

Recipe for a green recovery: Carbon taxes

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As Africa looks to recover from the economic devastation created by the COVID-19 pandemic, the time is right to prioritize green transformations in that recovery. Indeed, as Milton Friedman said—and the African Development Bank emphasized in its COVID-19 Rapid Response Facility document—a crisis is needed to appreciate when “the politically impossible becomes the politically inevitable.”²² If Friedman is right, we should not waste this crisis, since the world, including Africa, needs drastic change.

Three things are needed from African leaders to successfully accomplish the daunting twin tasks of economic recovery and green transformation: 1) generation of funds for investments in sustainable solutions; 2) creation of incentives that ensure that all actors contribute to building an inclusive green economy, and 3) establishment of human capital in institutions tailored to implement those transformations.²³

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Given the complexity of this challenge, leaders must enact policies that both raise funds and provide the right incentives for green growth, preferably alongside short-term poverty alleviation.²⁴ Pigouvian taxes—taxes that correct the market failure that stems from actors not paying the full cost of their actions on others (e.g., carbon taxes)—on polluting activities do that. There are several compelling arguments for implementing such policies in Africa now.

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First, carbon pricing (reduced subsidies) can raise substantial revenues. Fossil fuel subsidies in Africa amounted to \$36.5 billion in 2019.²⁵ Since the pandemic has contributed to reductions in global oil prices, policymakers have room to implement reforms without significantly increasing prices compared to pre-COVID-19 levels. For many countries, a \$75 per ton carbon tax—the level of carbon tax needed to contain global warming to below 2°C—would increase pump prices by less than the recent collapse in global oil prices—17 U.S. cents per liter.²⁶ Given the current oil consumption in Africa of about 4 million barrels per day, this policy would open up about \$40 billion per year for investing elsewhere, most notably in a recovery and sustainability program. Green transformations of the transport and energy sectors are possible today, but demand large up-front investments.

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The tax base for upstream carbon pricing on fossil fuels is broad and includes the informal sector. While being administratively easier and harder to evade compared to other taxes, implementation of such a tax is still sensitive to public acceptance and, at times, meets popular resistance.²⁷ At first glance, such a tax could seem to hurt the poor, but, if leaders invest the resulting revenues in pro-poor policies, the impact of the tax is more than offset by the resulting gains in other areas. For Africa, Figure 1.5

²² African Development Bank. 2020. *COVID-19 Rapid Response Facility, Abidjan*.

²³ Note that these recommendations are compatible with the much more elaborate analysis of Hepburn et al (2020) on the relationship between recovery packages and climate change. Hepburn, C., O’Callaghan, B., Stern, N., Stiglitz, J. and Zenghelis, D. 2020. *Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?* Oxford Review of Economic Policy 36(S1): 359-381.

²⁴ UNEP. 2020. *Building a Greener Recovery: Lessons from the Great Recession*. United Nations Environment Programme, Geneva.

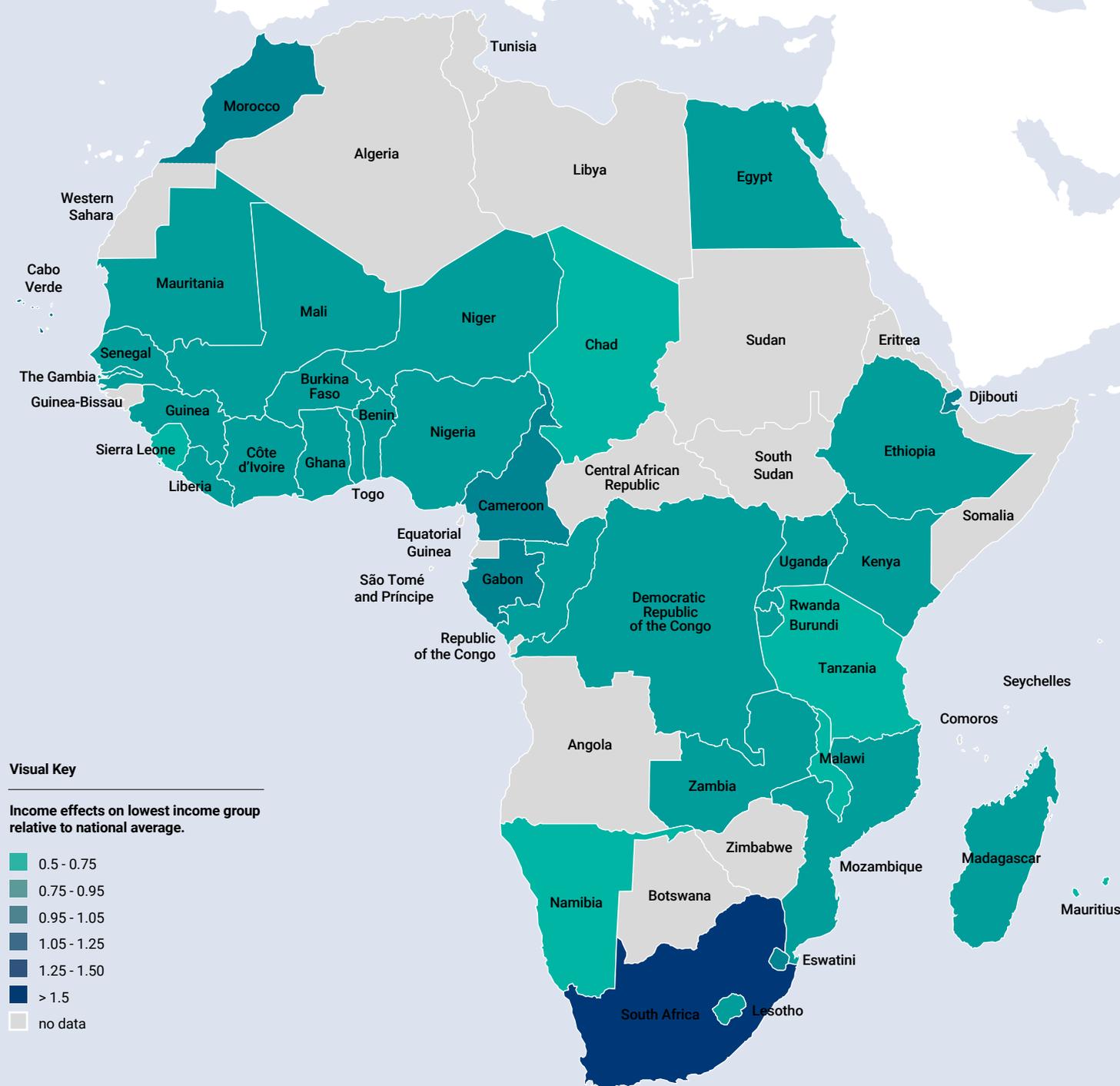
²⁵ IEA. 2020. *Energy Subsidies*. Accessed October 2020.

²⁶ International Monetary Fund. 2020. *Greening the recovery, IMF Special Series on COVID-19*.

²⁷ The most notable African case being the riots in Nigeria in 2012 that forced President Goodluck Jonathan to reverse gasoline subsidy cuts. These arguments are elaborated on in the 2015 World Bank report “Decarbonizing Development.”

FIGURE 1.5
INCOME EFFECT OF A CARBON TAX ON THE LOWEST INCOME GROUP RELATIVE TO THE NATIONAL AVERAGE

Carbon taxes reduce income inequality as low-income households pay relatively less than richer ones. Indeed, carbon taxes are progressive if, relative to their income, poor taxpayers bear a relatively lower tax burden than richer taxpayers. The figure below shows the tax incidence for the lowest income group compared to the national average. A ratio below 1 indicates that a carbon tax is progressive.



Source

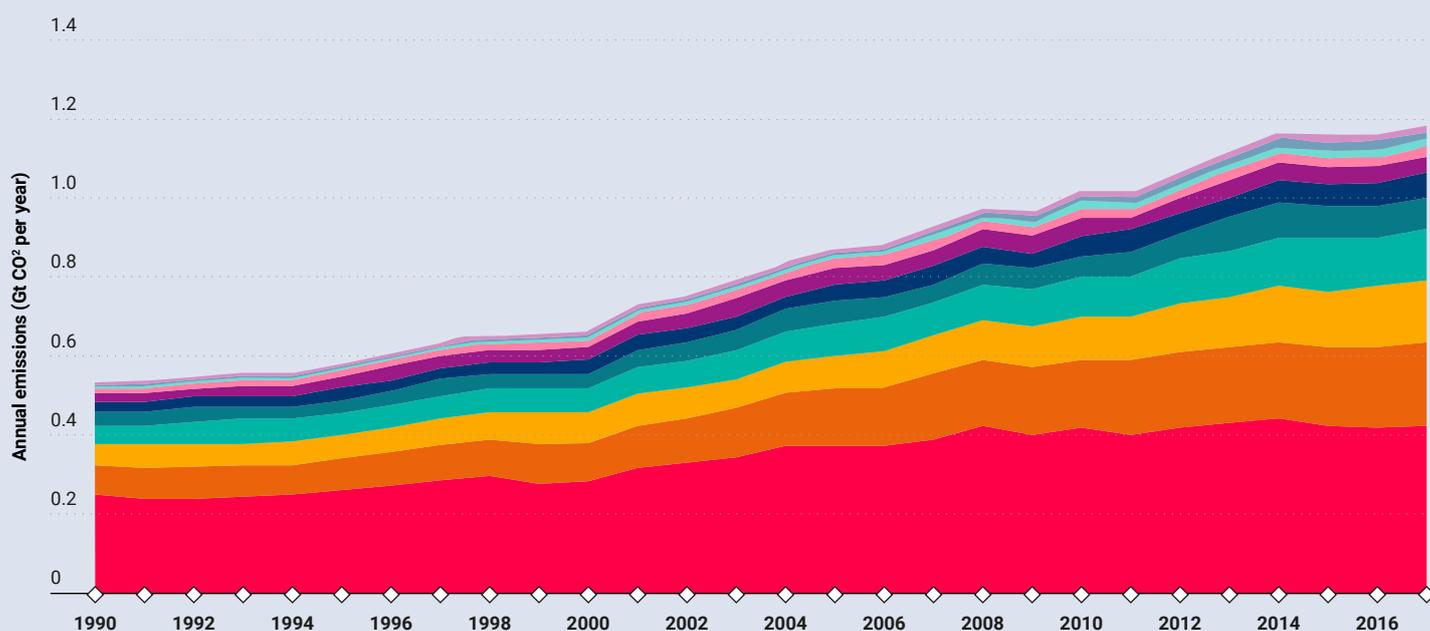
Dorband, I.I., Jakob, M., Kalkhul, M., & Steckel, J. C. 2019. *Poverty and distributional effects of carbon pricing in low- and middle-income countries – a global comparative analysis.* World Development, Volume 115: 246-257.

shows that the consumption incidence (before redistribution) of a carbon tax would actually be progressive²⁸ in all countries except South Africa. In fact, globally, for countries with per capita incomes below \$15,000 per year, carbon pricing has, on average, *progressive* income effects, reducing income inequality, largely because of the small proportion of transport and modern fuels in the consumption basket of the poorest people in the poorest countries.²⁹ Moreover, the distributional impact can be made even more pro-poor in the allocation of the tax returns.

By getting the prices right and taxing the negative environmental impacts, policymakers can create strong incentives toward a low-carbon economy. As African economies look to recover from the negative shocks of the pandemic and grow fast, a price on carbon is essential for that growth to not also lead to rapidly growing greenhouse gas emissions, which are on the rise anyway (Figure 1.6). While population and GDP growth underpin these increases, the increased carbon intensity in the transport sector has been a main driver, and investments in new coal-fired power generation can drive future emissions.³⁰ Getting prices right is therefore essential, since they affect production and consumption choices of all stakeholders, particularly those in industry, transport, and, of course, energy.

FIGURE 1.6
TOP-10 CARBON EMITTING COUNTRIES IN AFRICA, 1990-2017

Carbon emissions are already on the rise in Africa, driven primarily by only a few countries.



Visual Key

Kenya	Nigeria
Angola	Algeria
Sudan	Rest of Africa
Tunisia	Egypt
Libya	South Africa
Morocco	

Source

Ayompe, L.M., S.J. Davis, & B.N. Egoh. 2020. *Trends and drivers of African fossil fuel CO₂ emissions 1990-2017*. Environmental Research Letters in press.

In sum, a carbon tax is the obvious choice for an African policymaker in the wake of the COVID-19 pandemic. It can raise much-needed substantial revenues for progressive recovery packages with a broad tax base. It has short-term balance-of-payment benefits and incentivizes long-term green investments. It is, therefore, the perfect post-COVID, inclusive, green-growth policy.

²⁸ Carbon taxes are progressive if, relative to their income, poor taxpayers bear a relatively lower tax burden than richer taxpayers.

²⁹ Dorband, I.I., Jakob, M., Kalkhul, M., & Steckel, J. C. 2019. *Poverty and distributional effects of carbon pricing in low- and middle-income countries – a global comparative analysis*. World Development, Volume 115: 246-257.

³⁰ Steckel, J.C., J. Hilaire, M. Jakob, O. Edenhofer. 2020. *Coal and carbonization in sub-Saharan Africa*. Nature Climate Change, 10(1), 83-88.