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AIR AND WATER LABS

THE CHALLENGE

There is no substitute for clean air and water. Africa, the Middle East and North Africa (MENA), and South Asia are on the front lines of the global air and water crises, facing high levels of water scarcity and worsening air and water quality that lead people to live shorter and sicker lives.

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 makes it difficult for governments to enforce policies, and ultimately further harms vulnerable communities.

In 2020, in partnership with King Philanthropies, the Abdul Latif Jameel Poverty Action Lab (J-PAL) launched the King Climate Action Initiative (K-CAI) to vastly expand work on climate change and poverty across J-PAL worldwide.

Extending K-CAI's work and in partnership with Community Jameel, J-PAL is launching three Air and Water Labs with government partners in Africa, MENA, and South Asia. Together the labs 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.

AIR AND WATER LABS

High-quality data and evidence are the foundation of success at every stage of the air and water policy cycle. The Air and Water Labs work with partner government agencies to increase their access to evidence and spark collaboration with researchers to innovate, test, and scale evidence-informed air and water policies. Through the Air and Water Labs in Africa, MENA, and South Asia, J-PAL works with our government partners to:



Co-diagnose the most pressing air and water challenges and opportunities for policy innovation



Expand policymakers' access to and use of high-quality air and water data, because better and more transparent data on the extent and sources of air and water pollution can help build capacity and political will to change the status quo



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 leveraging existing and new data sources, measure the effectiveness of potential solutions, and determine which ones should be scaled up



Provide technical assistance to scale air and water policies and programs that are found to be effective

OPPORTUNITIES TO SUPPORT

As founding partner, Community Jameel has provided catalytic funding for the next five years, and we are proactively seeking additional funding partners to join our coalition to increase clear air and water access across the regions where J-PAL works. Contributions will help to catalyze a movement towards evidence-based air and water solutions that benefit people living in poverty in critical regions. We welcome many forms of funding partnerships, including support to expand the Air and Water Labs' work within a specific focus area (e.g. water access) and/or region:

RESEARCH AND/OR SCALING PROJECTS

- **US\$1,000,000** Supports 3–4 research and/or scaling projects
- **US\$500,000** Supports 1–2 research and/or scaling projects

RESEARCH PILOTS

- **US\$150,000** Supports 2 research pilots

EMBEDDED STAFF

- **US\$100,000** Embeds 1–2 staff with partners for one year to scale and support evidence use



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AIR AND WATER LABS ACTIVITIES

J-PAL South Asia: Solutions and Advancements through Research for Water and Air (SARWA)

Together with the Government of Gujarat, SARWA builds on existing proof of concept policies that reduce air pollution and help hold regulators accountable through improved data access.

India's extraordinary air pollution levels shorten the average life expectancy by an almost unfathomable 5.9 years, and a lack of centralized databases on water sources poses challenges for policymakers to improve access to clean water. These challenges are at the center of J-PAL South Asia's longstanding partnerships with key regulators, such as the Gujarat Pollution Control Board and others, which have already led to promising evaluations and scaling interventions.

J-PAL MENA: Hub of Advanced Policy Innovation for the Environment (HAPIE)

Building on the success of the Egypt Impact Lab, an embedded lab promoting the use of rigorous evidence throughout the Egyptian government, HAPIE is focused on air and water policy. The nexus of water, food, and energy is critical for the well-being of millions of people in MENA, and the lab identifies opportunities to use rigorous evidence in this area with a set of strategic government partners.

J-PAL Africa: Water, Air, and Energy (WAE) Lab

J-PAL Africa and the City of Cape Town have been working together for over a decade to improve city water and energy services through collaborative research and scaling projects. Urban centers such as Cape Town—which narrowly escaped running out of water completely in the “Day Zero” crisis in early 2018—are facing immense pressure to provide basic resources for expanding populations. The WAE lab focuses on policy-relevant research for urban responses to water scarcity and other resource constraints in South Africa. J-PAL Africa is also developing the use case of administrative data for climate related challenges and sharing policy-relevant research on water scarcity in other C40 cities on the African continent.

PAST SUCCESSES AND CURRENT PROJECTS

India. Expanding Emissions Trading Schemes (ETS) with Government of Gujarat

J-PAL affiliated researchers worked with the Government of Gujarat to pilot and conduct a randomized evaluation of India's first emissions trading scheme for particulate emissions for industries in Surat. The ETS has helped cut emissions by 20–30 percent in the plants participating in trading, has provided access to the real time pollution monitoring of plants through the use of continuous emissions monitoring systems, and did not increase the regulatory costs of participating plants. In 2022 the government scaled up to 294 industrial plants in Surat, reaching nearly 6 million people living in the city's airshed, and in 2023 scaled to over 100 plants in Ahmedabad, home to 9.3 million people in its airshed. Building on this work, J-PAL affiliated researchers and staff have held preliminary conversations with the pollution control boards to discuss opportunities to adapt and scale ETS in other partner states.

India. Adapting and scaling payments for ecosystem services to reduce crop burning

During winter months in Delhi, 30–40 percent of the city's pollution comes from crop fires in nearby states like Punjab. Evidence from a recent study by J-PAL affiliated researchers and J-PAL South Asia suggests that paying farmers to avoid burning rice stubble can be effective in reducing crop burning. Researchers are now exploring the possibility of scaling the intervention in collaboration with state governments in northern India, using satellite and administrative data.

Egypt. Encouraging the take-up of treated water

In places that do not have reliable piped drinking water, point-of-use water treatment units are considered a cost-effective alternative. However, take-up of this technology has been insufficient in Egypt. J-PAL affiliates are currently evaluating community-level water treatment units that make safe, filtered water available in rural areas that lack basic infrastructure. This ongoing experiment aims to increase water treatment adoption in rural areas by correcting misconceptions about treated water. This is an ambitious project that targets several governorates in Upper Egypt. Early discussions with partners have indicated that, if successful, this project can be scaled up to other locations in Egypt.

Africa. Better targeting of water and electricity subsidies for people experiencing poverty

In Cape Town, the allocation of nationally mandated “free basic electricity,” via subsidized electricity is one strategy used to achieve energy access for people experiencing poverty. Better targeting of these transfers, as well as water subsidies, could help the City of Cape Town achieve both its ambitious climate and poverty alleviation goals. J-PAL Africa and the research team are leveraging the existing evidence base on targeting of social assistance to inform the targeting of utility subsidies.



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WHY J-PAL?

J-PAL is a global research center working to reduce poverty by ensuring that policy is informed by scientific evidence. Thanks to a strong local grounding in seven regional offices around the world, J-PAL has a long track record of collaboration with government partners and development stakeholders to successfully scale programs based on evidence. J-PAL's regional offices in Africa, MENA, and South Asia have already built partnerships with more than a dozen governments and NGOs interested in collaborating on clean air and/or water.

Clean air and water have long been priority issues for many J-PAL research and policy partners. Besides the many ongoing projects previously mentioned, J-PAL affiliates have run evaluations on a range of key topics such as water treatment in rural areas, rainwater harvesting, and improving indoor air quality. This has led to successes in scaling randomized evaluation results to policies such as Chlorine Dispensers for Safe Water, among others, which have improved millions of people's lives.

Building on the successful model of generating rigorous evidence, fostering sustained partnerships, and scaling up effective programs, additional funding support will substantially expand J-PAL's ability to catalyze research that drives evidence-informed policy to confront the global air and water crises.

CONTACT

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