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Brazil's offshore oil risks

- **Philip Martin Fearnside**, Ecologist / INPA, National Institute for Research in Amazonia (INPA)

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Brazil's offshore oil risks

Bernadino and Sumida (1) recommend conserving vulnerable deep-sea ecosystems threatened by Brazil's offshore oil development. To this I would add the need to rethink the development itself. Potential impacts of oil leakage include threat to much of the country's shoreline and its famous beaches. In the 2010 Deepwater Horizon disaster it took five months to control a leak at a water depth of 1500 m. Brazil's Pre-Salt oilfields are mostly at depths around 2200 m (2) and range up to 3000 m (3). In 2011 Brazil's minister of science and technology stated publically that the country has excellent capability to control leaks, making the risk nonexistent. However, if Brazil really had control capability at this depth, it would have rushed to help in the Gulf of Mexico. History there indicates that no country in the world had this capability. The Pre-Salt plans are projected to exacerbate the Brazilian economy's "resource curse" (4). Pre-Salt defies greenhouse mitigation, and new subsidies earned Brazil a "Fossil of the Day" award at COP-23 in November 2017 (5).

Philip M. Fearnside¹

¹Instituto Nacional de Pesquisas da Amazônia (INPA), Av. André Araújo 2936, Manaus, Amazonas 69067-375, Brazil
Email: pmfearn@inpa.gov.br

REFERENCES

1. A.F. Bernadino, P.Y.G. Sumida. Deep risks from offshore development. *Science* 358, 312. (2017). <http://dx.doi.org/10.1126/science.aag0779>
2. J. Formigli. Pre-Salt Reservoirs Offshore Brazil: Perspectives and Challenges. Petrobrás, Rio de Janeiro. (2007).
http://www.investidorpetrobras.com.br/download/1462/2007_Formigli_Miami_...
3. A.L. Martins, Á.F.L. Aragão, P.E. Aranha, M.G. Folsta, A.T. A. Waldmann, R.A. Gandelman, J.V.M. de Magalhães. Hidráulica de construção de poços em cenários críticos. *Boletim Técnico da Produção de Petróleo* 4, 183-200. (2009) [in Portuguese].
<http://www.pbpublishing.com.br/uploads/PublishedContent/BPPT/V4/V4N2/06-...>
4. Magalhães, A.S. & E.P. Domingues. Blessing or curse: Impacts of the Brazilian Pre-Salt oil exploration. *Economia* 15, 343. (2014)
<http://dx.doi.org/10.1016/j.econ.2014.11.002>
5. 350.org. Brazil wins 'Fossil of the Day' at COP 23. (2017) <https://350.org/brazil-wins-fossil-of-the-day-at-cop-23/>