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Pollution from fuel so dirty it can only be burned on the high seas is making its way back to land — and causing premature deaths, scientists say.

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Arnulfo Franco / AP

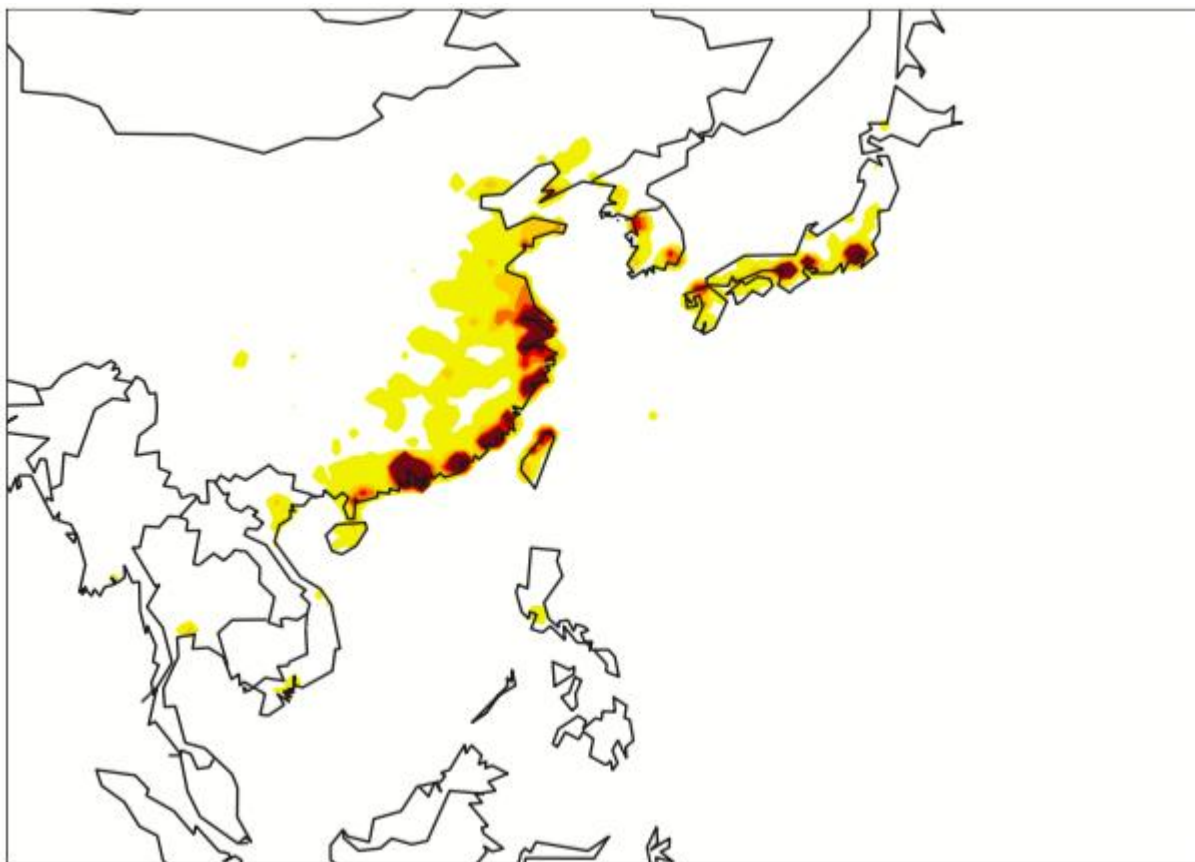
A new study shows that a spike in cheap goods shipped from East Asia has come at a hidden but deadly cost to residents there.

Massive plumes of pollution from cargo ships plying the waters off the coasts of China, Japan, South Korea, Vietnam, and Taiwan — often headed to Western markets — has led to the premature deaths of an estimated 14,500 to 37,500 people every year in those countries.

That's according to a [study](#) of ship traffic in East Asia published on Monday. The deadly pollution from these ships, researchers say, takes the form of tiny particles, often the remnants of the dirty fuels burned by cargo ships.

The thick, sludgy fuel used on many cargo ships is cheap but loaded with sulfur that, when burned, releases particles so small they can remain suspended in the air for months. Wafting over the Sea of Japan or East China Sea to coastal cities, the smoke can lead to lung and heart problems among residents.

### Here's where people are prematurely dying from East Asian shipping emissions:



Red = highest concentration Huan Liu et al, Nature Climate Change / Via nature.com

Refineries make the ships' sulfur-laden fuel as one of the byproducts of lighter fuels

like gasoline. Because it's generally illegal in the U.S. and many other countries to burn this dirtier fuel on land, it gets used to power large ships on international waters, where regulations are lax.

"You get this heavy stuff with all this sulfur in it," Drew Shindell, professor of climate science at Duke University and one of the authors of the new study, told BuzzFeed News. "And as long as there are no regulations for shipping, and it works to power the ships, the economics say that's the thing to use."

International shipping is also an often overlooked source of another pollutant: carbon dioxide.

Emissions of the planet-warming gas, largely unregulated in East Asia, are growing faster there than in other parts of the world's oceans, ballooning from at most 7% of global shipping emissions before 2005 to 16% in 2013.

Other researchers say the new report underscores a troubling problem.

"If anything, it's more likely that their analysis is conservative and underestimates in terms of emissions," Tristan Smith, a researcher at University College London who studies the carbon dioxide emissions of ships, told BuzzFeed News by email.

The Paris climate agreement, the treaty signed last year by 178 nations pledging to cut carbon dioxide emissions, did not address shipping. The task of cutting carbon emissions from ships was left to the United Nations agency that regulates shipping, the International Maritime Organization, whose members can't seem [to agree on carbon limits](#).

As for the pollution causing health problems in East Asia, China announced regulations last year to limit the sulfur in marine fuels used near its shores by 2019.

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