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Oil and gas project threatens Brazil's last great block of Amazon forest (commentary)

Commentary by Philip Fearnside on 9 March 2020

- *The eastern part of Brazil's Amazon rainforest is already heavily deforested and degraded, but the western portion of the region (covering roughly 740,000 square kilometers; 285,000 square miles) is almost entirely intact due to the lack of road access.*
- *The huge block of forest to the west of Highway BR-319 (a road stretching between Amazonas and Rondônia states) is essential to maintaining the region's biodiversity, its indigenous peoples, its huge forest carbon stocks, and its role in water recycling that supplies rainfall to places like São Paulo.*
- *Planned roads branching off Highway BR-319 would open the northern part of this vast forest block to entry by deforesters. Now a new threat is rapidly advancing: the Solimões oil and gas project that would implant thousands of wells spread over the central and southern portions of this forest block. Although not part of the official development's preliminary environmental impact statement, future roads linking the drilling areas to the BR-319 are likely to give deforesters access to the entire area.*
- *This post is a commentary. The views expressed are those of the author, not necessarily Mongabay.*

The preliminary Environmental Impact Assessment (EIA) of Brazil's gigantic "Solimões Sedimentary Area" oil and gas project is open for public comment until 19 March (available here).

"Solimões" is the Brazilian name for the upper Amazon River; that is, the Amazon River upstream from its confluence with the Rio Negro at Manaus. The oil and gas project as envisioned would allow the drilling of thousands of wells in a series of "blocks" spread over 470,976 square kilometers (181,844 square miles), an area that encompasses approximately one third of Brazil's Alaska-sized Amazonas state (Figure 1). Of course, there are a number of risks.

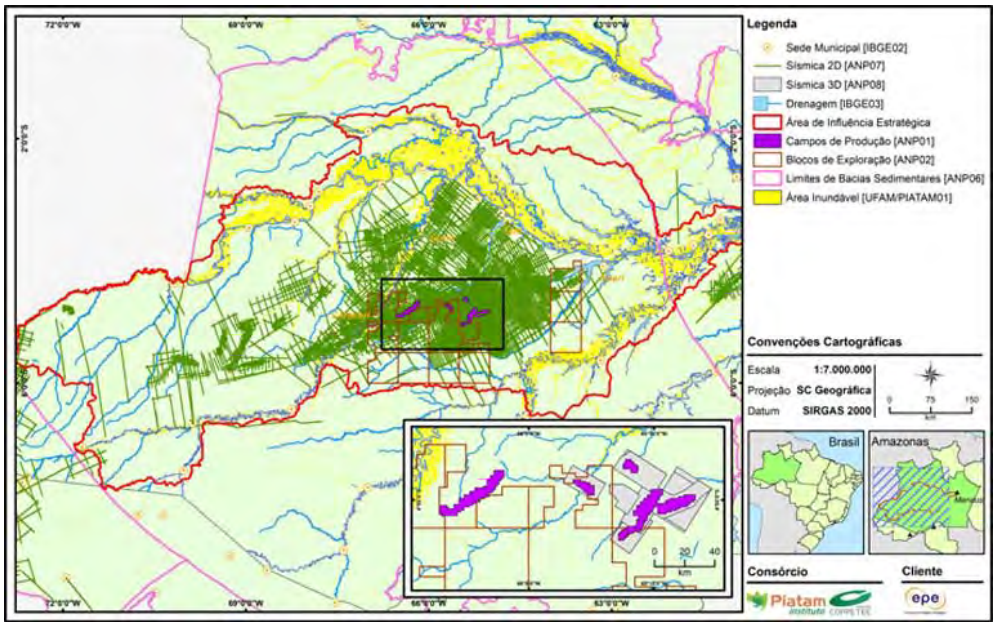

Figure 1. Map of drilling blocks (EIA, p. 56). The purple areas have wells currently in production. The thin green lines represent the locations for future drilling. The project's "strategic area of influence," outlined in red, is larger than the US state of California.

One risk is from oil spills, a type of event that has occurred with some frequency in the Amazon areas of Peru and Ecuador, where petroleum extraction is taking place on a larger scale than it currently is in the Brazilian Amazon. The risk of spills is inherent to these operations, and the impacts on biodiversity are serious.

Another risk is impact on isolated indigenous peoples. The first blocks made available to oil and gas firms in February 2020 excluded those blocks that might contain isolated indigenous peoples, which displeased the companies. The areas occupied by uncontacted indigenous peoples have been subject to a wave of pressure from mineral extraction of various kinds since Brazil's current president, Jair Bolsonaro, took office in January 2019.

Indigenous areas in general could soon be opened for oil and gas exploitation with passage of Proposed Law 191/2020, which was

sent to the National Congress by President Bolsonaro on 5 February 2020. Under this legislation (dubbed the "Proposed Law of Devastation" by its critics), indigenous people would not have the right to veto the exploitation of gas and oil in their own territories, even if officially recognized as "Indigenous Lands."

The approval of this or other similar proposed laws would likely lead to further expansion of the "Solimões Sedimentary Area" project. The right of consultation of indigenous peoples on infrastructure projects that are likely to impact them is already being routinely disrespected in Brazil, with the reconstruction of Highway BR-319 serving as a relevant case at the present moment.

Another social cost stems from impacts on the area's non-indigenous traditional inhabitants, such as *ribeirinhos* (riverine dwellers). The record is not promising.

Amazon rainforest fragmentation due to construction of a main road and side-roads. Image courtesy of NASA.

A statement in the preliminary environmental impact assessment claiming that new roads are not going to be built to support the Solimões project is one of the most important in the EIA, but it receives only two lines of text buried on page 88 of the document, where it says that the project will "transport people and materials only by air and river without opening new roads."

The idea that groups of wells would be treated as if they were oil platforms at sea, only allowing access by helicopter, is attractive as a means of minimizing impacts (and also as a means of gaining an environmental license for the project). It is well known that Amazon

roads are the major drivers of deforestation across the region, bringing invasions by actors and processes that are beyond government control.

However, while maintaining oil and gas operations without roads can be financially sustained when only a few locations are involved, when drilling expands to hundreds of locations the financial viability of roads would increase dramatically, as would the attraction of using this cheaper transportation option.

The elephant in the room is the open question of how to ensure that Brazil's Ministry of Mines and Energy will not simply change its plans at a future date when roads become more financially attractive. There is no indication in the EIA of anything that would eliminate the possibility of a future policy change to allow roads.

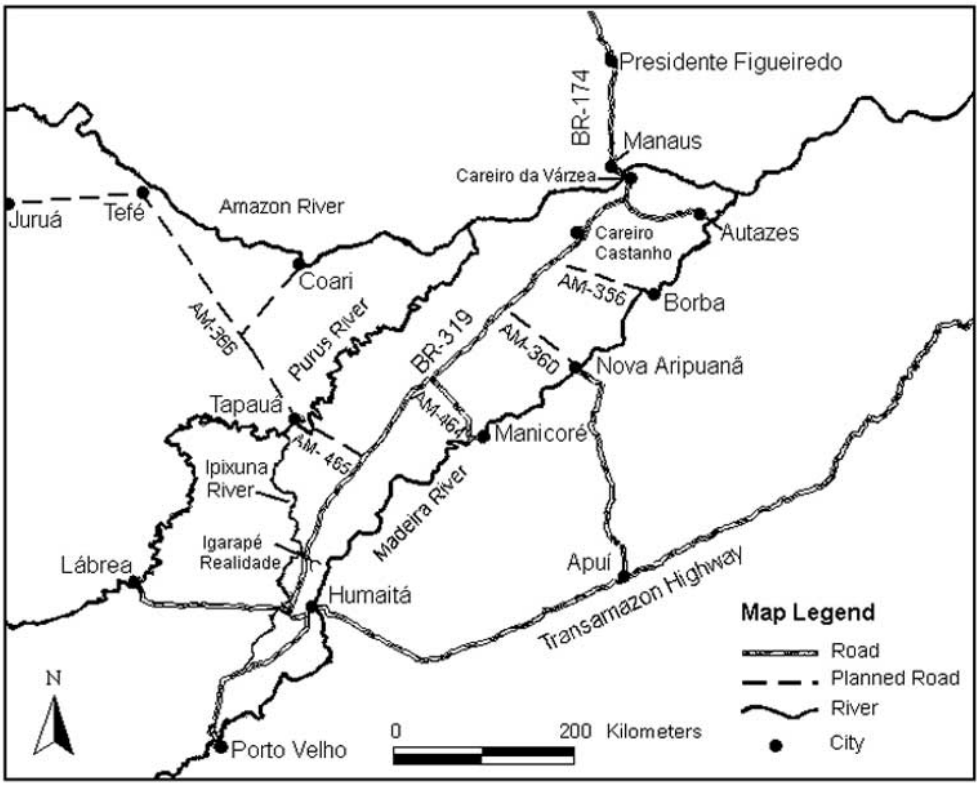

Figure 2. Planned roads branching off Highway BR-319, including the AM-366 road. Source, Fearnside & Graça, 2006.

One of the dangers presented by Highway BR-319 is the associated plan to build side roads branching off the main highway, and opening this vast block of forest. The most important is AM-366 that would cross the Purus River at Tapauá and proceed to Coarí, Tefé and Juruá (Figure 2). Roads to oil and gas exploitation areas would likely then branch off AM-366.

The critical importance of keeping the large forest block west of the Purus River intact is hard to overstate. Due to rapid deforestation

and degradation in the eastern part of the Amazon, half of the tree species in Brazilian Amazonia as a whole are projected to become threatened with extinction by 2050 under the criteria of the International Union for the Conservation of Nature (IUCN). But even this grim projection assumes that the forest to the west of the Purus River would remain intact, as it is based on a deforestation simulation (Figure 3) that does not consider the planned roads that would open this area to the entry of deforesters.

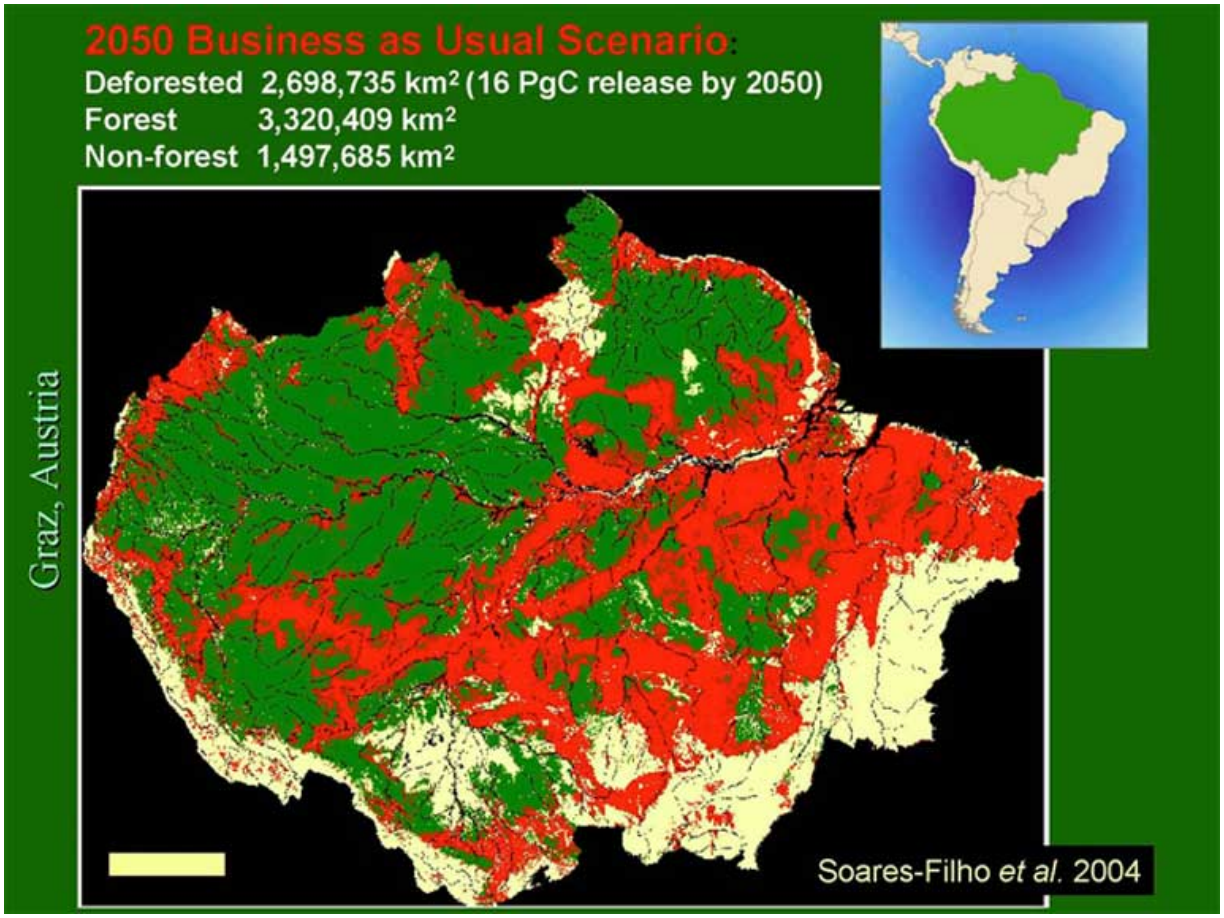

Figure 3. Simulation of deforestation by 2050 by Britaldo Soares-Filho and colleagues, published in Nature in 2006. The vast green area in the western part of the Amazon basin remains intact in the simulation because planned roads opening this area are not included. The oil and gas project now adds an additional risk. Image courtesy of Soares-Filho et al., 2004.

The forest block to the west of the Purus River contains an enormous forest carbon stock, the safeguarding of which is essential to avoiding a major boost to global warming. This block of forest is also critical for maintaining the recycling of water that supplies water vapor to the "flying rivers" — the winds that carry Amazonian water to produce rain in non-Amazonian parts of Brazil, such as São Paulo. The city of São Paulo has already come close to running out of water during major droughts, and loss of the water transported from Amazonia by the "flying rivers" would make a catastrophe there much more likely.

Banner image caption: Brazil's National Department of Transport Infrastructure (DNIT) has been reconstructing Highway BR-319 since 2016, dramatically increasing access to the Purus-Madeira river basins. Image by Marcio Isensee e Sá / Mongabay.