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Climate

The Sustainable Scenario

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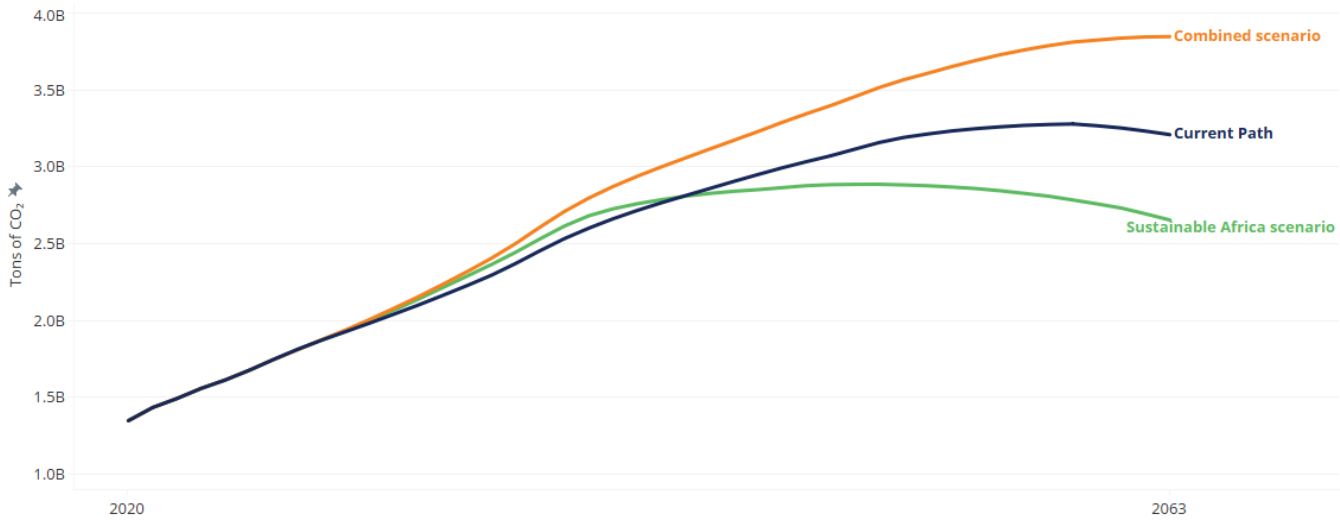
The Sustainable Scenario

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 CO_2 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 CO_2 equivalent emissions below even the Current Path. The user can change the regions to select the World or any African country.

Chart 14: CO_2 emissions in different scenarios, 2020-2063

Measured in tons of CO_2 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 founder and former executive director of the ISS. He currently serves as chair of the ISS Board of Trustees, head of the African Futures and Innovation (AFI) programme at the Institute's Pretoria office, and an extraordinary professor at the University of Pretoria. His 2017 best-seller Fate of the Nation addresses South Africa's future 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) offer rigorous analyses of the continent as a whole. From August to December 2025, Cilliers was a Richard von Weizsäcker Fellow at the Robert Bosch Academy in Berlin.

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Scenarios and forecasting can help Africa identify and respond to opportunities and threats. The work of the African Futures & Innovation (AFI) program at the Institute for Security Studies aims to understand and address a widening gap between indices of wellbeing in Africa and elsewhere in the world. The AFI helps stakeholders understand likely future developments. Research findings and their policy implications are widely disseminated, often in collaboration with in-country partners. Forecasting tools inspire debate and provide insights into possible trajectories that inform planning, prioritisation and effective resource allocation. Africa's future depends on today's choices and actions by governments and their non-governmental and international partners. The AFI provides empirical data that informs short- and medium-term decisions with long-term implications. The AFI enhances Africa's capacity to prepare for and respond to future challenges. The program is headed by Dr Jakkie Cilliers.

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