

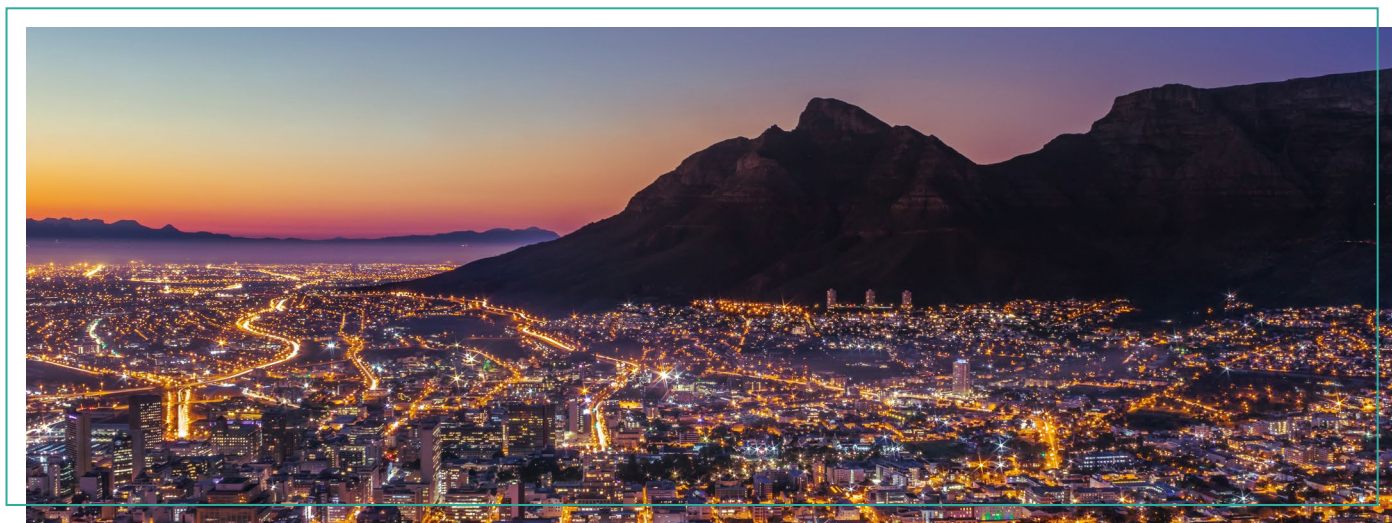


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WATER, AIR, AND ENERGY LAB

A Part of J-PAL's Air and Water Labs

GROWING POPULATIONS AND CLIMATE CHANGE ARE STRAINING CITY INFRASTRUCTURE

The African continent's population is [projected to double](#) between 2020 and 2050, with two-thirds of the growth happening in cities and urban areas. As urban populations grow, settlements densify, roads often become congested, and the additional demand for limited water and energy can strain infrastructure and compete to make the resources scarce. This creates new challenges for providing residents with quality basic services. Climate change, which disproportionately impacts people experiencing poverty, exacerbates these challenges.

Solutions to these problems are scarce, often because data and evidence on policies that work are limited. The resulting uncertainty around the most effective course of action may harm vulnerable communities.

To fight this urgent policy problem, J-PAL Africa and the City of Cape Town have launched the Water, Air, and Energy (WAE) Lab, a partnership to co-generate evidence and inform the scaling of programs and policies that effectively improve access to clean air, water, and reliable energy for Capetonians. The evidence generated will also be relevant to growing urban centers in the rest of South Africa and low- and middle-income countries globally.

The WAE Lab is a part of the Air and Water Labs (AWLs) founded by J-PAL and Community Jameel. The AWLs aim to improve clean air and water access for millions of people by informing the decisions of city, state, and national governments that together serve nearly 260 million people.

THE WAE LAB: COLLABORATING WITH THE CITY OF CAPE TOWN TO INFORM EFFECTIVE POLICIES

High-quality data and evidence are the foundation of success at every stage of the policy cycle. The WAE Lab is designed to accelerate the adoption of scientific evidence and data for making effective air, water, and energy policies. It builds upon a decade-long relationship with the City of Cape Town to co-develop research and shape policy. Through the WAE Lab, J-PAL Africa, the City of Cape Town, and academics from around the world will:



Co-identify the most pressing air, water, and energy challenges and opportunities for policy innovation.



Expand access to the use of high-quality air, water, and energy data.



Co-design potential solutions informed by existing evidence, design more targeted policies, and use data to monitor progress.



Co-generate evidence on promising solutions through pilots and randomized evaluations and determine which ones should be scaled up.



Provide technical assistance to scale effective air, water, and energy policies and programs.

COLLABORATIONS BETWEEN J-PAL AFRICA AND THE CITY OF CAPE TOWN

WAE Lab builds on lessons learned from across J-PAL's network of more than 900 researchers worldwide united by their use of randomized evaluations to conduct research on anti-poverty programs.

Prepaid electricity meters to decrease electricity use and recover utility revenue

Electricity access is growing in low- and middle-income countries. However, many households struggle to pay their monthly electricity bills, making it difficult for utility companies to sustainably supply electricity to these households. Researchers conducted a [randomized evaluation](#) in Cape Town to measure the effect of prepaid meters on households' electricity use and utility revenue. They found that prepaid meters led households to reduce their electricity consumption and helped the utility company recover more costs. These findings suggest that prepaid meters can play an important role in maintaining financial viability of utility companies while expanding energy access for low-income households.

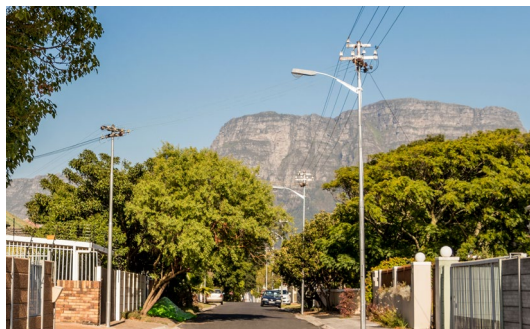


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Improving administrative data systems for evidence-informed policymaking

The day-to-day administration of government programs produces large amounts of data that can be used for evidence-informed policymaking. The City of Cape Town and J-PAL Africa [have collaborated](#) to develop a more streamlined system for cataloging, accessing, and sharing administrative data with external researchers and with analysts and decision-makers within the City of Cape Town. The end goal is a single, cloud-based, data sharing platform for both public-use and restricted-use data sets, documented in a browsable catalog with standardized metadata.

ABOUT J-PAL AND J-PAL AFRICA

The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a global research center working to reduce poverty by ensuring that policy is informed by scientific evidence. Anchored by a network of more than 900 researchers at universities around the world, J-PAL conducts randomized impact evaluations to answer critical questions in the fight against poverty. The lessons from such evaluations are then used to inform policy making and enhance intervention design. To date, over 600 million people have been reached by programs and policies that have been informed by evaluations by J-PAL affiliated researchers.

J-PAL was launched at the Massachusetts Institute of Technology in 2003 and has seven regional offices around the world. J-PAL Africa, hosted by the University of Cape Town, has built partnerships for the generation of new research in South Africa, works with organizations and governments across Africa to build, pilot, and scale cost-effective interventions, and works to build researcher capacity to conduct randomized evaluations and policymaker capacity to use evidence from randomized evaluations effectively.

For more information, visit povertyactionlab.org/africa

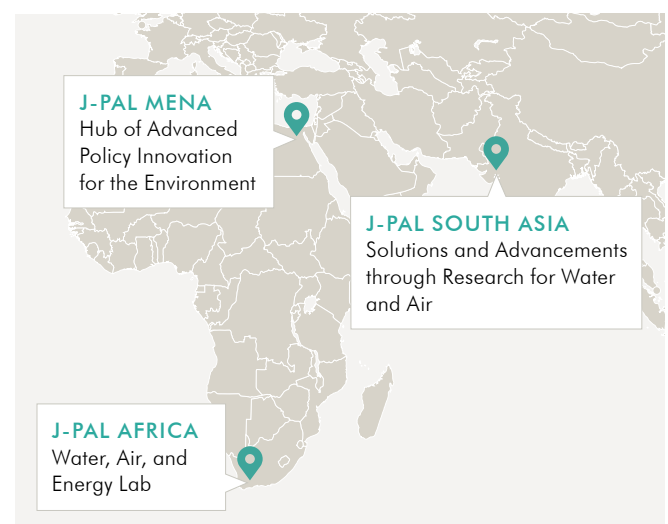
ENGAGING WITH WAE LAB

The WAE Lab is committed to sharing lessons learned from this collaboration with the City of Cape Town, as well as broader work in the J-PAL network, with partners interested in advancing solutions to air, water, and energy challenges.

For partnership opportunities, please contact waelab@povertyactionlab.org. We are actively looking to expand our partnerships and would be excited to discuss:

- **For researchers:** potential matchmaking opportunities with the City of Cape Town
- **For government partners:** evidence-sharing opportunities related to your policy priorities
- **For funding partners:** opportunities to support WAE Lab's research or policy work

AIR AND WATER LAB LOCATIONS



Government partner



Founding partner



Host university

