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Locating the financial impacts from stranded fossil-fuel assets

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Stranded assets from the low-carbon energy transition could pose financial risks: this circumstance is now well understood. However, much less is known about just how stranded assets and transition or physical risks are connected.

One issue is that the financial risk may sit elsewhere than the stranded asset, geographically. Recent research is now breaking ground by linking granular understanding of asset-level stranded assets with their remote financial owners and thus climate-related financial risks.

An emerging pattern is that financial investors in rich countries are exposed to stranded asset risk in developing countries in addition to risks in their home countries. But that also implies that they have a greater influence over and responsibility for reducing overinvestments not just domestically but, in effect, globally. This applies especially to assets exposed to transition risks, which are contributing to physical risks through their emissions.

Manych et al. (2021), in "Finance-based accounting of coal emissions," analyze the location of finance providers for new coal power plants. While nearly all new coal power plants are now built in developing countries, the authors harness data from urgewald to show that both debt and equity investors from the USA, Europe and Japan play a major role in financing these potentially stranded assets..

Mandel et al. (2021), in "Risks on global financial stability induced by climate change: the case of flood risks," look at the propagation of physical risks from coastal flooding. The authors compute monetary values of damages per country and show how the financial sector amplifies them (including via insurance payments). They use bilateral financial exposures from the European Commission's Joint Research Centre. They find that rich countries have the largest ratio of amplified financial impact to actual domestic damages from flooding.

Most recently, **Semieniuk et al.** (2022), in "Stranded fossil-fuel assets translate to major losses for investors in advanced economies," trace the stranded asset risk ownership under plausible changes in expectations about future fossil-fuel demand from the world's oil and gas fields to their ulimate financial owners using ORBIS data. They find a robust net transfer of 15-20

There is still much work to be done to better understand international financial ownership chains. One example of our limited understanding of where financial profits go is provided by **Ndikumana and Boyce** (2022), in "On the Trail of Capital Flight from Africa: The Takers and the Enablers," who show that the illicit financial outflows from various countries in Africa are larger than the inflows via official development aid.

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