen to let the fire burn until it hits the icy perimeter areas and dies out rather than sending firefighters in to put out the blaze.

He added that Forest Service officials aren't concerned that flames or hot ash could jump past the snowy areas, starting fires elsewhere in the national forest.

But it may take until mid-February for the Soda Fire — named after Soda Butte, where authorities initially believed initially the fire started — to burn out. Until then, the fire will continue sending smoke into the air.

And that smoke already is having an effect beyond the foothills, as the San Joaquin Pollution Control District issued on Friday a cautionary warning to Valley residents that fine particulates from the Soda Fire's smoke could cause health problems for people or worsen existing ones, including lung disease, asthma and bronchitis.

The agency also warned the dirty air could increase risks for heart attacks and strokes, and district officials suggested that older adults and children should avoid prolonged exposure or heavy exertion.

On Monday afternoon, the Air District's website listed the Visalia area's air quality as good for ozone but very unhealthy for particulates about noontime. That designation improved to just unhealthy later in the afternoon.

Gibbs said Monday that winds at the fire were blowing north and northeast during the day and south and southeast at night.

Soda Fire continues to grow

Staff Writer

The Porterville Recorder, Monday, Jan 20, 2014

Forest Service says wildland fire now exceeds 500 acres

The Soda Fire burning in the Golden Trout Wilderness east of Porterville has grown to more than 500 acres, the forest service reported.

The fire's growth Saturday was to the west, north and east. The fire's movement was aided by gusty winds that were blowing out of the south southeast and reached over 15 mph.

By Sunday, the fire had consumed 587 acres.

The fire, which was discovered Tuesday, is still north of Clicks Creek and the North Fork of Clicks Creek. Flame heights were one to two feet and, no tree-torching was observed. The fire grew at a moderate rate in the understory.

Snow on the road to Clicks Creek Trailhead was cleared for several miles, said officials with the Sequoia National Forest. The snow became thicker as the crew and equipment worked toward the trailhead. Eventually, the snow became too thick to continue and the operation was stopped.

The road is now drivable to where the trail crosses the road which is approximately five miles from the fire. The trail has deep snow and ice which makes its use as the main access into the fire unfeasible at this time.

The inversion lifted and the smoke cleared enough to allow fire personnel to access the fire by helicopter. They were able to begin the fire investigation and scout some of the trail system that is likely to be used to help confine and contain the fire. Currently, there is not a need to insert ground resources and risk injuries to firefighters until the fire gets closer to the trails, said officials.

Fire officials will continue to monitor the fire's spread to determine when it is necessary to insert ground personnel. Heavy equipment will be working to remove the snow on the road into Lewis Camp.

Smoke will continue to push down the drainage and into Kernville and possibly over the Valley.

Soda Fire in Tulare County grows to 587 acres

By Diana Aguilera, staff writer

The Fresno Bee, Sunday, Jan 19, 2014

The Soda fire in the Tulare County mountains east of Lindsay grew to 587 acres on Saturday, the U.S. Forest Service reported. Valley air officials have advised residents to be wary of smoke impacts.

The fire is burning north of Clicks Creek near Golden Trout Wilderness, a portion of the Sequoia National Forest with no road access to the public, Forest Service officials said.

The blaze has spread to the west, north and east aided by gusty winds that were blowing out of the south and southeast reaching more than 15 mph, officials said.

Forest officials are predicting wind will push smoke down into Kernville and other areas of the Valley. The San Joaquin Valley Air Pollution Control District issued statements of caution through Monday specifically to the foothills and eastern Valley areas of Tulare and Kern counties.

The air district said the smoke could cause health problems, and those with heart or lung diseases should consult their doctors for advice on smoke exposure. Older adults and children should avoid heavy exercise and being outside for long periods of time, depending on local conditions.

Soda Fire in South Valley affecting region's air quality

By Brianna Vaccari

The Fresno Bee, Friday, Jan 17, 2014

Air-pollution officials are advising Valley residents to be aware of smoke impacts from the Soda Fire in Tulare County.

The Soda Fire grew to 315 acres Friday. The fire is burning north of Clicks Creek near Golden Trout Wilderness, a portion of the forest with no road access, Sequoia National Forest officials said.

Forest officials are predicting wind will push smoke down into Kernville and other areas of the Valley. The San Joaquin Valley Air Pollution Control District issued statements of caution through Monday specifically to the foothills and eastern Valley floor areas of Tulare and Kern counties.

The air district said the smoke could cause health problems, and those with heart or lung diseases should consult their doctors for advice on smoke exposure. Older adults and children should avoid heavy exercise and being outside for long periods of time, depending on local conditions.

Forest officials predict that as the days warm up, the smoke will lift and head north.

Firefighting efforts will continue Saturday. Heavy smoke has limited the ability to use helicopters to deliver firefighters.

Residents can monitor the air conditions closest to them by visiting the real-time air advisory network page at www.valleyair.org/programs/RAAN.

Exceptional dryness brings the hazy days of winter

A high-pressure zone that has been warding off rain for months has worsened air pollution across California and the Southwest.

By Tony Barboza

Los Angeles Times, Sunday, Jan. 19, 2014

California's exceptionally dry winter is having a visible consequence: bad air.

A high-pressure zone off the West Coast that has been warding off rain for months has worsened air pollution across California and the Southwest. The stagnant conditions have trapped fine particles close to the ground, leaving a buildup of sooty haze that poses a threat to people's health.

To keep pollution levels down, air quality officials in California have issued an unprecedented number of no-burn alerts that ban wood fires in homes. Even so, clinics report treating more patients who have trouble breathing, tightness in their chest, itchy eyes and runny noses.

"It's not just an inconvenience, it's a significant health issue," said Dr. Sunil Saini, an allergist in Upland. Saini said he typically sees a drop-off in patients with respiratory problems starting in December. "This year we haven't seen that decrease."

The region, with some of the dirtiest basins in the nation, usually counts on a few big winter storms to scour away pollution. Santa Ana winds and short-lived breezes have circulated the air a bit, but it hasn't been enough, air quality officials said.

Since last month, the Bay Area, the Central Valley and Southern California have contended with spells of dirty air that have not relented for days or even weeks.

Forecasters do not predict any rainstorms through the end of the month, which would make this California's driest January on record. Last year was California's driest calendar year in 119 years of record-keeping, and Gov. Jerry Brown declared a drought emergency on Friday.

Nowhere in the state has the air been worse than in the San Joaquin Valley, where pollution-trapping conditions have pushed daily averages of fine particles in Bakersfield, Hanford and other communities to more than triple the federal standard of 35 micrograms per cubic meter. The air has been so unhealthy at times that officials have issued dozens of Level 5 advisories, the highest on their five-point scale, and advised people to stay indoors. Some high school soccer games and swim meets were canceled or postponed.

"It's been terrible," said Dr. Alexander Sherriffs, a family physician in Fowler and a member of state and local air quality boards. "We're sitting in the soup, and it's not a healthy soup."

Though cars, diesel trucks, trains and industrial stacks spew fine particles and other pollutants year round, the concentrations people breathe are largely driven by weather conditions, said Barbara Finlayson-Pitts, an atmospheric chemist at UC Irvine.

Winter nights and mornings tend to form strong inversions, in which a layer of warmer air traps cool air and pollution close to the ground. When fog blankets the surface, the humidity can speed up chemical reactions that convert nitrogen oxides and other gases from vehicle tailpipes, factories and ships into haze-forming fine particles.

Around San Francisco, such conditions have marred the Bay Bridge in a gray haze reminiscent of a smoke-filled bar. Episodes of stagnation since November have led Bay Area officials to call a record 29 days of "Spare the Air" alerts that prohibit home wood burning, with more on the way. Last winter season they called 10 such days.

South Coast Air Quality Management District officials said the weather has elevated pollution readings just as the region is getting close to meeting federal health standards for fine particulate matter.

"That gets put in jeopardy when you have extended periods with no rain," said Joe Cassmassi, the district's planning and rules manager.

Parched conditions also have raised the risk of fire, as many Southern Californians saw last week when a plume of smoke billowed out from a brush fire near Glendora, prompting air quality advisories.

Fine particles, a fraction of the width of a human hair, are among the most worrisome air pollutants to health experts because they lodge deep in the lungs and can aggravate respiratory problems. Long-term exposure is tied to a host of illnesses, including heart disease, asthma and cancer.

A 2010 report by the California Air Resources Board estimated that 9,200 people in the state die prematurely each year because of exposure to fine particle pollution, most of them in Southern California.

"It's very disturbing, the legacy of this," Sherriffs said.

All burn permits suspended

By Cal Fire

Sierra Star, Friday, Jan 17, 2014

Due to Red Flag Alert conditions and lack of precipitation, the menace of wildfires still remains prevalent with the potential to destroy life and property, Cal Fire has proclaimed that all burning permits in the State Responsibility Areas of Madera County are suspended.

Past fire history combined with dry vegetation and predicted fire weather has prompted Cal Fire to proclaim the following types of burning restrictions and exception:

Restrictions: *All San Joaquin Valley Air Pollution Control District (SJVAPCD) Hazard Reduction and Prescribed Burning Permits within State Responsibility Areas are suspended. Previously issued permits will no longer be valid until the proclamation is rescinded.

Exceptions *Campfires within organized campgrounds or on private property are allowed if the purpose of the campfire is for cooking or providing warmth and is maintained in such a manner as to prevent the campfire from spreading to the wildland vegetation. This suspension will continue in place until formally rescinded. For more information on fire safety visit fire.ca.gov or readyforwildfire.org.

Burn ban in place until midnight

Stockton Record and Merced Sun-Star, Monday, Jan 20, 2014

San Joaquin County is one of seven counties where fireplace burning is banned until midnight on Monday.

The Air Quality Management District put the ban in place because of continued bad air in the Central Valley. It's been 44 days since enough rain has fallen to cleanse the air in the Valley.

The ban includes wood, pellets and manufactured fire logs in residential fireplaces, stoves and fire pits.

The ban extends through Stanislaus County and all the way to portions of Kern County.

Violations can result in fines.