



Climate Action Network International

CAN Position

The need for restrictions on Fossil Fuel Supply

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Climate Action Network (CAN) is the world's largest network of civil society organizations working together to promote government action to address the climate crisis, with more than 1300 members in over 120 countries. www.climatenetwork.org

"It is the urgent responsibility and moral obligation of wealthy fossil fuel producers in particular, to lead in putting an end to fossil fuel development and to manage the decline of existing production."

The Lofoten Declaration, September 2017. More than 500 global organizational signatories, including CAN.

"Research shows that the carbon embedded in existing fossil fuel production will take us far beyond safe climate limits. Thus, not only are new exploration and new production incompatible with limiting global warming to well below 2°C (and as close to 1.5°C as possible), but many existing projects will need to be phased out faster than their natural decline. Simply put: there is no more room for new fossil fuel infrastructure and therefore no case for ongoing investment."

Declaration on Climate Finance, December 2017. Signed by more than 400 leading global economists.

Position Summary

CAN affirms that managing the rapid transition away from fossil fuels is the most crucial element of achieving the Paris climate goals. In addition to decreasing fossil fuel demand, parallel policies to restrict fossil fuel supply create the circumstances and promote the technologies that provide alternatives to fossil fuel use, making them an essential part of the climate policy toolkit.

A rapid transition does not mean stopping the production and use of all fossil fuels overnight. But it does mean no longer adding to the problem by developing new resources and infrastructure, and phasing out existing production at the pace required to meet the Paris targets. In many or even most locations, there will be significant co-benefits to ending the environmental and social harms of fossil fuel development and replacing it with more jobs-intensive clean energy development. Successful efforts must include close coordination with local community voices and consideration of local conditions.

- *CAN demands that the wealthiest countries must move first and fastest to phase out fossil fuel extraction, and on the basis of climate justice, they must assist poor developing countries with their own phaseout.*

- *CAN urges wealthy countries to assist poorer countries to leapfrog the fossil fuel economy through adequate climate finance, capacity-building, and technology transfer efforts that protect their residents and the environment.*
- *CAN supports efforts by governments and international and national stakeholders, including companies, to conduct a carefully managed decline of the fossil fuel industry, working in coalitions with trade unions and other social partners to ensure a just transition for the workers and communities that depend on it.*
- *CAN demands that this managed decline and the consequent retirement of fossil fuel reserves be conducted in line with carbon budgets identified by the IPCC, to not exceed 1.5°C average global warming by the end of this century.*

Background

Airborne pollution from fossil fuels, principally carbon dioxide (CO₂), but also methane (CH₄), constitute almost three-quarters of global greenhouse gas (GHG) emissions. To date, global action to mitigate climate change has overwhelmingly focused on the point at which carbon enters the atmosphere, rather than the process by which it leaves the ground. For fossil fuels, this has meant focusing on demand and combustion rather than supply and extraction through energy efficiency policies, carbon pricing, and renewable energy incentives^{1,2}. These measures, along with efforts to address emissions from sectors, such as land use, agriculture, forestry, and industrial manufacturing, form the established backbone of global climate change mitigation.

While these demand-side measures are critical, they are insufficient to adequately address climate change and put the world on track to meet the Paris Agreement goals of limiting global warming to well below 2°C, and aspiring to keep it as close to 1.5°C as possible³. To fill this gap, **CAN urges collective and parallel action by governments to manage a just and equitable phaseout of fossil fuel supply by leaving coal, oil, and gas in the ground. Otherwise, the goals set out in the Paris Agreement cannot be met⁴.**

Based on principles of equity (see Appendix 1), CAN affirms that it is the urgent responsibility and moral obligation of wealthy, fossil fuel-producing countries and emerging economies to lead in ending fossil fuel development, and to manage the decline of existing production. If this urgent priority is not addressed, and the fossil fuel industry is permitted to continue exploring for and developing new oil, gas, and coal infrastructure projects, economic and political forces will lock in growing dirty emissions for decades to come.

¹ Fergus Green and Richard Denniss, "Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies," *Climatic Change*, March 12, 2018. <https://doi.org/10.1007/s10584-018-2162-x>

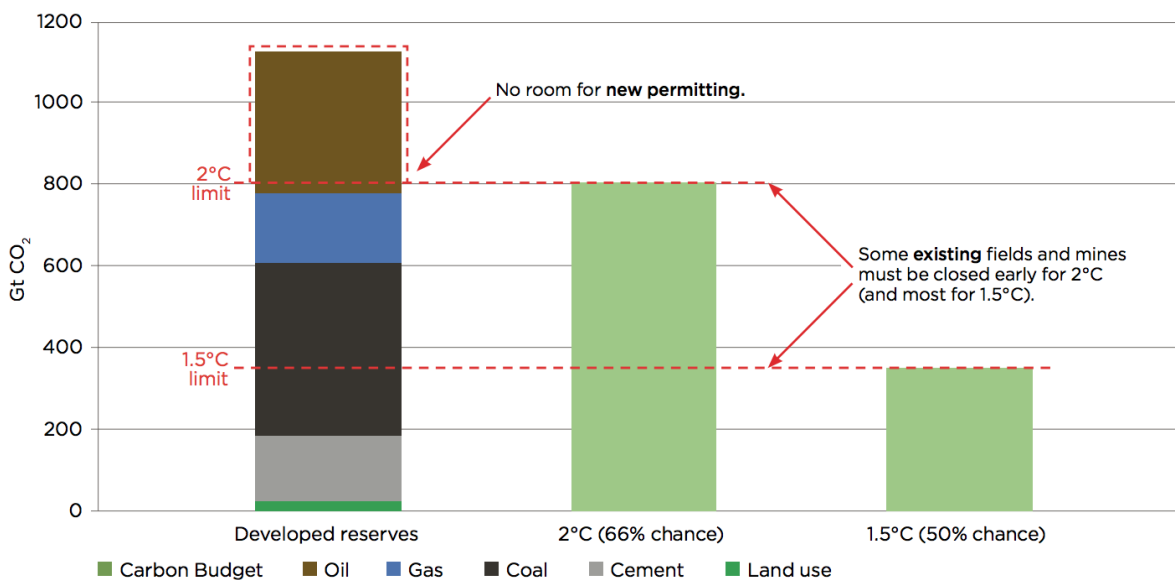
² Michael Lazarus, Peter Erickson, and Kevin Tempest, "Supply-side climate policy: the road less taken," SEI Working Paper No. 2015-13, October 2015 <https://www.sei.org/publications/supply-side-climate-policy-the-road-less-taken/>

³ Climate Action Tracker, accessed June 7, 2018. <https://climateactiontracker.org/global/cat-emissions-gaps/>

⁴ Greg Muttitt, "The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production," Oil Change International, September 22, 2016. <http://priceofoil.org/2016/09/22/the-skys-limit-report/>

Already today, there is no atmospheric space for new fossil fuel reserves at the current level of reserve extraction. According to the IPCC, the cumulative carbon budget for meeting a 1.5°C pathway amounts to 550-750 Gt CO₂ from 2018 onwards⁵. The GHG emissions from burning oil, gas, and coal in the world's currently operating fields and mines would exceed all carbon budgets consistent with the Paris goals (Figure 1).

Figure 1: Carbon Dioxide Emissions from Developed Fossil Fuel Reserves, Compared to Carbon Budgets for Likely Chance of 2°C and Medium Chance of 1.5°C⁶



ESI Sources: Rystad Energy, International Energy Agency (IEA), World Energy Council, Intergovernmental Panel on Climate Change (IPCC), Oil Change International analysis²

Despite growing fossil fuel consumption in recent decades, readily available fossil fuel reserves had been growing considerably because of technological progress. Many physically available fossil fuel resources, including unconventional fossil fuels, such as deep sea and shale oil and gas, became economically viable as reserves. Yet the global fossil fuel resource base is still more than 10 times larger than these reserves⁷.

Even if some stakeholders held out hopes that major technology bottlenecks can be overcome in the future, so that aggressive carbon capture and storage (CCS) removed 1-4 Gt CO₂ per year from the

⁵ DRAFT Summary for Policy Makers (SPM) on IPCC Special Report on 1.5 C, 2nd version, 4th June 2018; unpublished.

⁶ We include projections of land use and cement emissions for the context, because they are the primary non-energy sources of carbon dioxide emissions. Cement emissions are the most difficult to reduce given current technological options

⁷ The world consumes about 500 exajoules (EJ) of energy per year, current fossil fuel reserves amount to about 40,000 EJ, while resources stand at about 571,000 EJ, or 1,150 years of consumption at today's rates. See: https://www.geozentrum-hannover.de/DE/Themen/Energie/Downloads/Energiestudie_2016.pdf;jsessionid=46D09CC1D9047F1006AF3AC146FD8A9B.1_cid292?_blob=publicationFile&v=3

mid-century onwards⁸, the resulting reductions will be far too modest to offset the available fossil fuel supplies.

CAN, therefore, concludes that a significant proportion of existing fossil fuel projects must be phased out before their reserves are exhausted in order to limit warming to well below 2° or 1.5°C. And the first rule of thumb is that, when you are in the hole, you stop digging: governments must stop issuing licenses and leases for new fossil fuel development projects.

CAN supports the global move to 100% renewable energy by mid-century at the very latest, one of the crucial pre-conditions to not exceed the 1.5°C temperature threshold⁹. This timeline, coupled with the limitations of the global carbon budget, leaves no room for more fossil fuel exploration and expansion, nor for any further development of so-called “clean” coal, or for “low-carbon” fossil gas that is falsely viewed as a transitional or bridging fuel¹⁰. We cannot afford the emissions from any new fossil fuel reserves, nor even from a proportion of existing fossil fuel projects.

Success against climate change requires using all the available tools at our disposal, including government actions to restrict the supply of fossil fuels, as well as curbing fossil fuel demand.

Why Extraction Must Be Addressed

There is no room in our atmosphere for all the carbon in existing fossil fuel reserves and projects. The potential carbon emissions from the oil, gas, and coal in the world’s currently-operating fields and mines would take us far beyond 2°C of warming¹¹. Reaching the Paris Agreement goals will require a significant number of existing fossil fuel projects to cease production well before their expected lifespans are exhausted. Any additional exploration and development of new wells, fields, and mines would only further magnify this challenge. Furthermore, fossil fuel extraction does not have a strong track record of inclusive development, and distributed renewables offer more opportunities for the poor than gridded centralized fossils.

Fossil fuel production, storage, and distribution also releases significant quantities of methane (CH₄), a greenhouse gas eighty-seven times more potent than CO₂ over a 20-year time scale. Although methane is shorter-lived than CO₂, unless phased out, it will remain a potent source of accelerating warming over the coming decades, leading to feedbacks that can exacerbate atmospheric GHG loading. Increased efforts to immediately avoid leakage of methane from any existing fossil fuel supply chains remain essential, if climate impacts are to be reduced.

⁸ CCS Institute, 2018 http://www.globalccsinstitute.com/sites/www.globalccsinstitute.com/files/uploads/global-status/1-0_4529_CCS_Global_Status_Book_layout-WAW_spreads.pdf

⁹ http://www.climatechangeinternational.org/sites/default/files/can_position-long_term_global_goals_for_2050.pdf

¹⁰ Oil Change International, “Burning the gas bridge fuel myth”, November 2017, <http://priceofoil.org/content/uploads/2017/11/gas-briefing-nov-2017-v5.pdf>

¹¹ Greg Muttitt, “The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production,” Oil Change International, September 22, 2016. <http://priceofoil.org/2016/09/22/the-skys-limit-report/>

Given the urgent need for greater ambition to stay within the Paris targets, governments must utilize all the tools available to them to accelerate equitable action, including ending expansion and phasing-out the production of fossil fuels. In other policy arenas, measures to limit the supply and promotion of harmful substance (including their phase-out or regional sales bans) – cigarettes, asbestos, DDT¹², ozone-depleting CFCs¹³, PCBs¹⁴, plastic bags – have been widely accepted and utilized as components of comprehensive policy plans to limit their damaging effects, as have measures against the industry interference involved in direct production and promotion of these substances¹⁵.

Carbon Lock-in

One of the major barriers to closing down existing fossil fuel projects prior to their expiration date is the financial structure in play. Once significant capital has been sunk up front into exploration and development, there is little incentive for fossil producers to wind down production early¹⁶. Even if initial capital expenditure is written off, oil, gas and coal producers will continue producing, unless fossil fuel prices drop below the marginal costs of operation¹⁷.

There are also substantial political barriers to winding down fossil fuel infrastructure once they are built¹⁸. Fossil fuel companies, including extractors, transporters and utility energy producers, carry disproportionate influence over governments in the jurisdictions, where they operate, including through significant campaigning and government finance. This influence not only undermines needed carbon mitigation policies, but also drives governments to subsidize and finance fossil fuel projects, even as other climate policies undermine their viability¹⁹. Meanwhile, residents, especially in low-income communities, tend to bear the health and physical brunt of fossil fuel projects. Drilling, mining, and fossil fuel power plants are often sited in and near low-income communities.

With the carbon risks from fossil fuel projects clearly established, governments should no longer burden the public with the liability for new fossil fuel projects²⁰. Fossil fuel companies must take on

¹² Pesticide Action Network (PAN), 2017 <http://www.panna.org/resources/ddt-story>

¹³ The Montreal Protocol, Ozone Secretariat, 2018 <http://ozone.unep.org/en/treaties-and-decisions/montreal-protocol-substances-deplete-ozone-layer>

¹⁴ The Stockholm Convention on Persistent Organic Pollutants (POP), 2017 <https://wedocs.unep.org/bitstream/handle/20.500.11822/20786/PCB%20Brochure%20%282017%29.pdf?sequence=1&isAllowed=y>

¹⁵ Kelly Trout et al. “The Sky’s Limit California: Why the Paris climate goals demand that California lead in a managed decline of oil production,” Oil Change International, May 2018.

<http://priceofoil.org/content/uploads/2018/05/Skys-Limit-California-Oil-Production-R2.pdf>

¹⁶ Gregory Unruh, “Understanding carbon lock-in,” Energy policy 28 (12), 2000, pp. 817-830.

¹⁷ Peter Erickson, “Confronting carbon lock-in: Canada’s oil sands,” Stockholm Environment Institute, May 24, 2018. <https://www.sei.org/publications/confronting-carbon-lock-canadas-oil-sands/>

¹⁸ Karen Seto et al, “Carbon Lock-In: Types, Causes, and Policy Implications,” Annual Review of Environment and Resources vol 41 (2016); pp. 425–52.

¹⁹ Climate Action Network International, “G20 Issue Brief: fossil fuel subsidies,” May 1, 2018. <http://www.climateactionnetwork.org/publication/can-g20-issue-brief-fossil-fuel-subsidies-may-2018>

²⁰ <https://www.ifc.org/wps/wcm/connect/294e55004ba934bca5adbd54825436ab/01.0+Volume+I+-+The+World+Bank+and+Extractive+Industries,+EI+Review+Report,+ENG.pdf?MOD=AJPERES>

entirety of costs of early closure, and should not be permitted under any circumstances to pass this on to governments.

Financial institutions are also recognizing the growing risks of fossil fuel investment. Institutions, such as the World Bank, private insurers, such as AXA (withdrawing close to 1.1 billion CAD in insurance to oil sands and related pipelines²¹), banks, such as BNP Paribas, ING, and HSBC, and pension funds, such as Sweden's AP7, are among those withdrawing billions from fossil fuels, including infrastructure such as pipelines, through various policy reforms²². There is also mounting pressure on companies as well as investors to disclose climate-related risks, the Task Force on Climate-Related Risk Disclosures (TCFD) being a mainstream example²³.

As well, fossil fuels are often extracted from some of the most biologically diverse environments in the world, leading to serious ecosystem and habitat destruction. Recent research has identified 181 "high-risk" locations where potential for oil or gas extraction coincides with important centres of biodiversity, making conflicts between extraction and conservation probable. World-wide, protected areas are located on US\$3 to \$15 trillions of unexploited hydrocarbon reserves²⁴.

Leakage

Fossil fuel markets are created where supply and demand meet. Fossil fuel producers therefore play a critical role in shaping the economics of mitigating carbon.

Economists have long understood that increasing the supply of a commodity can induce demand by lowering its price. For example, the recent shale production boom in the United States has contributed to declines in oil and gas prices, undermining energy efficiency standards and other incentives for vehicles and buildings. The same dynamic can take hold when policies that reduce fossil fuel demand, but fail to also restrict supply, undermine their own intent by driving down prices.

Almost all deep and ambitious decarbonisation scenarios show fossil fuel prices falling dramatically in the decades to come. This is why supply-side curtailments of fossil fuels can help deliver emissions reductions more cost-effectively than demand-side policies alone²⁵. Both are absolutely essential for effective climate mitigation.

²¹ Joshua S Hill, "World Bank, ING, and AXA announce fossil fuel divestment worth billions," Clean Technica, December 13, 2017, <https://cleantechnica.com/2017/12/13/world-bank-ing-axa-announce-fossil-fuel-divestment-worth-billions/>

²² Elizabeth McSheffrey, "Europe's biggest bank retreats from the oil sands," National Observer, April 20, 2018, <https://www.nationalobserver.com/2018/04/20/news/europes-biggest-bank-retreats-oilsands>

²³ <https://www.fsb-tcf.org/>

²⁴ Harfoot et. al., Present and future biodiversity risks from fossil fuel exploitation, Conservation Letters, March 2018; <https://onlinelibrary.wiley.com/doi/full/10.1111/conl.12448>

²⁵ See: Michael Lazarus, Peter Erickson, and Kevin Tempest, "Supply-side climate policy: the road less taken," SEI Working Paper No. 2015-13, October 2015. <https://www.sei.org/publications/supply-side-climate-policy-the-road-less-taken/>; Taran Fæhn et al, "Climate Policies in a Fossil Fuel Producing Country: Demand versus Supply Side Policies," Energy Journal, Vol.38, No.1, 2017, http://www.frisch.uio.no/publikasjoner/pdf/2016/Formatert/Faehn_et_al_Climate_Policies_Energy_journal_2016_CREE

From a climate perspective, the safest, economically optimal way to avoid production lock-in and induced demand is to stop new exploration and development expenditures before they take place. For projects already operating, a carefully-managed phaseout will be required to ensure a smooth and just transition for workers and communities that depend on the industry²⁶.

A growing number of jurisdictions have begun to recognize that climate leadership means actively restricting fossil fuel supply, alongside demand-side mitigation measures. To date, these jurisdictions include: Costa Rica, Belize, France, New Zealand and Ireland. Other sub-national bans are more numerous, including the recent decision by the Dutch government to close Europe's largest fossil gas fields in Groningen²⁷. Multiple countries and businesses recently committed to phase out coal use by 2030 through the Powering Past Coal Alliance²⁸, and the World Bank Group announced it will no longer finance oil and gas extraction as of 2019, apart from "exceptional circumstances", to align with the Paris goals²⁹.

The Missing Piece: Supply-Side Mitigation Policies

CAN strongly supports all of the options in the supply-side mitigation toolkit. These include but are not limited to:

- Limits on and phaseouts of fossil fuel exploration (bans on leasing, selling or transferring mineral rights, and bans on permits to explore for fossil fuels or drill exploratory wells).
- Limits on and phaseouts of fossil fuel extraction (established phaseout timelines for existing wells and mines, bans on permitting and regulatory approval of wells and mines, bans on linked fossil fuel infrastructure such as pipelines, terminals, refineries).
- Fossil fuel subsidy reform (elimination of fossil fuel producer subsidies, tax code changes, liability reform).
- Ceasing "soft" political support for the expansion of fossil fuel production through campaign finance reform and conflict of interest laws that undercut the sector's outsized political influence.
- Restricting or redirecting financing and political support away from fossil fuel supply (limits on government finance, development finance, export credit agencies, political support to private companies in national overseas trade missions and business fairs).
- Ensuring a just and equitable transition to a clean energy future (establishing transition frameworks through adequate, informed and ongoing consultation with stakeholders and

_Cri1380439.pdf and Green and Denniss, "Cutting with both arms of the scissors," op. cit., <https://doi.org/10.1007/s10584-018-2162-x>

²⁶ International Trade Unions Confederation, 2017: <https://www.oecd.org/environment/cc/g20-climate/collapsecontents/Just-Transition-Centre-report-just-transition.pdf>

²⁷ Bryan Miranda, "Dutch fight to shut down EU's largest gas field after earthquake," January 2018, <https://wagingnonviolence.org/2018/01/dutch-eu-largest-gas-field-earthquake/>

²⁸ Past Powering Coal Alliance, 2017, <https://www.canada.ca/en/services/environment/weather/climatechange/canada-international-action/coal-phase-out/alliance-declaration.html>

²⁹ World Bank, "World Bank Group Announcements at One Planet Summit," December 2017, <http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit>

social dialogue, social protection policies, inclusive growth and development strategies, prioritizing the phaseout of existing projects with the greatest impacts on vulnerable communities).

- Protecting against undue influence of the fossil fuel industry in policy-making, thus removing major barriers to the development and implementation of other policies in the supply-side mitigation toolbox.

Bringing Supply-Side Policies into the UNFCCC

CAN calls on all Parties to incorporate supply-side mitigation measures into the UNFCCC process. In particular, immediate leadership must come from high-income countries that have benefitted from fossil fuel extraction and are historically responsible for significant emissions. There are many opportunities to address fossil fuel supply within the Paris Agreement and greater UNFCCC framework, including:

- Incorporating supply-side policies into the NDC process. Country targets included in strengthened NDCs should include pledges not just for domestic emissions reductions, but also for significant reductions in global fossil fuel production and export, in line with a Paris-compliant carbon budget.
- Ensuring that the UNFCCC process progresses in a manner that is free from the influence of actors demonstrably shown to be blocking attempts to address supply-side policies.
- Incorporating supply-side policy into pledges for financial support and capacity-building.
- Including present and scheduled future fossil fuel supply reporting into the Global Stocktake in 2023, to track progress towards keeping carbon in the ground.
- To the extent possible under the UNFCCC framework, including such reporting and pledges in regular reports, including the National Communication Report and biennial reports from both developed and developing countries, as a means of tracking progress.
- Recognizing the leadership of non-state action on supply-side measures.
- Identifying how “soft” support measures will be reduced over time, and tracking progress in that direction.
- Ensuring that a just transition for workers and their wider communities is central in the transition away from fossil fuel production.

Additional resources:

The Lofoten Declaration, <http://www.lofotendeclaration.org/>

Aligning fossil fuel production with the Paris Agreement, https://unfccc.int/sites/default/files/resource/11_12_13_SEI_Talanoa_Fossil_Fuels.pdf

Greg Muttitt, The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production <http://priceofoil.org/2016/09/22/the-skys-limit-report/>

Fergus Green and Richard Denniss, *Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies* <https://link.springer.com/article/10.1007/s10584-018-2162-x>

The Green Paradox: A Supply-Side View of the Climate Problem <https://academic.oup.com/reep/article/9/2/239/1626800>

Guidelines for a just transition towards environmentally sustainable economies and societies for all: http://www.ilo.org/global/topics/green-jobs/publications/WCMS_432859/lang--en/index.htm

Appendix 1 - Principles of Supply Side Equity³⁰

In a forthcoming paper on supply-side equity from Oil Change International and the Stockholm Environment Institute, the authors enumerate five key ethical principles by which we might aim to manage these concerns fairly and enable an equitable and just phase-out of fossil fuel extraction. Briefly, these five principles are:

- **Curb Extraction at a Pace Consistent with Climate Protection:** The overall global pace of the managed decline must be consistent with a precautionary interpretation of the Paris objectives of keeping warming well below 2 degrees Celsius, and aiming to keep warming below 1.5 degrees Celsius; this implies sharply curbing future extraction and developing no new oil and gas fields or coal mines.
- **Ensure a Just Transition:** This decline must afford fossil fuel-dependent workers and their communities a viable, positive future.
- **Respect Human Rights and Safeguard Local Environment:** Prioritize for closure any extraction activities that violate human rights, especially of poor, marginalized, ethnic minority, and indigenous communities, and local environmental protections.
- **Transition Fastest Where It Is Least Disruptive:** Phase out extraction fastest in the countries where it is least socially and economically disruptive, particularly in wealthier, less extraction-dependent countries, including the early closure of oil and gas fields and coal mines.
- **Share Transition Costs Fairly:** Ensure that poorer countries whose economies depend on extraction receive support for an effective and just transition.

³⁰ Sivan Kartha of the Stockholm Environment Institute and Greg Muttitt of Oil Change International are developing a forthcoming paper on equity considerations in the managed decline of fossil fuel extraction. The paper is expected to be published by Fall of 2018.