



Climate

The Sustainable scenario

Alize le Roux and Jakkie Cilliers

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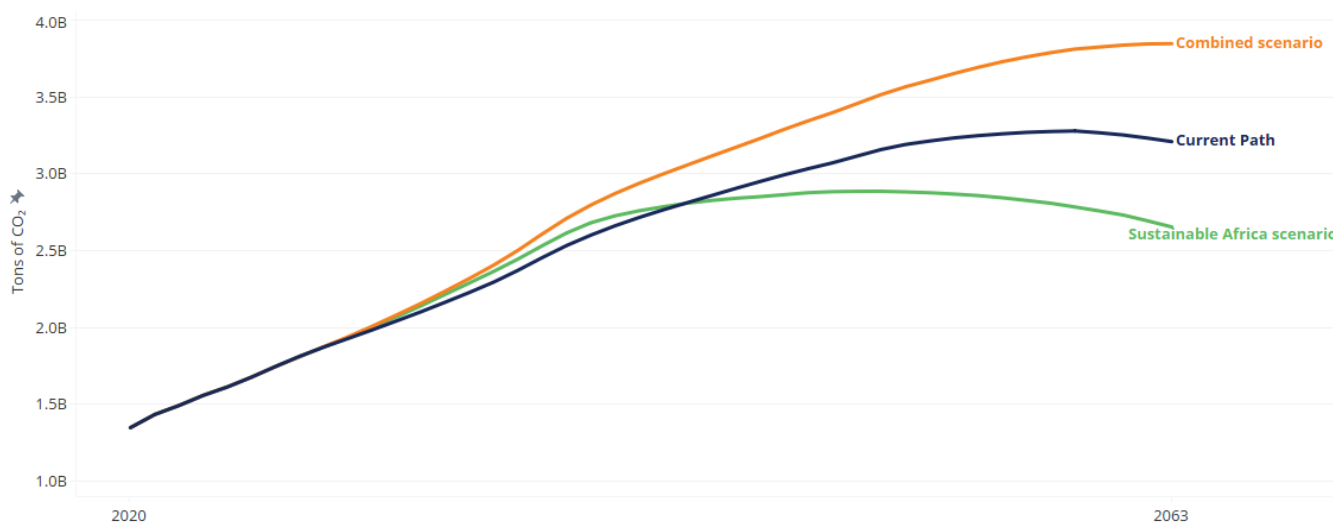
The Sustainable scenario

We now combine the Differentiated Pay and Combined scenarios into a single scenario, the Sustainable Africa scenario, and compare the summary impact on emissions and development outcomes.

Chart 14 presents Africa's CO₂ equivalent emissions from fossil fuel use in the Current Path, the Combined and the Sustainable Africa scenarios. The impact of the Differentiated Pay carbon tax is significant, with CO₂ equivalent emissions below even the Current Path. The user can change the regions to select the World or any African country.

Chart 14: CO₂ emissions in different scenarios, 2020-2063

Measured in tons of CO₂ equivalent emissions from fossil fuel use



Source: IFs 8.34 initialising from Appalachian State University data

The impact of the suite of policies to improve energy efficiency and constrain carbon emissions is evident when considering that Africa will release 7.5% less carbon from fossil fuels in the Sustainable Africa scenario in 2050 compared to the Current Path and 17.6% less in 2063 while economic growth averages 7.7% per annum compared to 4.3% in the Current Path.

The reader is reminded that the fulfilment of the Sustainable Africa ambitions would see a 2050 African economy that is 79% larger than the Current Path. GDP per capita would be 61% higher, and only 105 million Africans would live in extreme poverty instead of 341 million. Africa's total economy would grow roughly two percentage points more rapidly than in the Current Path. The differences are even more impressive by 2063.

However, because of the various mitigation policies, energy demand would only be 30% higher in 2050. Instead of energy demand equivalent to 6.4 barrels of oil equivalent per person, African per capita demand would be 10.7 barrels by 2063.

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About the authors

Ms Alize le Roux joined the AFI in May 2021 as a senior researcher. Before joining the ISS, she worked as a principal geo-informatics researcher at the CSIR, supporting various local and national policy- and decision-makers with long-term planning support. Alize has 14 years of experience in spatial data analysis, disaster risk reduction and urban and regional modelling. She has a master's degree in geographical sciences from the University of Utrecht, specialising in multi-hazard risk assessments and spatial decision support systems.

Dr Jakkie Cilliers is the ISS's founder and former executive director. He currently serves as chair of the ISS Board of Trustees and head of the African Futures and Innovation (AFI) programme at the Pretoria office of the Institute. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

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