

FROM WELL TO WHEEL: THE SOCIAL, ENVIRONMENTAL, AND CLIMATE COSTS OF AMAZON CRUDE

EXECUTIVE SUMMARY

In *From Well to Wheel: The Social, Environmental, and Climate Costs of Amazon Crude*, Amazon Watch tracks crude extracted from oil wells in the western Amazon rainforest to refineries in the United States and ultimately into cars and trucking fleets across the country. This is the first thorough analysis of Amazon crude from its source to its final end use, and it demonstrates the devastating environmental, social and climate impacts of oil drilling in the global treasure that is the Amazon.

KEY REPORT FINDINGS:

- A thriving market for Amazon crude drives the ongoing expansion of oil operations into some of the Amazon rainforest's most pristine regions, which has devastating impacts for the Amazon's biodiversity and indigenous peoples, refinery communities in the United States, and our global climate.
- Drilling in the Amazon has a triple carbon impact: the burning of the oil, the emissions released when cutting down the rainforest, and the destruction of the world's largest carbon sink.
- Oil operations have particularly toxic impacts on the health of indigenous communities. In one oil-producing region of the Peruvian Amazon, 98 percent of children in indigenous communities have high levels of toxic metals in their blood as a direct result of oil extraction waste products in their environment.
- California's refineries are the worst offenders, processing an average of 170,978 barrels (almost 7.2 million gallons) of Amazon crude every day. The state processes roughly 60 percent of all exports of Amazon crude from Ecuador, Peru, and Colombia and 74 percent of those that come to the United States.
- Every large public and private vehicle fleet in California uses diesel that is at least partly derived from Amazon crude, as do many outside of the state and country.

This perilous trend is at odds with a growing scientific consensus that we must leave 80 percent of the planet's remaining fossil fuels in the ground and unburned in order to stave off climate catastrophe, and requires innovative strategies to stem demand for this particularly destructive source of crude.

However, as the report demonstrates, this disastrous expansion of the Amazonian oil frontier is largely being driven by a new set of actors dominating the western Amazon's economic and political landscape, chiefly the Chinese government. Now heavily indebted to China, Ecuador is routinely flouting international laws and norms that should steer government and corporate dealings with indigenous peoples in order to advance drilling plans in service to its cash-for-oil loan agreements.

Despite the dangers, indigenous forest guardians are leading the movement to *End Amazon Crude*, as they are among the first communities to bear the brunt of both immediate impacts and a changing climate. This report presents models championed by indigenous communities that chart pathways to a just transition beyond fossil fuel dependence and offers a starting point for reducing the international market pressures that make these short-sighted extraction plans so enticing.

FREQUENTLY ASKED QUESTIONS

Q: Why is crude from the western Amazon worse than other kinds of crude?

A: Crude oil sourced from the western Amazon is particularly harmful because of the associated destruction of aboveground rainforest ecosystems that play a vital role in climate stability, house the world's highest levels of biodiversity, and are the homeland of hundreds of indigenous and isolated peoples. Drilling in the Amazon rainforest poses a triple threat to the climate, leading to increased emissions from burning of the hydrocarbons, deforestation from construction of well sites, pipelines, and access roads, and the resulting degradation of the world's largest carbon sink. Resulting alterations in rain patterns could worsen or create new catastrophic droughts or floods across the Western Hemisphere, setting off a chain reaction that could lead to ecological collapse.

The western Amazon is the most biodiverse part of the world's most biodiverse forest. It holds the highest concentration of bird, mammal, insect, and amphibian species in the Amazon. It is also the home of hundreds of indigenous peoples who depend upon the rainforest for their survival and way of life. When the rainforest is destroyed from impacts associated with oil drilling, it threatens their health by contaminating their water, soil, air, and takes away their food security. The rainforest is not only important to the continuation of their culture, but to their survival on a daily basis.

Q: Who did the research?

A: The Borealis Centre for Environmental and Trade Research created the initial report on U.S. refineries purchasing Amazon crude. Borealis is a non-profit international investigative research organization that provides essential, unique, accurate information and analysis on critical global issues. They are experts in the field of natural resource trade flow research.

Q: How was the oil tracked?

A: Borealis reviewed concession and field maps from government and industry sources as well as public company websites to determine the geographic origins of crude streams. Then they analyzed government import/export and shipping data to determine which crude streams are primarily exported. This data was then cross-referenced with U.S. Energy Information Administration data to derive the volumes of Amazon crude oil received by U.S. refineries in 2015 from Colombia, Ecuador, and Peru.

Q: What are the challenges and limitations in tracking crude from well to wheel?

A: Occasional incomplete shipping or U.S. Energy Information Administration data makes it difficult to know for every shipment whether the oil being imported from a given country is Amazonian or non-Amazonian. Shipments where the information was incomplete were categorized as "Unknown." The other two categories are "Amazon" and "Non-Amazon." The

percentages we report here are all from the known “Amazon” category, in which there was complete information. Only a small percentage of oil imported to the US was categorized by the Borealis Centre as “Unknown.”

Q: What is different about tracking crude than other commodities?

A: Crude is more difficult to track than other commodities because it’s a liquid. It is frequently diluted for pipeline transport purposes, and it can become mixed with crude from other sources during the refining process. But by isolating crude streams, extrapolating percentages, and tracking crude export-import data, reliable origin and destination conclusions can be reached. This report tracks the physical transport of crude from origin to destination, and does not explore in-depth crude ownership from along any given route.

Q: By advocating for discontinuing use of Amazon crude aren’t you by default advocating in favor other crude streams which are still harmful to the environment or may be associated with rights violations?

A: We are advocating for a just transition away from fossil fuels and to clean, renewable energy as quickly as possible. For the reasons outlined in the report, Amazon crude is particularly harmful. As we work to keep 80 percent of all fossil fuels in the ground to limit temperature increase to 1.5°C, reserves in the Amazon are a critical place to start.

Q: Why is there so much focus on Ecuador?

A: Ecuador is a key country in the world oil market because it has the third largest oil reserves in South America, and the vast majority of exported Ecuadorian crude oil is processed in the U.S. California alone processes 60 percent of Ecuador’s crude oil exports. Ecuadorian oil is of specific environmental interest because currently all active oil blocks in Ecuador are located in the Amazon. Of all Amazon crude processed by the U.S., 90 percent is imported from Ecuador. To satisfy U.S. demand, debt to China, and development, Ecuador is expanding its oil patch production into new, pristine, roadless rainforest.

Q: Doesn’t oil extraction help oil-producing countries reduce poverty and foster economic growth?

A: Studies by leading experts show that countries well-endowed with natural resources remain poor not in spite of those resources but because of them. This resource curse exposes oil-producing countries to the boom and bust cycle of commodities and deepens debt and dependency. Ecuador is a telling example. After striking oil in the late 1960s, it has attempted to drill its way to prosperity well by well. But some fifty years later, not much has changed. While some short-term progress has been made during boom years to improve infrastructure, education, reduce poverty, and wean itself from oil dependence, the investments and reforms are not sustainable in non-boom years. Ecuador has borrowed more than \$15 billion from China since 2010, most of it in high-interest, short-term loans that must be paid in oil.

Further oil development only makes the country's economy more vulnerable to fluctuations in the world oil market, whose recent crash has Ecuador reeling. This, combined with the country's extreme wealth disparity, means that further income from oil alone will not solve the problems of poverty in Ecuador. The country must create a diverse economy that addresses wealth inequality in order to reduce poverty.

Q: What are the community alternatives?

A: Across the Amazon, indigenous peoples have been leading the way in maintaining climate stability for millennia by protecting their territories, keeping their forests intact, and, more recently, striving to keep oil, gas, and minerals in the ground. Studies indicate that indigenous lands and community-managed forests are the best defense from unsustainable development policies reliant on export-oriented extractives and agro-industries.

For indigenous peoples living in the Amazon, perhaps the most important starting point in a conversation about alternative development involves first and foremost respecting their rights and autonomy and an end to the imposition of extractive and mega-projects slated for their territories. These communities have their own vision, or life plans, of how they seek to live and sustain their people, cultures, and lands into the future. The root of conflict that pits indigenous rights against resource rights stems from a fundamental clash of worldviews, with indigenous people sharing a holistic view of the natural world and its collective resources, compared with a western view that commodifies natural resources both above and under their lands. The U'wa in Colombia, Kichwa of Sarayaku in Ecuador, and Achuar in Peru are all advancing life plan proposals for territorial management and community development that involve keeping their forests intact and oil in the ground.