

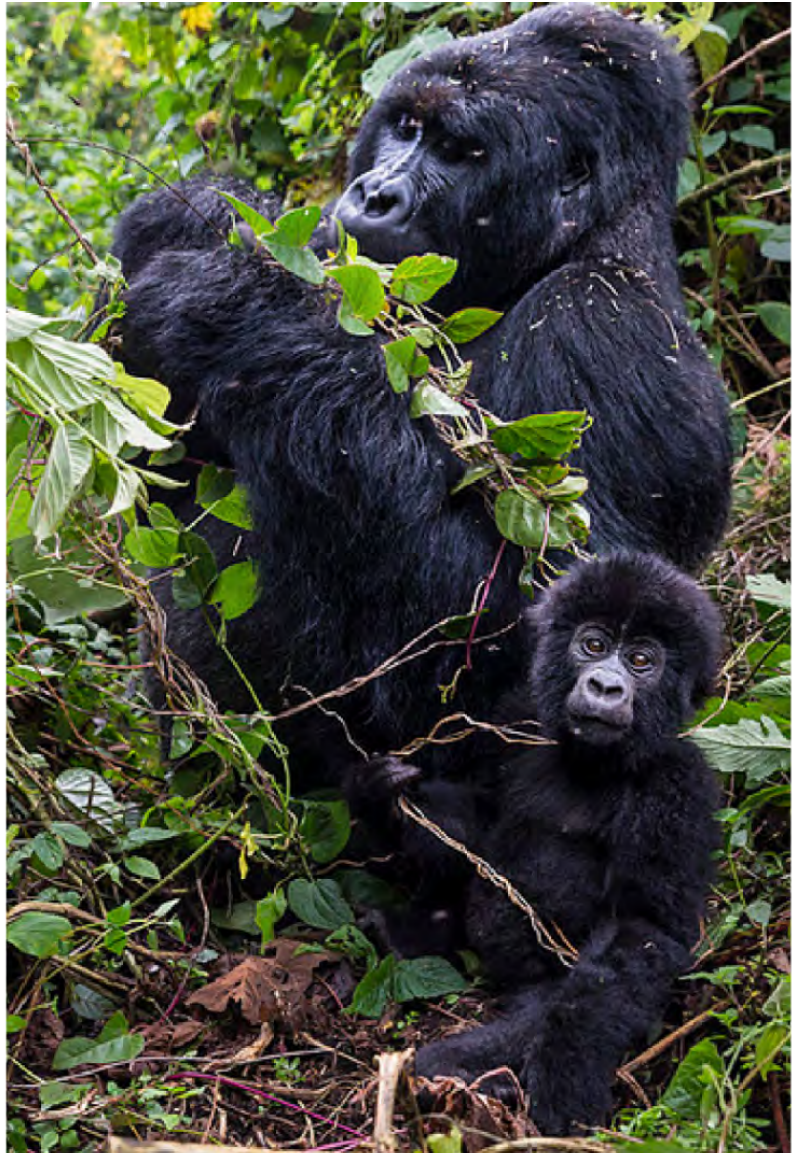
BRIEFING NOTE

Fossil Fuel and Mining Expansion Threats to Forests and Communities in the Pantropics

Introduction

Fossil fuel and mining expansion is an urgent threat that will harm climate stability, the integrity of the world's most vital ecosystems, and the Indigenous and local communities who call these regions home.

The vital forests and riverine ecosystems of the Amazon, Congo, and Borneo-Mekong Southeast Asian basins are natural and cultural wonders that are critical for the maintenance of biodiversity and climate stability. Their preservation is essential for Indigenous and local communities who call them home and for the future of humanity. The first cut is the deepest, and the expansion of fossil fuel, mining and other industrial activities have the potential to initiate a cascade of deforestation and forest degradation that follow. Without a halt to extractive activities in intact areas — and adequate protection and enforcement, the remaining forests and the Indigenous and local communities that depend on them will continue to be severely impacted. Tropical forest basins risk systemic ecosystem breakdown, and as climates warm, feedback loops get triggered, and entire canopies die off. Amazonia is already in the midst of a tipping point crisis, and in the Congo Basin, the world's second largest rainforest, a similar tipping point threshold near 25% deforestation and high degradation has also been modeled where it may no longer support rainforest ecosystems and services if that threshold is passed.^{[1](#)}



A mother and baby gorilla in the Democratic Republic of Congo's Virunga National Park, a protected World Heritage Site and most biodiverse park in Africa. Image courtesy of Brent Stirton/Getty Images for WWF-Canon

The International Energy Agency (IEA) has stated that in order to limit global warming to within the threshold of 1.5 C, no further fossil fuel expansion must take place. However, the Production Gap Report 2023 has found that governments plan to produce around 110% more fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C.² In a similar vein, the newly launched UNFCCC NDC Synthesis Report 2023 shows that national climate action plans remain insufficient to limit global temperature rise to 1.5 degrees Celsius and meet the goals of the Paris Agreement.³ An early look at the findings from the first-ever global stocktake indicates that the world is not on track to achieve the goals of the Paris Agreement. As UN member states negotiate their response to the stocktake's findings, it is important to underscore the critical need for a moratorium on the expansion of fossil fuel and other industrial activities in primary and priority forests in these regions and globally in order to create space for financial solutions (like debt relief, subsidy redirection, payments for ecosystem services, and other financial system innovations) to be established to preserve these global treasures, meet development needs and secure climate stability.



Copper mining slag dump in Congo, Image courtesy of Nada Bascarevic/Getty Images.

Imminent threats: Key facts

New mapping and analysis shows that:⁴

- Nearly 20% or one fifth of intact tropical forests in the three basins are now in active and potential oil and gas concessions.
- Nearly 25% or a quarter of intact tropical forests in the Amazon and Congo basins are now in active or potential mining concessions.
- In Indonesia nearly half of all nickel concessions, nickel being a major energy transition metal for transportation electrification, overlap with natural forests.
- Over 200 million people, including a significant proportion of Indigenous and local communities, or about 20% or one-fifth of the population in the three basin regions, live within oil and gas blocks.

Pervasive disappearance of tropical moist forest across the world

An analysis of Landsat data from 1990-2019 found 218.7 million hectares of tropical moist forest disappeared, with a further 106.5 million hectares in a degraded state. It estimated that at least 45.4% of recent degradation will likely lead to deforestation in less than ten years. Global tropical primary forest loss in 2022 totaled 4.1 million hectares, **the equivalent of 11 football fields of forest disappearing every minute.**

In the Amazon Basin, some 26% of its area show signs of deforestation and high degradation; 20% have been irreversibly converted; and 6% are highly degraded. It is projected that at least 27% of intact rainforests in the Congo Basin present in 2020 face existential threats by 2050, if the rate of deforestation and forest degradation continues. Southeast Asia has lost forest area larger than Germany – 376,000 km, or nearly one-sixth of its forests, with mounting threats from fossil fuel, mining, agribusiness, forestry and other industrial expansion.¹¹



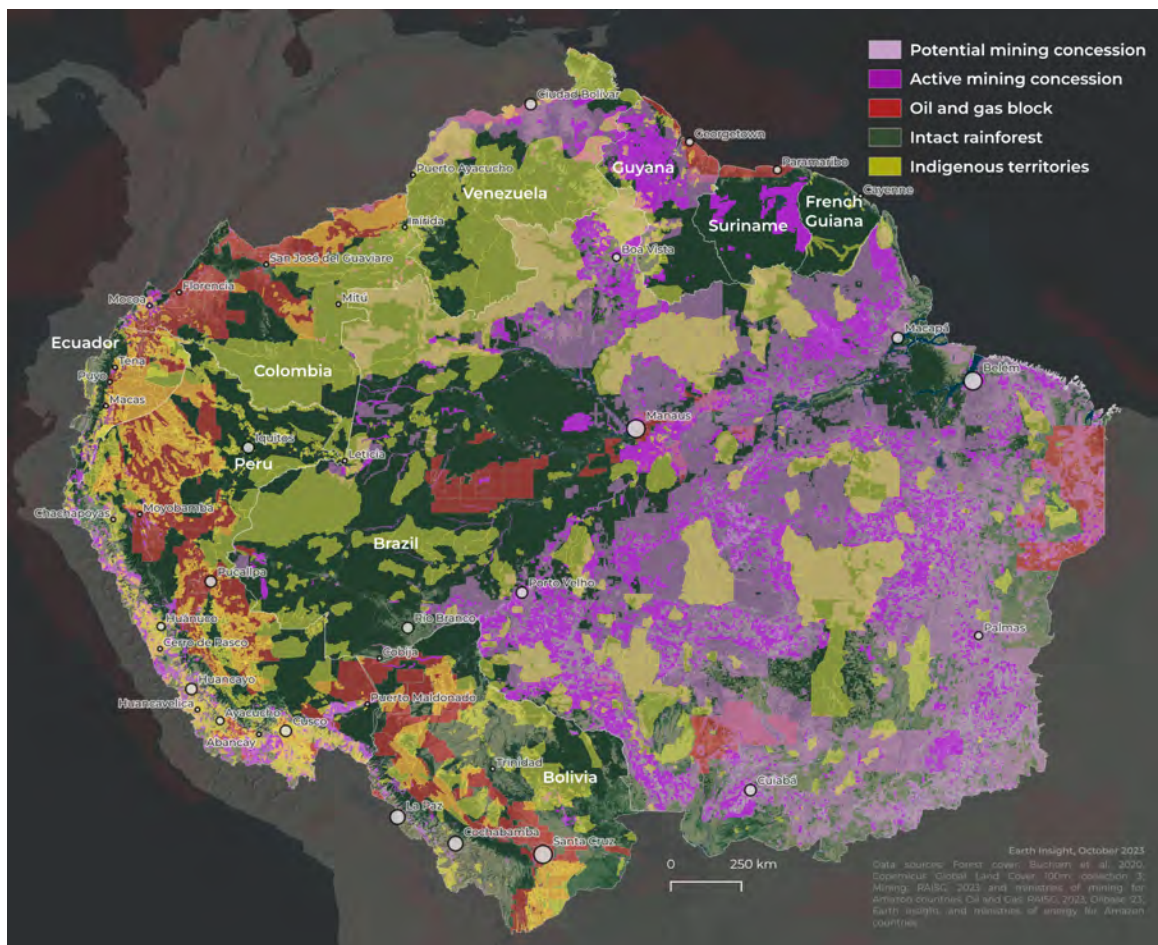
An aerial view reveals the thick mist rising from the canopy after heavy rains on virgin rainforest in South Sulawesi, Indonesia. Photo courtesy of Khairul Abdi/CIFOR-ICRAF.

Oil and gas expansion threats in the Amazon basin:

- An estimated 65 million hectares, or nearly 13% of undisturbed Tropical Moist Forests (an area nearly twice the size of Poland) overlap with oil and gas production and exploration blocks.
- Over 500 distinct Indigenous nationalities call the Amazon Basin home, and more than 31 million hectares of Indigenous Territories are now in oil and gas production and exploration blocks.
- More than 13,000 populated places—including villages, towns, etc.—representing nearly 14 million people, or more than 23% of populated places in Amazonia, now live in oil and gas production and exploration blocks.

Mining expansion threats in the Amazon basin:

- Nearly 170 million hectares, or more than 33% of undisturbed Tropical Moist Forests, overlap with active (~71m ha) and potential (~99m ha) mining concessions.⁵
- More than 70 million hectares of Indigenous Territories overlap with active (~10m ha) and potential (~60m ha) mining concessions.⁶
- In an extreme threat scenario, more than 16,000 populated places (villages, communities, towns, etc.) and 27 million people are located in active and inactive mining concessions.



Oil and gas expansion threats in the Congo basin:

Congolese country officials have been courting interest globally from oil companies in new developments in connection with the DRC's massive oil and gas block auctions. The continued development of the East African Crude Oil Pipeline (EACOP) will also make existing blocks more viable in the Eastern Congo, posing threats to Upemba and Virunga National Parks. New research indicates that:²

- Over 72 million hectares, or more than 39% of the intact Tropical Moist Forests, now overlap with oil and gas production and exploration blocks.
- Over 150 distinct ethnic groups call the Congo Basin home, and nearly 33 million people in more than 17,000 populated places — or more than 20% of populated places (villages, communities, towns, etc.) in the Congo Basin — now live in oil and gas production and exploration blocks.

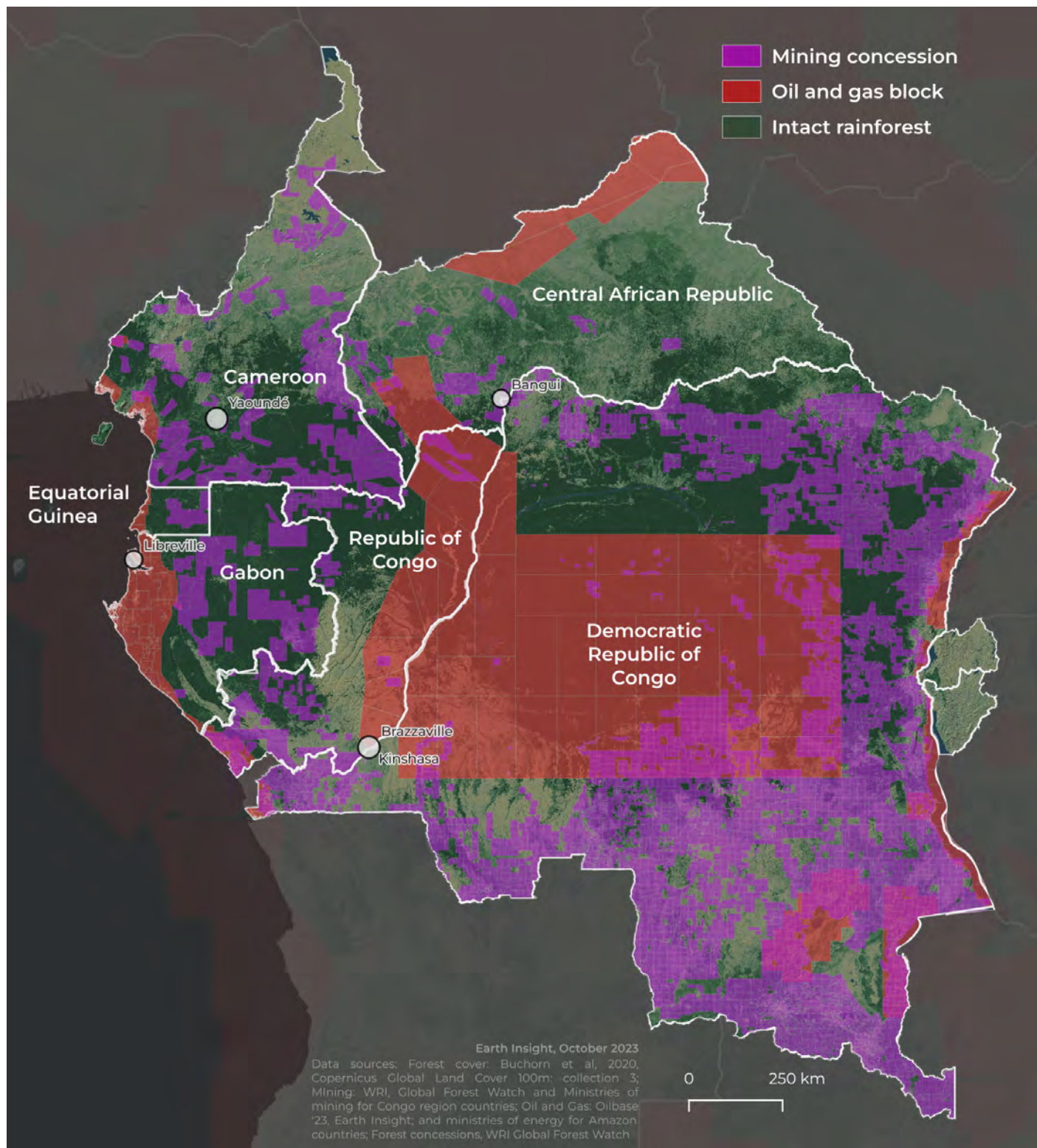
Mining expansion threats in the Congo basin:

Across the Congo basin mining expansion represents a significant threat to both ecosystems and local communities, given the associated deforestation and forest degradation, toxic impacts to communities and freshwater critical for survival. Mining expansion threats in the Congo basin are also looming:

- Nearly 48 million hectares, or nearly 27% of undisturbed Tropical Moist Forests, overlap with mining concessions.
- More than 11,000 populated places (villages, communities, towns, etc.) and 56 million people (inclusive of Indigenous and forest-based people) are located in mining concessions.



Mutanda Mine in the Democratic Republic of Congo in CBERS4 PAN10 image. It is the largest cobalt mine in the world. Located in the Katanga Province of the Democratic Republic of Congo, near Kolwezi. Image courtesy of Oton Barros (DSR/OBT/INPE) via Flickr (CC BY-SA 4.0 DEED).



Map 2. Congo basin multilevel threats

DRC's Massive Oil and Gas Auction — Priming a Carbon Bomb and Threatening Protected Areas

The Democratic Republic of the Congo (DRC) covers 60% of the Congo Basin, solidifying the country's decision-making as central to the fate of the region. In July 2022, the DRC government moved a massive auction of 30 oil and gas blocks covering more than 11 million hectares of undisturbed tropical forest – an area nearly the size of England.⁸ Apart from climatic impacts, the infrastructure required to even explore for oil in this remote and highly sensitive ecosystem could alter drainage patterns, contaminate water and open up previously intact forest areas to further deforestation.

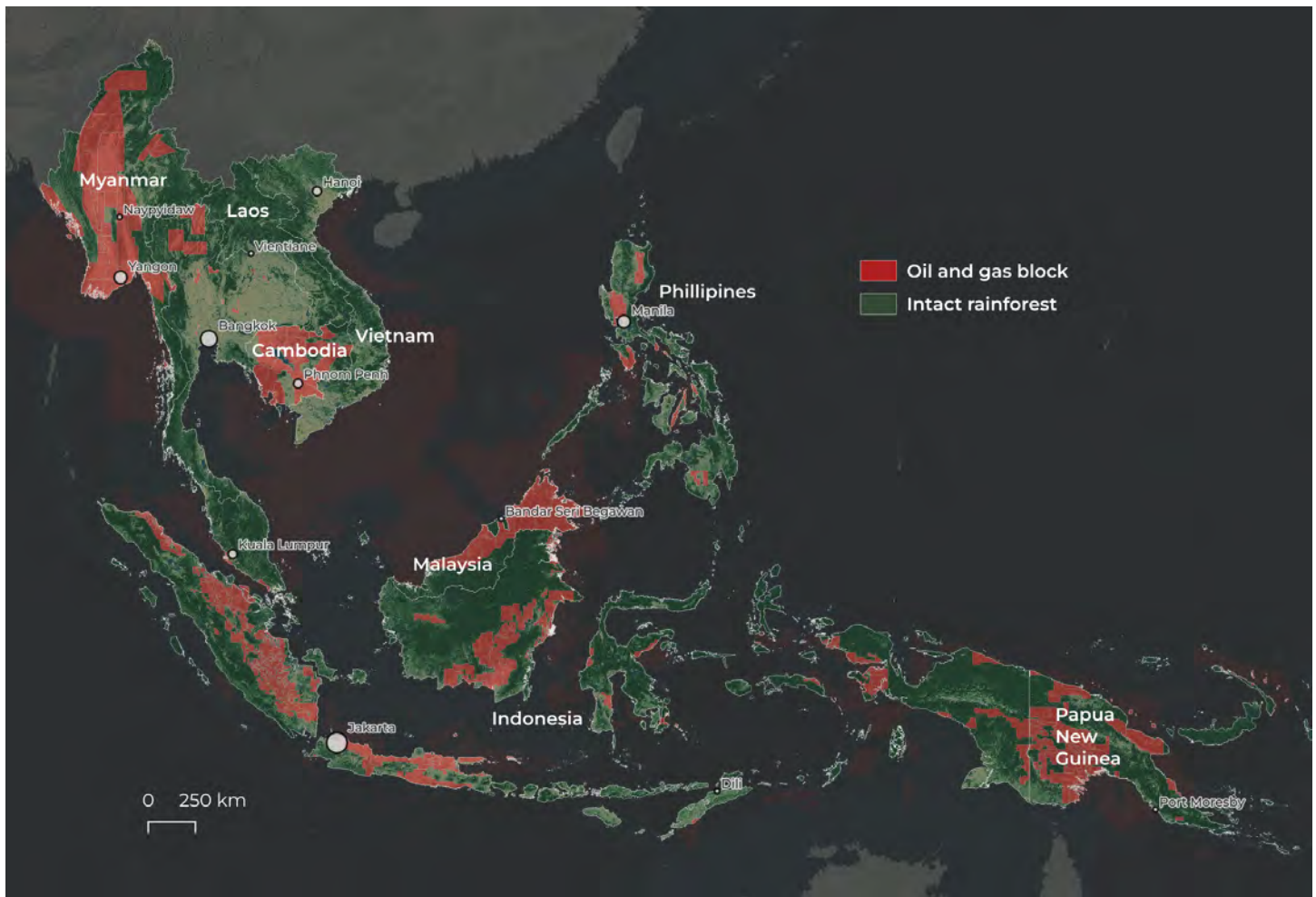
Three of these oil blocks (blocks 4, 4B and 22) overlap with the Cuvette Centrale peatlands, a globally vital carbon sink storing an estimated 29 billion tonnes -- or three years' worth of global fossil fuel emissions. The peat in these three oil blocks alone store 1.67 billion tonnes of carbon – equivalent to the carbon emitted by burning 14.2 billion barrels of oil, according to the CongoPeat initiative.⁹ This is in addition to several oil blocks that have already been allocated over these peatlands in the neighboring Republic of Congo, including to oil majors Total and ENI.¹⁰



Local people on a river in Congo. Image courtesy of Maud Salber, Rainforest Foundation UK

Oil and gas expansion threats in Southeast Asia:

- More than 34.8 million hectares are in oil and gas production and exploration blocks.
- In Indonesia, 88 million people (inclusive of a high degree of Indigenous and forest-based people) in more than 99,000 populated places (villages, communities, towns, etc.) now live in oil and gas blocks.

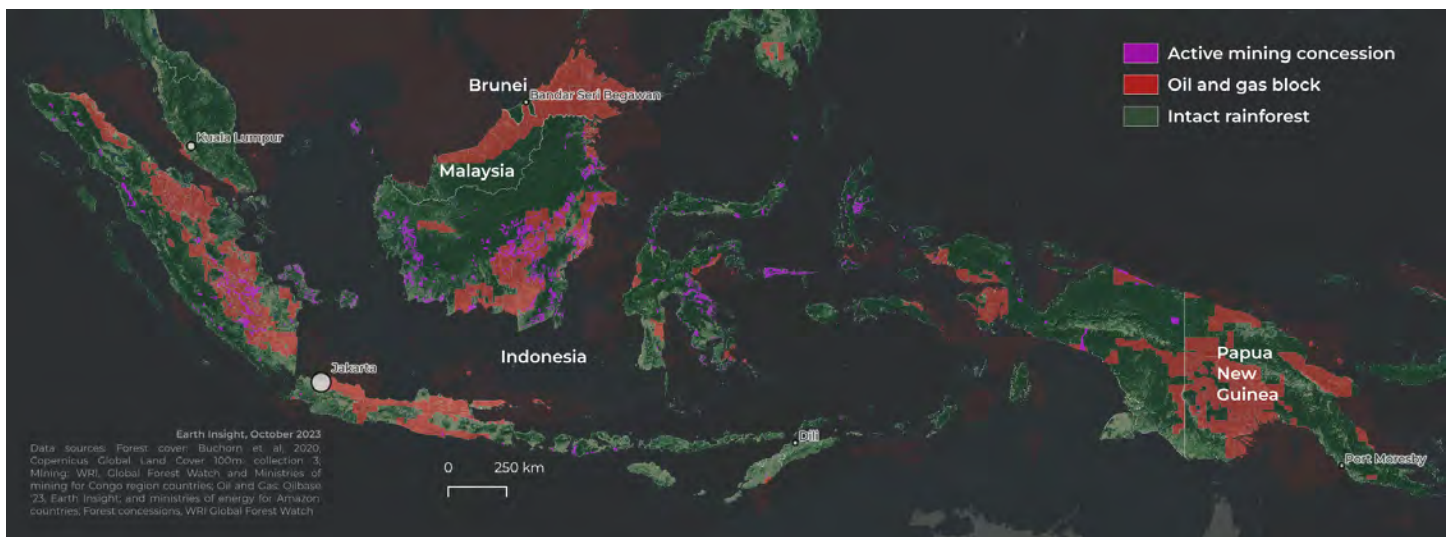


Map 3. Oil and gas threats in Southeast Asia

Mining expansion threats in Indonesia:

The world needs a just and sustainable transition to clean energy, but decarbonization calls for a massive increase in the mining and extraction of minerals such as nickel. There is an urgent need to protect critical ecosystems from mining as well as ensure that mining for the energy transition is deforestation-free.

- More than 3 million hectares of intact Tropical Moist Forests overlap with mining concessions.
- More than 450,000 hectares of nickel mining concessions and permit areas for the energy transition, or more than half of concessions, overlap with natural forests.
- Nickel deposits span more than 3 million hectares in Indonesia, and 2.5 million hectares of deposits overlap with natural forests — representing a massive risk of deforestation if nickel mining permits expand.
- More than 3,000 populated places (villages, communities, towns, etc.) and 4.5 million people (inclusive of Indigenous and forest-based peoples) are located in mining concessions.



Map 4. Threats from oil, gas, and mining in Indonesia

Protecting forests, advancing Indigenous and community rights, and averting tipping points:

Put simply, primary and intact forests must be preserved now before it is too late and the life-sustaining forest ecosystems of the three basins pass irreversible tipping points and further exacerbate the climate crisis.

The multitude of cascading industrial pressures and future threats explored in this briefing note reinforce the need for new, bold policies and financial mechanisms that are critical for global climate stability and to safeguard the forests of the three basins and the Indigenous and local communities who call them home. In a statement issued by a wide range of Indigenous, regional, and frontline organizations, heads of state from the three basins are being called upon to commit to the following:

- Scale up rights-based on legal protection, demarcation and recognition of forest communities' lands and territories, as a prerequisite to more effective forest protection.
- Uphold communities' right to fully and effectively participate in decision making on any developments planned in these areas; respecting Indigenous peoples' right to free, prior and informed consent, as well as securing the protection of those living in voluntary isolation.
- Empower and protect Indigenous peoples and other frontline environmental and human rights defenders by enhancing access to justice and providing strong legal protection for them.
- Halt and reverse loss and degradation of all natural ecosystems from large-scale agriculture, mining, extractives and other industries, such as through a global moratorium on industrial activities in primary forests as well as priority forests and through provision of legal protections for remaining natural forests, including in concession areas.
- Accelerate true, low-carbon development in tropical forest countries through a just energy transition, protecting natural forests and the rights and food sovereignty of local communities and Indigenous peoples.
- Adopt time-bound and measurable goals towards these objectives, for transparency and accountability.



A man in Indonesia carries rattan in the forest to bring home and turn into products that can be sold. Image courtesy of Khairul Abdi/CIFOR-ICRAF.

Addressing sovereign debt: A problematic driver and a powerful solution

Sovereign debt has traditionally been a driver for exploitation of natural resources, disrupting ecosystems and hindering sustainable development. There are high debt numbers in high biocultural diverse regions such as in the Congo basin reaching approximately 40 billion US dollars.

Debt distress needs to be addressed through financial mechanisms, such as debt-for nature swaps, allowing for portions of debt to be forgiven, in return for making commitments to invest in the preservation of biodiversity. Conditioned debt forgiveness can leverage tens of billions in debt repayments as a mechanism to advance protection for some of the world's most intact and vulnerable ecosystems. With international momentum building for a transformation of the global financial system to support nature protection, there is a critical window in time to leverage existing financial resources in play in the form of debt as a tool for keeping fossil fuels in the ground and advancing expanded protection for nature and the rights of Indigenous peoples and local communities.

Solutions

Regional and global awareness and momentum is building; and bold action is critical. A range of solutions and frameworks are referenced below that embody the need for both measured and accelerated action:

- The [Belem Declaration](#), if sufficient and timely action is taken, can help avert the tipping point crisis that the Amazon basin is facing.
- [A moratorium on all industrial activity in primary and priority forests until 2050](#) in order to safeguard critical ecosystems and allow time and space to develop appropriate financial system innovations, including adequate funding and payments for ecosystem services, debt relief, redirecting subsidies away from extractive industries, and to develop the legal mechanisms that support primary forest preservation and Indigenous co-management and restoration.
- [Expansion of global Indigenous land tenure, access and resource rights, direct funding for co-management, and the requirement of Free, Prior, and Informed Consent \(FPIC\)](#)
- Global financial architecture reforms that scale up financial resources towards climate action and the Sustainable Development Goals as [uplifted by the Bridgetown Initiative](#)
- [The Amazonia for Life: 80% by 2025 Declaration from Amazonian Indigenous federations](#)
- [New debt for Climate and Biodiversity commitments](#) from International Financial Institutions, such as the IMF, large debt-holding nations like China, and other debt holders in the private sector
- New frameworks for action including [the 10-Point Plan for Financing Biodiversity](#)
- Increased country-level commitments to the principles of the [Beyond Oil and Gas Alliance](#) and widespread commitments to the [Fossil Fuel Non-Proliferation Treaty](#)

- Unlocking the vast potential in renewables and scaling up direct support to forest communities and other frontline forest defenders.

Additional data

Several recent reports underscore the global need to end oil and gas expansion – especially in these and other critical forest basins and ecosystems:

- [Three Basins Threat Report: Fossil Fuel, Mining, and Industrial Expansion Threats to Forests and Communities](#)
- [Crisis Point: Oil and Gas Expansion Threats to Amazon and Congo Basin Tropical Forests and Communities](#)
- [Congo in the Crosshairs: New Oil and Gas Expansion Threats to Climate, Forests, and Communities](#)
- [Amazonia Against the Clock: a Regional Assessment on Where and How to Protect 80% by 2025](#)
- [Fuelling Failure: How coal, oil and gas sabotage all seventeen Sustainable Development Goals](#)
- BankTrack's Dodgy Deals can be found [here](#). In particular see profiles on the [DRC oil & gas auction](#); [oil and gas exploration in Virunga National Park](#); and the related [East African Crude Oil Pipeline \(EACOP\)](#), and on [Petroperú](#).
- [RAISG and the Amazonia Under Pressure](#) series
- [Amazonia Against the Clock](#) published by the Amazonia for Life: 80% by 2025 coalition.
- The Exit Amazon Oil and Gas Platform [can be found here](#)

Endnotes

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2. SEI, Climate Analytics, E3G, IISD, and UNEP. (2023). The Production Gap: Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises. Stockholm Environment Institute, Climate Analytics, E3G, International Institute for Sustainable Development and United Nations Environment Programme. <https://doi.org/10.51414/sci2023.050>
3. UNFCCC/PA/CMA/2023/12. Nationally determined contributions under the Paris Agreement Synthesis report by the secretariat. Accessed Nov. 2023 at https://unfccc.int/sites/default/files/resource/cma2023_12.pdf
4. Earth Insight (2023). Three Basins Threat Report: Fossil Fuel, Mining, and Industrial Expansion Threats to Forests and Communities. Accessed Nov 2023 at <https://www.earth-insight.org/three-basins-report-landing/>
5. Note this figure includes 99 million hectares of formerly established and now “inactive” concessions that still represent a potential expansion threat.
6. Note this figure includes 60 million hectares of formerly established and now “inactive” concessions that still represent a potential expansion threat.
7. Earth Insight (2023). Three Basins Threat Report: Fossil Fuel, Mining, and Industrial Expansion Threats to Forests and Communities. Accessed Nov 2023 at <https://www.earth-insight.org/three-basins-report-landing/>
8. Earth Insight (2022) Crisis Point: Oil and Gas Expansion Threats to Amazon and Congo. Accessed Nov. 2023 at <https://www.earth-insight.org/wp-content/uploads/2022/12/Crisis-Point-Oil-and-Gas-Expansion-Threats-to-Amazon-and-Congo-Basin-Tropical-Forests-and-Communities-Dec-2022-ism.pdf>
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11. Duhesme, C. et al. (2022, July). Forests of the Congo Basin - State of the Forest 2021. Observatory of Central African Forests (OFAC)., Accessed October 2023 at <https://www.observatoire-comifac.net/publications/edf?lang=en>

About Earth Insight

Earth Insight is a research and capacity building initiative that is a sponsored project of the Resources Legacy Fund, based in Sacramento, California. Staff and partners span the globe and represent a unique grouping of individuals and organizations with diverse backgrounds in mapping and spatial analysis, communications, and policy. Earth Insight is committed to advancing new tools, awareness, and momentum for protecting critical places and supporting civil society and indigenous and local communities in this effort.

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