SUPPLEMENTARY MATERIAL S1

A. METHODS

Searches were conducted between September 2020 and March 2021 using the Google website as a base (https://www.google.com). For the searches withing the Google base, we used the words "oil spill + amazon + fish kill", "oil spill + Amazon + fish dead", "oil leak + Peru", "oil leak + Colombia", "oil spill + Amazon river", "oil spill + Brazil", "pipeline + fish kill", "Iguacu River + oil pill". In addition, we combined the name of oil and/or gas producing countries in Neotropical region (*i.e.*, Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Guatemala, Mexico, Peru, Surinam, Trinidad and Tobago, Venezuela) with the key words "oil spills" + "river" or "lake" or "stream" (*e.g.*, peru + oil spill + river). Searches were performed using these combinations of words in Portuguese, English, and Spanish; and were conducted exhaustively only for negative impacts of input of crude oil on Neotropical freshwater fishes. In each search, we considered only the first 20 pages of results. We considered oil spills in gas and oil blocks, oil fields, tank farm, or from pipelines.

B. SEARCH RESULTS

Andean River to Lake Titicaca (2000):

https://apnews.com/article/df10614adc20601990008831f10f08c3

https://ejatlas.org/print/desaguadero-oil-spill-transredes-s-a-bolivia

Stream to the Barigui and after to the Iguaçu River (2000):

http://news.bbc.co.uk/2/hi/americas/840379.stm

https://www.theguardian.com/environment/2000/jul/19/oilspills.internationalnews

Catatumbo River to Lake Maracaibo (2001):

https://neftegaz.ru/en/news/crime/435570-venezuela-fights-to-halt-river-borne-oil-slick

Coatzacoalcos River (2004):

https://noticias.ambientebrasil.com.br/clipping/2004/12/24/17439-vazamento-de-petroleo-atinge-praias-do-golfo-do-mexico.html

https://www.latimes.com/archives/la-xpm-2005-jan-16-fg-mexspill16-story.html

Coatzacoalcos River (2011):

https://expansion.mx/planetacnn/2012/01/14/limpiar-por-completo-el-derrame-de-crudo-en-veracruz-tomara-un-mes-mas

Catatumbo River to Lake Maracaibo (2012):

http://www.ipsnews.net/2012/04/ecobreves-venezuela-oil-spill-halts-fishing-in-lake-maracaibo

Guarapiche River (2012):

Carvajal AC, Oletta JF. Derrames petroleros y sus efectos sobre la ecología y la salud humana. Noticia Epidemiológica. 2012; 1 (35):1–40.

Coca River (Amazon basin) (2013):

https://www.bbc.com/news/world-latin-america-22836975

Lake - Unknown name (2014):

https://news.mongabay.com/2016/09/negotiations-and-protests-ongoing-in-wake-of-oil-spills-in-peruvian-amazon

A tributary of the Marañón River basin (2014):

https://news.mongabay.com/2015/03/9-months-after-amazonian-oil-pipeline-spill-effects-and-fears-linger

Stream - Unknown name (2014):

Fraser B. Oil in the forest. Science. 2016; 353(6300): 641–43.

Stream - Unknown name (2015):

https://agenciabrasil.ebc.com.br/geral/noticia/2015-06/vazamento-em-oleoduto-da-transpetro-atinge-corrego-e-chega-ao-mar

Chiriaco and Morona Rivers - 1 (2016):

https://www.bbc.com/news/world-latin-america-35636738

Chiriaco and Morona Rivers - 2 (2016):

https://news.mongabay.com/2016/06/breaking-oil-spill-in-peruvian-amazon-puts-local-communities-at-risk

Stream - Unknown name (2016):

https://news.mongabay.com/2016/06/breaking-oil-spill-in-peruvian-amazon-puts-local-communities-at-risk

Tepeyac stream and Coatzacoalcos River (2018):

https://mexiconewsdaily.com/news/veracruz-oil-spill-300-evacuated

Streams, Sogamoso and Magdalena Rivers (2018):

https://www.nsctotal.com.br/noticias/emergencia-ambiental-na-colombia-por-vazamento-de-petroleo

https://thebogotapost.com/oil-spill-wreaks-havoc-in-santander/28756

Coca and Napo Rivers (2020):

https://earther.gizmodo.com/an-oil-spill-and-the-coronavirus-are-creating-a-crisis-1843338899

Godineau River (2020):

https://trinidadexpress.com/newsextra/oil-spills-into-the-godineau-river/article_9ce5ce3c-2a6f-11eb-8102-7f9a11803055.html

Shiripuno River (2020):

https://es.mongabay.com/2021/02/derrame-petroleo-rio-shiripuno-ecuador

SUPPLEMENTARY MATERIAL S2

METHODS

Searches were conducted between September 2020 and March 2021. Searches of articles published in scientific journals (*i.e.*, excluding gray literature) were conducted in five databases: Google Scholar (https://scholar.google.com.br), Orcid (https://orcid.org), ResearchGate (https://www.researchgate.net), Science Direct (https://www.sciencedirect.com), and Web of Science (www.webofknowledge.com). For searches, we combined the following words: "mining + fish"; "mining + fish + country of Neotropical region (*e.g.*, Suriname)"; "Amazon + mining + mercury + fish"; "mercury + Neotropical fish + effects on organs"; "Samarco + fish + Doce River"; "mining + Fundão + Samarco + Brumadinho + fish"; "Lake Batata + effects on fish", "ecotoxicological + mercury"; "toxicological + mercury". Searches were performed using these combinations of words in Portuguese, English, and Spanish; and were conducted exhaustively only for negative impacts (*e.g.*, contamination) on Neotropical freshwater fishes.

SUPPLEMENTARY MATERIAL S3

METHODS

Searches were conducted between September 2020 and March 2021. We searched for impacts on fish diversity on Google Scholar (https://scholar.google.com.br), including gray literature. We used as a starting point the name of each major collapsed dam that was listed in Wise (2020) combined with the following words: fish kill; fish mortality; ichthyofauna; fish fauna. In the same search base, we used the combination of the words: "mining rupture + fish"; "tailings dam + collapse". Searches were performed using these combinations of words in Portuguese, English, and Spanish; and were conducted exaustivatelly only for negative impacts on Neotropical freshwater fishes.

REFERENCES

Wise. Chronology of major tailings dam failures. http://www.wise-uranium.org/mdaf.html. Accessed in 02/10/2020.

SUPPLEMENTARY MATERIAL S4

ON THE CYANIDE AT MINA DO ENGENHO DAM.

In Portuguese:

https://g1.globo.com/mg/minas-gerais/noticia/2019/01/31/barragens-com-maior-potencial-de-dano-do-pais-oferecem-risco-de-contaminacao-quimica-a-manancial-na-grande-bh.ghtml

SUPPLEMENTARY MATERIAL S5

ILLEGAL MINING IN COSTA RICA.

In English: https://ticotimes.net/2019/12/10/costa-rica-seizes-cyanide-and-mercury-in-operations-against-illegal-mining

In Spanish: https://www.estrategiaynegocios.net/centroamericaymundo/1340855-330/costa-rica-decomisa-cianuro-y-mercurio-en-operativos-contra-miner%EDa-ilegal

SUPPLEMENTARY MATERIAL S6

A. METHODS

Searches were conducted between September 2020 and March 2021 using the Google website as a base (https://www.google.com) and Google Scholar (https://scholar.google.com.br). For the searches withing the Google base, we used the words "cyanides", "cyanide" combined with Neotropical countries (*e.g.*, Nicaragua, Brazil), "fish", or "river", or "freshwater", or "mining", or "gold", or "spill". Searches were performed using these combinations of words in Portuguese, English, and Spanish; and were performed exhaustively only for negative impacts of cyanide on Neotropical freshwater fishes. In each search, we considered only the first 20 pages of results.

B. SEARCH RESULTS

Bambana River (1978):

Tolvanen A. The Legacy of Greenstone Resources in Nicaragua. 2003.

Omai and Essequibo Rivers (1995):

http://www.earthtimes.org/pollution/guyana-suspends-gold-diamond-mining-permits/2075

Hilson G, Monhemius AJ. Alternatives to cyanide in the gold mining industry: what prospects for the future? Journal of Cleaner Production 2006; 14:1158–67.

https://www.independent.co.uk/news/world/cyanide-from-mine-threatens-guyana-river-1597531.html

https://www.spokesman.com/stories/1995/aug/23/cyanide-poisons-major-guyana-river-325-million

Several waterbodies (1998):

http://www.ipsnoticias.net/1998/06/panama-clamor-contra-mineria-sucia-por-grave-derrame-de-cianuro

Lara River (2003):

https://wp.radioprogresohn.net/una-mina-de-sangre-y-oro-que-destruye-cerros-en-la-union-copan

Lara River (2009):

https://www.laprensa.hn/honduras/515888-97/honduras-fuga-de-cianuro-cae-al-rio-lara

https://www.biodiversidadla.org/Noticias/Honduras_nuevo_derrame_de_cianuro_al_rio_por_Yamana_Gold

San Sebastián River (Unknown):

https://noalamina.org/latinoamerica/guatemala/item/9368-confirman-hierro-y-cianuro-en-rio-san-sebastian

https://pueblosencamino.org/?p=128

Puyango-Tumbes River (Unknown):

Marshall BG, Veiga MM, Silva HAM, Guimarães JRD. Cyanide contamination of the Puyango-Tumbes River caused by artisanal gold mining in Portovelo-Zaruma, Ecuador. Curr Environ Health Rep. 2020; 7:303–10.

Tributary of Velhas River (2011):

http://g1.globo.com/brasil/noticia/2011/09/em-mg-contaminacao-de-rio-podera-ser-investigada.html

https://veja.abril.com.br/brasil/em-mg-contaminacao-de-rio-podera-ser-investigada

Several waterbodies (2015):

https://archivo.gestion.pe/empresas/barrick-confirma-multa-us-93-millones-y-lamenta-derrame-cianuro-argentina-2156219

https://www.rumbominero.com/noticias/mineria/barrick-confirma-multa-de-9-3-millones-de-dolares-y-lamenta-derrame-de-cianuro-en-argentina

Piaxtla River (2018):

http://www.mining.com/mexican-environment-officials-visit-mine-following-cyanide-spill

https://www.telesurenglish.net/news/Cyanide-Spill-in-Mexico-Traced-Back-to-Canadian-Mining-Company-20180324-0016.html

https://www.unotv.com/noticias/estados/durango/detalle/contaminacion-rio-piaxtla-derrame-cianuro-099325

Tapajós River (2018):

https://g1.globo.com/pa/santarem-regiao/noticia/2018/09/27/laudo-da-pf-alerta-para-volume-absurdo-de-lama-despejada-na-bacia-do-rio-tapajos.ghtml

SUPPLEMENTARY MATERIAL S7

METHODS

Searches were conducted between September 2020 and March 2021. Searches of articles published in scientific journals (*i.e.*, excluding gray literature) were conducted in five databases: Google Scholar (https://scholar.google.com.br), Orcid (https://orcid.org), ResearchGate (https://www.researchgate.net), Science Direct (https://www.sciencedirect.com), and Web of Science (www.webofknowledge.com). For searches, we combined the following words: "siltation effects + mining, agriculture, Neotropical fish"; siltation impacts + Neotropical fish"; and "siltation + fish". We also verify reference list of articles found; and articles citing articles found. Searches were performed using these combinations of words in Portuguese, English, and Spanish; and were conducted exhaustively only for negative impacts of siltation from mining activities on Neotropical freshwater fishes. For other activities (*e.g.*, agriculture), the search was not exhaustive, and we choose just examples of works found.

SUPPLEMENTARY MATERIAL S8

METHODS

Searches were conducted between September 2020 and March 2021. Searches of articles published in scientific journals (*i.e.*, excluding gray literature) were conducted in five databases: Google Scholar (https://scholar.google.com.br), Orcid (https://orcid.org), ResearchGate (https://www.researchgate.net), Science Direct (https://www.sciencedirect.com), and Web of Science (www.webofknowledge.com). For searches, we combined the following words: "deforestation + Neotropical fish + erosion + agriculture + mining"; "deforestation in the Neotropical region + effects on fish"; "deforestation + fish"; "deforestation + fish + Neotropical". We also verify reference list of articles found; and articles citing articles found. Searches were performed using these combinations of words in Portuguese, English, and Spanish; and were conducted exhaustively only for negative impacts of deforestation from mining activities on Neotropical freshwater fishes. For other activities (*e.g.*, agriculture), the search was not exhaustive, and we choose just examples of works found.

SUPPLEMENTARY MATERIAL S9

TRUCK LEAK

In Spanish: https://www.jornada.com.mx/2013/08/28/estados/030n1est

In Spanish: https://www.eleconomista.com.mx/politica/Confirman-un-muerto-y-derrame-de-cianuro-tras-vuelco-en-Sonora-20130823-0081.html

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