

How 90 Big Companies Helped Fuel Climate Change: Study Breaks It Down

A new study connects climate change impacts to the emissions from Exxon, Chevron and other large oil, gas and cement companies and their products.

[By Nicholas Kusnetz](#) Sep 11, 2017 REFORMATED FOR EDUCATIONAL USE ONLY

<https://insideclimatenews.org/news/09112017/climate-change-sea-level-rise-fossil-fuel-exxon-chevron-bp-study>



BP, Exxon and Chevron were among the top emitters in a new study that looks at historical emissions and climate change impacts, including sea level rise. Credit: Christopher Furlong/Getty Images

Can millimeters of sea level rise or increments of warming on the globe's thermometer be attributed to specific energy companies? A new study attempts to do that, and says that more than a quarter of sea level rise and about half the warming from 1880 to 2010 can be traced back to just 90 corporations.

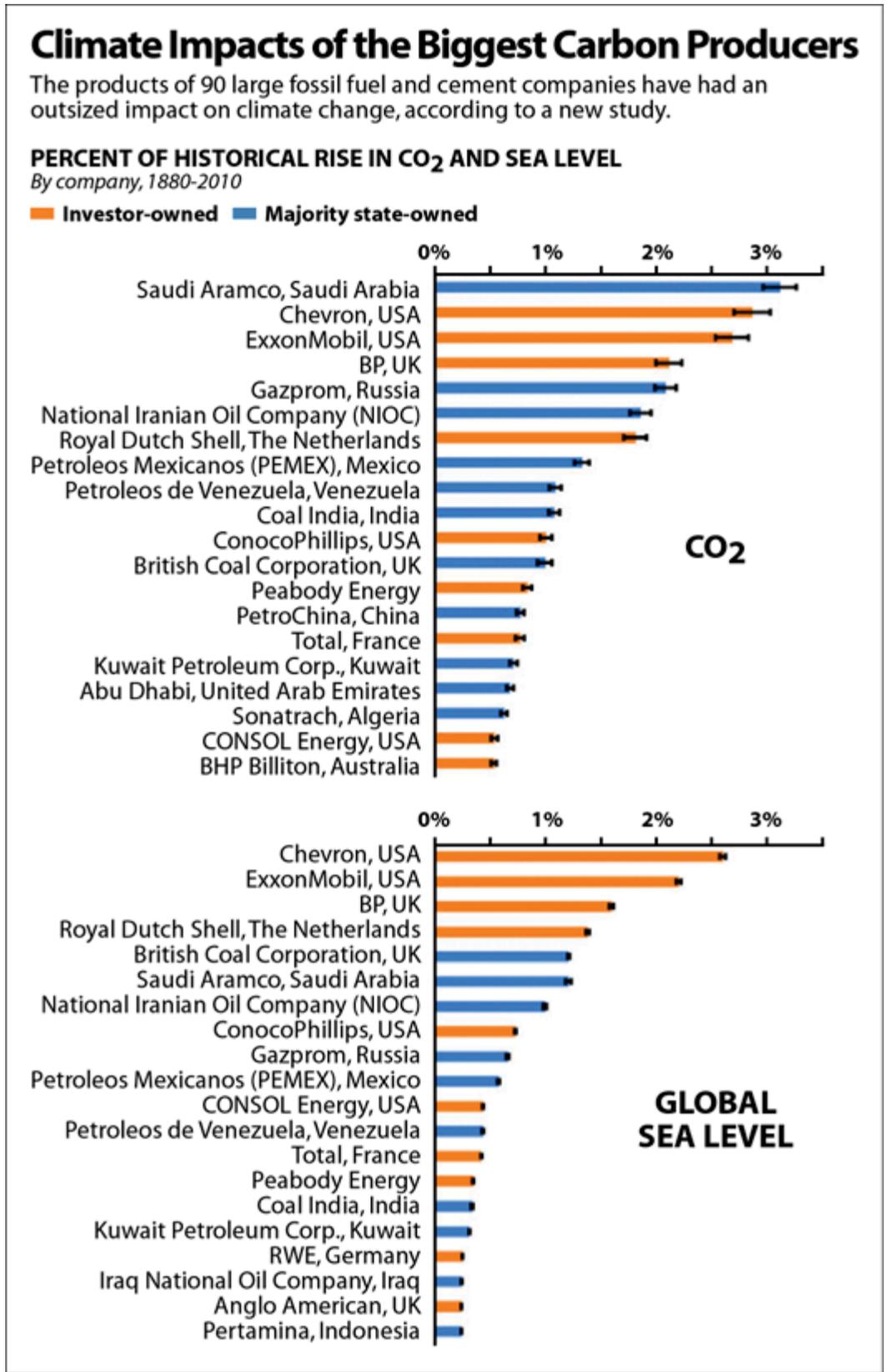
The study comes as energy companies confront lawsuits and shareholder resolutions seeking to account for their contributions to climate change.

The [new paper](#), published last week in the journal *Climatic Change*, builds on [earlier research](#) finding that nearly two-thirds of historical greenhouse gas emissions came from the products and operations of just 90 companies—mostly fossil fuel producers, plus a few cement companies.

The researchers from the Union of Concerned Scientists and two universities took the reasoning another step and calculated how much of the actual change in the climate can be tied to those extra emissions.

Using models, they calculated that the greenhouse gas emissions of these 90 companies accounted for around 42 to 50 percent of the global temperature increase and about 26 to 32 percent of global sea level rise over the course of industrial history, from 1880 to 2010. Since 1980, a time when global warming was first getting wide attention, their emissions have accounted for around 28 to 35 percent of rising temperatures and around 11 to 14 percent of rising seas.

While some of the companies are huge—Chevron, Saudi Aramco, ExxonMobil, Gazprom—even the biggest of them weren't blamed for more than about 1 or 2 percent of the rising tides or temperatures.



SOURCE: B. Ekwurzel et al., 2017, *Climatic Change*

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The next step, one of the authors suggested, would be to calculate the damages from those changes—and decide if the companies should help pay for them.

"We know climate impacts are worsening and they're becoming more costly. The question is who's responsible and who should pay the costs," said Brenda Ekwurzel, the lead author of the paper and director of climate science at the Union of Concerned Scientists. "In the United States, taxpayers are footing the bill entirely. So maybe with numbers like this you can put in the mix the producers."

In July, three local governments in California [sued a group of oil and gas](#) companies, arguing that executives knew for decades that the "greenhouse gas pollution from their fossil fuel products had a significant impact on the Earth's climate and sea levels."

The state attorneys general of New York and Massachusetts, meanwhile, are investigating whether Exxon misled investors about its risks from climate change.

Exxon and Chevron did not respond to requests for comment for this article. The American Petroleum Institute declined to comment.

Ekwurzel said the paper is only a first step for trying to sort out who is responsible for what as the costs of climate change grow. "We can calculate these numbers, and we don't expect them to directly equal responsibility," she said. "That's really for juries, policymakers, civil society conversation going forward."

Generally, state efforts to cap greenhouse gas emissions, such as California's cap-and-trade system, hold companies accountable only for their direct emissions. But just because it's fossil fuel consumers like power plants and drivers who ultimately burn the coal, oil and gas that emit greenhouse gases, that doesn't let the producers off the hook, she added.

"A common complaint is, what about utilities, what about car-driving," Ekwurzel said. "The thing is, is it the activities or is it how we've chosen to power those activities? We know there are other ways to move through space or to turn on the lights that don't rely as much on fossil fuels."

About the Author



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Nicholas Kusnetz is a reporter for InsideClimate News. Before joining ICN, he ran the Center for Public Integrity's State Integrity Investigation, which won a New York Press Club Award for Political Coverage. He also covered fracking as a reporting fellow at ProPublica and was a 2011 Middlebury Fellow in Environmental Journalism. His work has appeared in more than a dozen publications, including Slate, The Washington Post, Businessweek, Mother Jones, The Nation, Fast Company and The New York Times.

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