

AFRICA INSTITUTE FOR ENERGY GOVERNANCE (AFIEGO)

28 REASONS WHY OIL AND GAS WILL FAIL **UGANDA'S ENERGY TRANSITION PLAN**

Ruth Nankabirwa launched the country's gas sector revenues will help finance the Energy Transition Plan (ETP) at the 28th move toward green energy. With 80 percent Conference of Parties (COP28) on climate of Uganda's electricity currently coming change. The launch signaled Uganda's from hydropower, the government is commitment to achieving carbon neutrality by 2050 and ensuring universal access to by the oil and gas sector to support wind, electricity by 2040.

Uganda's ETP is a strategic roadmap for the development and modernisation of Uganda's energy sector. It charts an ambitious, and feasible pathway to achieve universal access to modern energy and power the country's economic transformation in a sustainable and secure way.

The plan was developed by Uganda's Ministry of Energy and Mineral Development (MEMD), with support from the International Energy Agency (IEA), and provides the framework for the government's upcoming Integrated Energy Resource Master Plan.

Specifically, the objective of Uganda's ETP is to facilitate a shift from reliance on fossil fuels to a more sustainable and diversified energy system that prioritises renewable energy sources through enhancing energy access for all citizens, reducing greenhouse gas emissions, and after mitigating climate change impacts. The plan aims to align Uganda's energy sector with global climate commitments and sustainable development dangerous threats facing Uganda is climate goals.

n December 5, 2023, the Minister for However, the Ugandan government has Energy and Mineral Development, Hon. framed the transition as one where oil and committing to use the revenues generated solar and sustainable biomass projects to power isolated off-grid communities.

> Between April and July 2024, AFIEGO and partners working to promote environmental conservation, a just energy transition and human rights observance organized local communities' from Bunyoro and Greater Masaka regions to discuss Uganda's ETP and its implications on achieving the universal access to clean renewable energy for Ugandans. During the meetings, the communities raised various reasons indicating why the clean energy transition will not be achieved with oil and gas. Below, AFIEGO, a public policy research and advocacy registered civil society organization whose main objective is to influence energy policies to work for Ugandan citizens, has compiled the 28 reasons raised by the communities on why oil and gas may fail Uganda's EnergyTransition Plan. These include:

> 1. Climate change risks: One of the most

change which manifests its effects through rapid and slow-onset disasters. In its analysis of countries and regions adapting to the risks of climate change, the 2021 report of Notre Dame Global Climate Adaptation Initiative put Uganda in the 13th position at a high risk of climate change vulnerability and the 160th position out of 192 countries prepared to addresses the problem. Oil and gas projects will inject 3791 metric tons of carbon emissions into the atmosphere making it 25 times the combined yearly emissions of Uganda and Tanzania. These developments also pose a threat to Uganda's

target of reducing greenhouse gas emissions by 22% by the year 2030.

- 2. Environmental impacts: The oil and gas activities including the East African Crude Oil Pipeline (EACOP) have far-reaching and ceaseless adverse environmental effects. Protected areas such as national parks, game reserves, forests, Ramsar wetlands, lakes, rivers, marine ecosystems at the Indian Ocean in Tanzania and others will be irreversibly affected by the EACOP project². Per the World Wide Fund for Nature (WWF), the EACOP will pass through nearly 2,000 sq. km of protected areas³, a quarter of which are habitats for endangered species such as chimpanzees and the African elephant. Notably, a lot of the oil to be transported by the EACOP will be extracted from the Murchison Falls National Park (MFNP), one of Uganda's oldest, largest and most visited national parks. Some of these ecosystems also help in carbon absorption.
- **3. Burgeoning debt burden:** Uganda's increased debt is due to over borrowing to invest in the oil and gas and other energy

developments. The country's debt stock has increased from Shs. 10 trillion (USD 2.7 billion) in 2005/2006 to a projected Shs. 97.638 trillion⁴ (USD 25.716 billion) by the end of June 2024. Of this, UGX 44.6 trillion is domestic while UGX 52.8 trillion is from foreign sources. Fourty Five million (45 million) Ugandans are now indebted to this tune. The significant amounts of money borrowed to finance oil and gas infrastructures including EACOP have been a huge drag on Uganda's financial resources. This makes it difficult for Uganda to maintain economic stability while at the same time limiting government's ability to channel funds into the renewable energy sector that can ensure universal access to electricity for Ugandans.

4. Mismanagement of oil revenues: Government claims that it will use oil revenues to drive universal energy access, however, many cases abound highlighting government's suspicious secrecy, including its failure to implement relevant laws such as the 2015 Public Finance Management Act (PFMA)⁶ that promotes transparency and proper utilisation of oil revenues. Some of the cases include the UGX6 billion⁷ "Presidential Handshake", raiding the treasure to buy fighter jets, withdrawal of UGX 200 billion oil revenues from the Petroleum Fund parliamentary approval, secrecy in signing oil agreements and others. Notably, the UGX 200 billion was used was used to finance deficits of the FY2018/2019 budget which was contrary to the PFMA which provides that the oil revenue will

 $^{^1\} https://www.theguardian.com/environment/2022/oct/27/east-african-crude-oil-pipelinecarbon\#: \sim : text = An\%20oil\%20pipeline\%20under\%20construction, and$

^{%20} Tanzania%2C%20the%20host%2 Onations.

https://www.amisdelaterre.org/wp-content/uploads/2022/10/eacop-a-disaster-in-the-making-foe-france-and-survie-oct-2022.pdf

³ https://www.afiego.org/wp-content/uploads/2024/03/Factsheet-EACOP-IMPACTED-FORESTS-andWhat-Uganda-stands-to-lose.pdf

⁴ https://x.com/pwatchug/status/1801257821226311799

 $^{^5 \} https://kikubolane.com/2024/05/30/ugandas-huge-public-debt-wont-affect-economic-growth-psggoobi/\#:\sim:text=Each\%20of\%20the\%2045\%20million, greater\%$

⁶ https://www.finance.go.ug/publications/public-finance-management-act-2015

⁷https://www.monitor.co.ug/uganda/news/national/museveni-defends-oil-handshake-1698676

https://www.independent.co.ug/govt-lacks-work-plan-for-ugx-200bn-withdrawn-from-petroleum-fund/

solely be allocated to infrastructural and other development purposes only. This is proof that oil revenues may not ensure the implementation of Uganda's Energy Transition Plan.

- **Biodiversity threats:** The inclusion of oil and gas in Uganda's ETP is a risk for critical biodiversity⁹ in national parks, Ramsar wetlands, forests, lakes, and rivers. The destruction of this critical biodiversity especially in the national parks that have the potential to provide funds to support the plan will further affect the revenues that are being generated to support communities' livelihoods and the economy. For instance, the tourism sector alone contributes about 4.7%¹⁰ to the country's GDP. In addition, some people in the host communities - who like 70% of Ugandans, subsistence agriculture is their livelihood – are being displaced from their land for oil and gas developments.
- Socioeconomic displacement human rights violations: The oil projects including the EACOP, Tilenga and Kingfisher oil projects have led to the forced eviction of local communities from their lands and homes. For instance, the EACOP project has displaced 14,000 households over causing significant economic disenfranchisement. A report¹² assessing the impact of the EACOP and other oil projects against the Equator Principles also indicates that 4,865 households, accounting for 31,716¹³ individuals have been directly affected by the Tilenga oil project and roughly 2,949 individuals are affected by the Kingfisher oil project. Specifically, a report by the Human Rights Watch (HRW) indicates that the EACOP project will not only displace more than 100,000 people but has already

- caused food insecurity and household debt, forced children out of school, and is likely to leave devastating environmental effects in its wake. For the ETP to meet its agenda, therefore it should prioritise human rights particularly the rights of host communities and indigenous people.
- 7. Undermining clean renewable energy efforts: Uganda is among the few countries across the world that are endowed with alternative clean energy sources including solar, wind, hydro and others. These energy sources have the potential to support the universal energy access as envisaged by the ETP. However, the government's priority is the development of oil and gas making it hard to achieve a clean energy transition. Notably, government recently set an ambitious target of increasing clean energy share in cooking from 15% in FY 2018/19 to 50% 15. This involved distributing one million free LPG (Liquified Petroleum Gas) cylinders to Ugandans. However, this initiative failed to take off largely because many cannot afford the gas because of the unffordability of the LPG cooking. Today, over 90% of Ugandans still depend on biomass and firewood to meet their energy needs, though as per the ETP, the government is still focusing on investing in LPG.
- **8. Illicit financial flows:** Cases of illicit financial flows of oil revenues have been documented. For instance, the District court of New York implicated a Ugandan Minister for receiving a bribe of USD 500,000¹⁷ from a Chinese company for purposes of promoting its interests in the

https://www.amisdelaterre.org/wp-content/uploads/2022/10/eacop-a-disaster-in-the-making-foe-france-and-survie-oct-2022.pdf

https://www.tourism.go.ug/single-post/annual-tourism-development-performance-review-report-2022-2023-launched

¹¹ https://library.fes.de/pdf-files/bueros/uganda/13549.pdf

¹² EACOP-EPs-assessment.pdf (inclusivedevelopment.net)

¹³ https://www.inclusivedevelopment.net/wp-content/uploads/2022/07/EACOP-EPs-assessment.pdf

 $^{^{14}\} https://www.hrw.org/report/2023/07/10/our-trust-broken/loss-land-and-livelihoods-oil-development uganda$

¹⁵ https://www.newvision.co.ug/category/agriculture/uganda-targets-reduction-of-biomass-energy-usNV_182844

https://energypedia.info/wiki/Uganda_Energy_Situation#:~:text=Biomass%20is%20still%20the%20most,a

country's oil sector. In addition, existing Production Sharing Agreements (PSAs) give international oil companies undue advantage over the state with stabilisation clauses therein aimed at restricting the state's capacity to tax the companies. The recent Inspector General of Government (IGG) report indicates that the natural resources sector including oil loses UGX 868 billion¹⁸ per year due to corruption in contract royalties. In total, Uganda loses about UGX 10 trillion to corruption, annually.

9. Undermining net zero emissions target: Uganda's oil projects including the EACOP pose a risk to the country's carbon reduction plan²⁰, exacerbating land-use conflicts, deforestation, and water pollution²¹. At the time when renewable energy technologies have significantly improved and prices have become competitive, Uganda shouldn't be thinking about investing in oil especially if it undermines efforts to transition to renewable energy and reducing the potential for the country to meet its net zero emissions targets.

10. Secrecy in oil agreements and contracts: Uganda's oil agreements and contracts are often kept secret²², leaving many Ugandans uninformed about developments in the sector. Although Ugandans have called on the government to make oil documents public, disclosure of Production Sharing Agreements (PSAs) and allegations of illicit gains²³ by some individuals have continued to create a clear public concern. Unfortunately, neither the government nor investors are willing to reveal the details in the contracts.

11. Oil exploitation risks: The Human Rights Watch (HRW) report 2023²⁴, indicates that the oil projects, including the EACOP. compromise communities²⁵, ecosystems, biodiversity, and livelihoods, resulting in immediate and imminent damage to the environment.

12. Failure to comply with international agreements: Uganda is signatory to several international commitments to combat climate change and adapt to its effects including the Paris Agreement (2015), United Nations Framework Convention on Climate Change (UNFCCC)²⁶, Sustainable Development Goals (SDGs) and others²⁷. Indeed, the Intergovernmental Panel on Climate Change (IPCC)²⁸ reports have over the years called on all UNFCCC member countries to further cut their emissions way beyond the commitments made in the Nationally Determined Contributions²⁹ (NDCs) if the 2030 goal is to be achieved. Uganda is a member of the IPCC and it's our moral duty to respect the commitments we make ourselves.

13. Cultural erosion: The oil and gas developments have already disrupted local cultures and traditional practices within the host communities. For instance, the EACOP project that required the acquisition of over 2,740 acres of land has seen local communities displaced and therefore inconvenienced traditional lifestyles and cultural practices, destroyed social ties and diminished cultural identity.

Land that holds spiritual and historical significance, sacred sites, such as shrines

nd%20crop%20residues%20(4.7%25).

¹⁷ https://ugbusiness.com/2017/11/politics-policy/u-s-justice-department-accuses-sam-kutesa-ofreceiving-bribe-from-chinese-businessman

https://www.igg.go.ug/media/files/publications/IG__cost_of_corruption_flier.pdf

https://nilepost.co.ug/news/148851/govt-seeks-citizens-help-as-shs10-trillion-is-lost-every-year-tocorruption

https://gasoutlook.com/analysis/oil-pipeline-detracts-from-uganda-energy-transition-experts/

https://cri.org/eacop-briefing-paper/

https://www.voanews.com/a/secrecy-in-uganda-oil/940355.html

²³ https://www.acode-u.org/uploadedFiles/PRS94.pdf

https://www.hrw.org/report/2023/07/10/our-trust-broken/loss-land-and-livelihoods-oil-developmentuganda

 $^{^{25}\} https://www.stopeacop.net/our-news/eacops-devastating-impact-livelihoods-worsen-amidstenvironmental-damage$

²⁶ https://unfccc.int/sites/default/files/resource/Final%20TNC%20Uganda.pdf

²⁷ https://gggi.org/wp-content/uploads/2019/03/Uganda-Green-Growth-Development-Strategy-20171204.pdf

²⁸ https://www.ipcc.ch/

²⁹ https://unfccc.int/sites/default/files/NDC/2022-09/Updated%20NDC%20_Uganda_2022%20Final.pdf

and burial grounds, has all been lost to

14. Local disputes: The oil projects have already led to conflicts over land rights pitting the projects affected communities against the government and oil companies. Take the Tilenga oil project for one, where the government of Uganda sued 42 oil affected-people in the Hoima High Court for rejecting the compensation offered for their land.

This impunity enabled TotalEnergies to acquire the community land for the Tilenga oil activities in clear violation of the citizens' rights to own land and or to receive fair and adequate compensation for it.

15. Poor oil resource governance: The poor oil resource governance remains a significant concern. This is evidenced in the unending corruption and mismanagement scandals that afflict government agencies and officials in the oil sector.

As a result, lack of transparency in the contracting processes, revenue mismanagement and misappropriation of funds has become a cancer.

16. Temporary benefits of the oil sector: Uganda's ETP that considers oil and gas³⁷ as a driver to clean energy transition aims at achieving carbon neutrality by 2050. However, the EACOP, and other oil developments may offer immediate financial gains³⁸ and undermine long-term sustainable economic growth by overshadowing other green economic sector alternatives, such as renewable energy, tour, and agriculture that have potential to contribute to the ETP agenda.

17. Lock-in effect: The oil and gas investments will create an over-reliance on fossil fuels for Uganda, making it difficult to focus on renewable energy investments³⁹. Moreover, in economic terms, oil prices⁴⁰ rarely stack up and the prices per barrel are always determined by the global market. Currently, Uganda needs energy security based on the widespread rollout of renewables and the millions of clean jobs that come with it while addressing issues of climate change, environment and human rights. Uganda should not be left behind especially as many countries are transitioning from fossil fuels41 to clean renewable energy investments.

18. International relations: The oil and gas projects will harm Uganda's reputation on a global stage, affecting international ratifying partnerships and climate agreements. For instance, in 2008, there was the conflict between Uganda and the Democratic Republic of Congo (DRC) that revolved around the undetermined borders and the ownership of the strategic island of Rukwazi, located in the oil rich⁴² southern tip of Lake Albert. At least 10 people from both Uganda and DRC were killed in the border conflicts triggered by discontent over increased oil exploration activities⁴³ on the Ugandan side of the Albertine Rift. This is because the two governments excluded local communities and other interest groups in the oil agreements negotiations and other socioeconomic initiatives.

19. Limited oil jobs creation: In addition, the number of jobs created by the oil and gas sector may not be significant compared to other green sectors such as agriculture,

³⁰ https://www.petroleum.go.ug/index.php/departments/midstream/eacop-east-african-crude-oil-pipeline

https://news.mongabay.com/2023/11/disturbing-graves-is-latest-violation-attributed-to-east-african-oil -pipeline/

³² https://www.hrw.org/news/2023/07/10/uganda-oil-pipeline-project-impoverishes-thousands

³³ https://www.theeastafrican.co.ke/tea/business/court-orders-42-ugandan-families-evicted-to-make-way -for-eacop-4466332

³⁴ https://www.petersandpeters.com/case/totalenergies-accused-of-violating-peoples-property-rightsand-right-to-food-in-uganda/

³⁵ https://soc.kuleuven.be/crpd/files/working-papers/crpd-no-59-brophy-wandera-full.pdf

³⁶ https://www.acode-u.org/uploadedFiles/PRS94.pdf

 $^{^{37}\} https://www.argusmedia.com/en/news-and-insights/latest-market-news/2498206-uganda-sayscarbon-neutrality-plans-hinge-on-oil-gas$

³⁸ https://www.greeneuropeanjournal.eu/should-uganda-give-up-its-controversial-mega-oil-project/

 $^{^{39}\} https://www.ncronline.org/earthbeat/justice/ugandas-quest-sustainable-energy-poses-freshenvironmental-threats$

 $^{^{40}\} https://www.imf.org/en/Blogs/Articles/2016/03/24/oil-prices-and-the-global-economy-its-complicated$

⁴¹ https://www.reuters.com/sustainability/climate-energy/over-110-countries-set-join-cop28-deal-triplerenewable-energy-2023-12-02/

renewable energy, fisheries and, tourism. For instance, the EACOP is said to provide only 100,000⁴⁴ jobs to Ugandans yet the activities will lead to adverse climate change and environmental degradation. Unfortunately for the many students that have since enrolled for oil and gas courses at institutions of higher learning, they will soon realise that the available jobs in the sector are way less than the trained workforce.

Diversion of investments: The diversion of investments into oil and gas can undermine Uganda's ETP by channeling financial resources away from renewable energy projects and infrastructure such as solar, wind, hydro power and others. This imbalance can stall the growth of sustainable energy infrastructure, delay the implementation of energy efficiency measures, and inhibit innovation in green technologies. As a result, Uganda's ability to achieve its long-term energy transition⁴⁵ goals are compromised, potentially locking the country into a fossil fuel-dependent future and missing critical opportunities to advance towards a more sustainable and resilient energy system.

21. Limited future demand: There is evidence that the future demand for oil and gas is expected to be limited due to several factors including the global push decarbonisation, technological advancements in renewable energy, and evolving consumer preferences for cleaner energy sources. More so, governments worldwide are implementing strict climate policies and investing heavily in clean renewable energy alternatives like wind, solar, and electric vehicles to reduce greenhouse gas emissions. Additionally, the rapid innovation and decreasing costs of renewable technologies makes them increasingly competitive against fossil fuels. This transition is supported by financial

markets and institutions increasingly favoring investments in sustainable and low-carbon technologies, underscoring a broader and accelerating shift away from fossil fuels.

22. Inequalities in oil revenue sharing: Uganda's oil and gas wealth may increase social and economic inequalities as the benefits may disproportionately favor wealthy corporations and individuals with connections to these oil companies, leaving marginalised communities at a disadvantage. For instance, the EACOP shares' distribution stands at 15% each for the governments of Uganda and Tanzania, 8% for CNOOC and 62% for TotalEnergies. Moreover, the focus on fossil fuels has diverted resources and attention from sustainable energy initiatives that could more equitably distribute benefits and mitigate climate-related impacts.

23. Water and food security risks: More so, from the EACOP, with nearly a third of the pipeline route cutting through the Lake Victoria basin.

As the second largest freshwater lake in the world and the largest inland freshwater lake in Africa, any oil spills in Lake Victoria would destabilise up to 42 million people in East Africa who depend on it for their daily water needs.

In addition, with 39.9% of the fish caught in Uganda coming from Lake Victoria its importance cannot be overemphasized.

Notably, the fisheries sector contributes 2.3% to Uganda's GDP and is one of the country's top foreign exchange earners.

24. Volatility of oil and gas market: The volatility of the oil and gas market poses significant challenges to Uganda's ETP especially the fluctuating oil prices and market uncertainties that can suffocate the growth of renewable energy initiatives.

 $^{^{42}\} https://www.opensocietyfoundations.org/newsroom/civil-society-groups-urge-drc-and-uganda-resolveborder-impasse-oil-rich-albertine$

⁴³ https://www.opensocietyfoundations.org/newsroom/civil-society-groups-urge-drc-and-uganda-resolveborder-impasse-oil-rich-albertine

https://chimpreports.com/eacop-to-create-over-100000-jobs-for-ugandans-nabakooba/

⁴⁵ https://kalikumutima.com/the-just-energy-transition-in-uganda-opportunities-risks-and-bottlenecks/

Rapid fluctuations in oil prices can lead to boom-and-bust cycles that diminish investor confidence and hinder long-term planning and investment in sustainable energy solutions. In periods of high oil prices, there may be a temptation to prioritise fossil fuel extraction and revenue over the development of renewables, diverting funds and attention from necessary investments in clean energy infrastructure. Conversely, in times of low prices, the resulting budget constraints could force the government to cut funding for innovative energy projects, further delaying the transition. instability undermines the commitment to a consistent, strategic approach to energy ultimately jeopardizing diversification, Uganda's sustainable energy future.

25. Diversion of policy focus: The diversion of policy focus toward oil and gas will derail Uganda's energy transition⁵⁰ plan by shifting governmental priorities away from renewable energy and sustainability initiatives. As attention and resources concentrate on developing and exploiting fossil fuel reserves, investments, and support for clean energy projects weakens. This misalignment delays the boost needed to develop a sustainable energy future, slowing Uganda's progress towards a green and resilient energy future.

26. Cross-border impacts: The impact from oil projects like EACOP will not only be felt in Uganda but across its borders as well because of shared resources like Lake Victoria (with Kenya and Tanzania) and Lake Albert (with the DRC).

Lake Albert, which is the country's second largest lake and Africa's seventh-largest, is located in the very region which hosts Uganda's oil and gas discoveries.

The lake employs millions of fishermen in Uganda and the DRC, while also being a source of water for neighbourhood communities in both countries.

The transition shouldn't be done at the expense of people's livelihoods, as any oil spills in the lake can be devastating..

27. International trends in oil and gas markets, including fluctuating prices and a global shift towards renewable energy, could significantly undermine Uganda's ETP. As countries around the world increasingly commit to reducing fossil fuel dependence⁵³ and enhancing renewable energy adoption due to climate change concerns, Uganda could find itself locked into a declining oil market that diminishes investment in cleaner

alternatives. Additionally, fluctuating global oil prices may complicate Uganda's economic stability, leading to potential over-reliance on oil revenue at the expense of renewable initiatives. Furthermore, international pressures such as divestment campaigns⁵⁴ targeting fossil fuels may limit Uganda's ability to attract foreign investment in its oil and gas sectors, hindering overall development and delaying the transition to sustainable energy.

28. Financial risks associated with the oil and gas sector could critically undermine Uganda's ETP by diverting essential investments and resources away from renewable energy initiatives. The volatility of global oil prices can lead to unstable revenues, creating a budgetary dependency that prioritizes fossil fuel extraction over sustainable energy development. Furthermore, the high capital costs of oil and gas projects may strain the national budget and limit available funding for the transition to renewables. Also, the reliance on fossil

⁴⁷ https://cri.org/eacop-briefing-paper/

⁴⁸ https://www.sciencedirect.com/science/article/pii/S0380133023001648

 $^{{}^{49}\} https://www.rvo.nl/sites/default/files/2022-05/Aquaculture-Road-Map-Uganda-Opportunities-in-the aquaculture-value-chain.pdf$

https://memd.go.ug/wp-content/uploads/2020/07/Uganda2023-Energy-Policy-Review.pdf

 $^{^{51}\} https://www.amisdelaterre.org/wp-content/uploads/2022/10/eacop-a-disaster-in-the-making-foefrance-and-survie-oct-2022.pdf$

https://www.africangreatlakesinform.org/article/lakealbert#:~:text=Lake%20Albert%20is%20located%20in,area%20of%205%2C300%20km2.

fuels increases the risk of stranded assets as global trends shift toward sustainability. For Uganda, this implies that huge investments in oil and gas infrastructure like pipelines or refineries may lose worth before they even offset their costs. Furthermore, public and private resources will be wasted with stranded assets resulting in severe economic losses. What's more, Uganda might accumulate debt or financial obligations and divert money from important areas like social services and renewable energy development which might eventually impede the nation's journey to a sustainable energy transition.

Conclusion

Exploiting oil in Uganda presents numerous risks and challenges that could undermine country's ETP. These concerns span from environmental degradation, economic instability, social injustices, and technological dependencies, all of which could counteract efforts to achieve a sustainable and resilient energy future. Addressing these issues and focusing on renewable energy sources might offer a more effective and sustainable path forward for Uganda's energy transition goals. When these 28 reasons are considered, policymakers and stakeholders can better evaluate the implications of oil exploitation versus pursuing cleaner, more sustainable energy alternatives.

⁵³ https://www.theguardian.com/environment/2024/feb/09/biggest-fossil-fuel-emissions-shipping-planemanufacturing

 $^{^{54}\} https://www.urgewald.org/sites/default/files/mediafiles/WhoisFinancingFossilFuelAfrica_Doppelseiten_LR.pdf$