## CROSS-SECTORAL COLLABORATION FOR CLEAN COOKING

Nepal







# **»TABLE OF CONTENTS**

1.	Introduction and Objectives1
2.	Country Background2
3.	Analysis of Clean Cooking Programs3 3.1. Biogas Support Programme
	(1992-ongoing)3
	3.2 National Rural & Renewable Energy
	Programme (2012-2017)6
4.	Limitations and Conclusions9
References10	
Ac	knowledgements13



Image 2. Biogas systems, like those in Nepal, require waste from cattle to produce energy.

## »INTRODUCTION AND OBJECTIVES

The government of Nepal has long recognized the negative impacts of polluting, open fires and inefficient stoves. The country is committed to achieving universal clean cooking by 2030 (World Bank Group, 2017a). Prior to setting this goal, the government and its partners launched multiple efforts to address clean cooking nationally, including the interventions analyzed on this report. Examining these efforts can provide insight and guidance for future interventions.

This report analyzes two national clean cooking interventions, the Biogas Support Programme (BSP), and the National Rural and Renewable Energy Programme (NRREP), to assess if they they utilized cross-sectoral collaboration, increased access to clean cooking, and achieved co-benefits, such as reducing burden of disease, climatewarming emissions, forest degradation, drudgery of fuel collection and cooking, and household fuel expenditures.

Clean cooking interventions are strengthened when multiple types of stakeholders (e.g., govern-

ment agencies, multilateral organizations, implementing organizations, consumer representatives, and entrepreneurs) and sectors (e.g., health, climate, and environment) are engaged. This report is part of a larger package that includes a similar report for Kenya; recommendations for cross-sectoral collaboration; and a generalized results chain that visualizes the potential positive and negative impacts of clean cooking.

While the case studies are country-specific, they provide broader learnings that can be applied to other contexts. This package is a resource for implementors, policymakers, and other stakeholders working collaboratively to create sustainable clean cooking interventions.

The overview and recommendations. and Kenya report, are available at:

### nicholasinstitute.duke.edu/project/bridgecollaborative/publications



Image 3. A variety of metallic biomass cookstoves on display in Nepal.

## »COUNTRY BACKGROUND

Nepal is a small, landlocked country with a developing economy and a population of 29 million (United Nations, 2017). It is marked by three distinct geographic regions: the low-lying Terai, the mid-hill region, and the Himalayan region (Asian Development Bank, 2017). In the spring of 2015, a series of large earthquakes struck Nepal. Nearly 9,000 people died, and 22,000 were injured. More than 800,000 homes were partially or completely destroyed, and household biogas digesters were damaged (Wendelbo et al., 2016). In 2015, the supply of imported liquified petroleum gas (LPG) was very limited in Nepal, contributing to a push for energy independence (BBC News Asia, 2015; The Tribune, 2015). These factors contributed to the variable and complex clean cooking landscape in Nepal.

Seventy-two percent of Nepal's population, or 21 million people, depend on polluting open fires or inefficient stoves for their household cooking

needs (World Health Organization, 2016b; United Nations, 2017). Solid fuels, including wood, agricultural waste, and animal dung, are common because they are more accessible than the alternatives, particularly in rural areas (Asian Development Bank, 2017).

Yale's Environmental Performance Index places Nepal at 145 out of 180 countries for household solid fuel use. For overall air quality, Nepal ranked last (Yale University, 2018). Household air pollution (HAP) from cooking contributes to childhood chronic pneumonia, obstructive pulmonary disease, ischemic heart disease, stroke, and lung cancer (World Health Organization, 2018). Twentythree thousand Nepalese people die prematurely every year from illnesses attributable to HAP exposure (World Health Organization, 2016a). Women and children are often the main foodpreparers and fuel-gatherers (Alternative Energy Promotion Centre, 2014).

Over the last three decades, Nepal has pursued multiple clean cooking solutions, focusing on improved biomass, LPG, biogas, and, recently, electricity (World Bank Group, 2018). While 80 percent of the population has access to electricity, Nepal has historically faced acute shortages and scheduled power outages of up to 18 hours per day in winter. This situation is improving and as of April 2017, the Nepal Electricity Authority announced the elimination of load-shedding for domestic users, although infrequent and short, unannounced load shedding events still occur (Nepal Electricity Authority, 2018). In May 2018, Nepal's Ministry of Energy, Water Resources, and Irrigation released a whitepaper stating a goal of nationwide access to electric cooking by 2028 (Ministry of Energy, Water Resource, and Irrigation, 2018). Because cooking is power-intensive, the current electricity grid must be developed further to support this level of use. The government has invested in increasing the reliability and supply of electricity, but it is unclear when the grid will be able to effectively support widespread electric cooking.

# **»ANALYSIS OF CLEAN COOKING PROGRAMS**

This report describes the Biogas Support Programme (BSP) and the National Rural and Renewable Energy Programme (NRREP). These interventions were selected based on availability of evaluation data, the importance of the interventions in-country, and advice from expert incountry stakeholders. It is important to note that cross-sectoral engagement and impacts were not always a primary goal of these interventions, but this report focuses on these areas to inform future efforts.

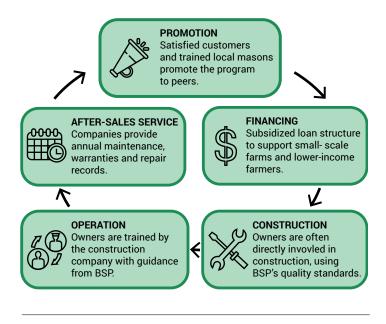
### 3.1. BIOGAS SUPPORT PROGRAMME (1992-ONGOING)

### 3.1.1 OVERVIEW

Started in 1992, BSP is an ongoing, public-private partnership that promotes biogas in rural areas as a substitute for polluting and inefficient cooking and lighting fuels such as wood, agricultural residues, animal dung, and kerosene. In 1990, before the program began, only 6,000 biogas systems were installed in Nepal (Bajgain & Shakya, 2005). As of 2016, BSP had constructed and installed 250,000 biogas systems. More recent and robust evaluations of BSP were unavailable. The program began in 1992 with funding from the Netherlands Development Organization (SNV), and later continued with funding from the government of Nepal, the German Development Bank, and the World Bank (Sustainable Architecture & Energy Scaling Up Project, 2010). It has been adapted in response to Nepal's evolving biogas market. The primary implementing organizations have transitioned from SNV and the Alternative Energy Promotion Centre (AEPC) to the Biogas Sector Partnership-Nepal (BSP-Nepal), a national NGO (Biogas Sector Partnership-Nepal, 2019; Nakarmi, Dhital, Kumar, Bahadur Karki, & Sharma, 2015). AEPC is housed in the Ministry of Energy, Water Resources, and Irrigation and is the national focal point for developing, promoting, and coordinating renewable energy technologies and related activities (Alternative Energy Promotion Centre, 2019).

Although the program has evolved, BSP continues to provide high-quality<sup>1</sup> biogas systems to endusers, while promoting biogas businesses. BSP does this through subsidies, training for biogas businesses and end-users, and after-sales service. The program emphasizes the strong engagement with both businesses and end-users, who in turn promote the program (Mendis & van Nes, 1999). This creates a positive cycle, described in Figure 1.

A key element of BSP is financial support for endusers. As the program evolved, this shifted from a fixed subsidy per biogas system, to a variable subsidy based on the system size and location and the socioeconomic status of the end-user. The subsidies are also dependent on the construction company adhering to quality control standards. In addition, there are credit supports from AEPC



*Figure 1. The Biogas Support Programme's operational process highlights partnerships between the program implementors, private sector partners, and end-users.* 

administered through local cooperatives and microfinance institutions (Sustainable Architecture & Energy Scaling Up Project, 2010). In 2006, BSP tried an innovative financing approach using carbon offsets under the Clean Development Mechanism. Some 20,000 biogas systems were financed through this mechanism over seven years (Nakarmi, Dhital, Kumar, Bahadur Karki, & Sharma, 2015).

In addition to changes in consumer financing, BSP's requirements for the biogas systems also shifted as the market grew. When BSP began, there was one state-owned biogas business. As more businesses entered the market, the program instituted a uniform design based on end-user preference studies. This design was suitable for both the Terai and Hill regions, and user surveys after construction indicated wide consumer acceptance (Bajgain & Shakya, 2005). As the market grew, the uniform design was no longer required, but BSP had primed the market with highquality biogas systems and active maintenance (Prakriti Consult, 2018).

<sup>&</sup>lt;sup>1</sup>High-quality based on end-user satisfaction and quality control standards set during construction.



Image 4. A biogas system in Nepal.

### 3.1.2 RESULTS

We rely on data primarily from evaluations completed in 2003 and 2017; impacts beyond that time period are not fully captured in available evaluations.

BSP began with one state-owned biogas business in 1992, and there are now at least 114 private biogas businesses within the country (Sustainable Architecture & Energy Scaling Up Project, 2010; Nepal Biogas Promotion Association, 2019). A manufacturers' association, the Nepal Biogas Promotion Association (NBPA), was established in 1994 to promote collaboration between businesses, as well as with the public sector and non-governmental organizations (Nakarmi, Dhital, Kumar, Bahadur Karki, & Sharma, 2015).

An early internal evaluation of the program from 2003 found multiple benefits, including:

- » Reduced HAP for 111,000 households;
- Reduced time collecting wood, preparing wood, and cooking meals;
- Increased male engagement in cooking due to the ease of cooking with a biogas stove;

- » Direct employment for 11,000 people and indirect employment for 65,000 people; and
- » Reduced annual wood use by an estimated two tonnes per household (Bajgain & Shakya, 2005).

Additional reported benefits from a 2017 survey of end-users include:

- Increased crop productivity from using bioslurry, a waste-product of the biogas system, as fertilizer;
- Increased quality of life from reduced incidences of eye infection, respiratory diseases, cough, and burn injuries; and
- » Time-savings from reduced wood collection, which was used for agricultural work, domestic work, socializing, helping children study, and income-generating activities (Prakriti Consult, 2018).

### **3.1.3 STRENGTHS AND WEAKNESSES**

A key strength of BSP is the thoughtful engagement of stakeholders from multiple sectors, including:

- » Rural farmers, the target end-users;
- » Biogas construction companies and appliance manufacturers;
- » Finance and banking officials;
- » National government officials, including the Ministry of Finance, the Ministry of Education, Science and Technology, the National Planning Commission, and AEPC; and
- » District government officials, including local administrators at the Ministry of Forests and Environment, Ministry of Agricultural and Livestock Development, and Ministry of Energy, Water Resources and Irrigation (Bajgain & Shakya, 2005).

By involving the end-users and financing institutions, BSP ensures that the biogas systems meet end-users' needs and preferences and are financially within reach. By engaging with the private sector, BSP contributes to the long-term sustainability of the biogas sector. Finally, engaging multiple government ministries facilitates coordination and brings critical expertise in several areas (such as technology, environment, and energy). Thus, BSP as a cross-sectoral program is better able to address barriers at multiple points in the system and develop a sustainable solution. And, as noted in Figure 1 above, this comprehensive program has led to stakeholders independently promoting biogas, further contributing to longterm sustainability.

The monitoring and evaluation of BSP could be improved. There was no systematic collection of measurement data (Bajgain & Shakya, 2005). While some benefits were reported by end-users, these co-benefits were not rigorously assessed, so it is unclear if they were achieved. The inclusion of expertise from other sectors and a stronger focus on monitoring and evaluation could have led to explicit inclusion of these co-benefits during program development.

BSP also heavily employed subsidies for endusers as a financing mechanism. While carefully designed subsidies can help build a market, they are not sustainable in the long term. As subsidies still continue, it is unclear if the biogas market in Nepal is independently sustainable.

Finally, the 2015 earthquakes highlighted the need for robust after-sales service. Some 17,000 domestic biogas systems were destroyed in the earthquakes (Wendelbo et al., 2016). AEPC has begun reconstruction efforts, and as of September 2018, more than 5,000 household biogas systems were repaired (Dhital, 2018). While natural disasters of this magnitude are difficult to predict, this illustrates the need for long-term support beyond the initial installation, or other systems altogether.

### 3.2. NATIONAL RURAL & RENEWABLE ENERGY PROGRAMME (2012–2017)

### 3.2.1 OVERVIEW

NRREP established several mechanisms to support renewable energy, including subsidies to end-users, and technical support and business development to local enterprises. The objectives were to improve living standards, increase



Image 5. A variety of biomass cookstoves on display in Nepal.

employment and productivity, reduce dependency on traditional energy, and sustainably integrate alternative energy into socioeconomic activities in rural areas. NRREP also had a strong povertyreduction focus. Cooking was one component of this broader energy intervention (Government of Nepal, 2012).

NRREP was a collaboration between five national governments (Denmark, Germany, Nepal, Norway, and the United Kingdom), two multilateral banks (the Asian Development Bank and the World Bank), two United Nations organizations (the United Nations Development Program and the United Nations Capital Development Fund), and SNV. Together, they committed USD 184 million (World Bank Group, 2017b). Like BSP, NRREP is housed within AEPC (Evidence on Demand, 2016).

NRREP was delivered through three components:

- » The Central Renewable Energy Fund, the core financial institution responsible for the effective delivery of subsidies and credit support;
- » Technical support, which included technology promotion, institutional development, outreach, monitoring, and gender and social inclusion; and

» Business development for micro-, small-, and medium-sized renewable energy enterprises (Government of Nepal, 2012; Evidence on Demand, 2016).

NRREP's mandate was to reduce the dependence on traditional energy and replace it with alternative energy. Through its three components, NRREP disseminated cooking solutions in rural areas. Subsidized biogas systems were installed in partnership with BSP. In addition, both mud and metallic improved biomass cookstoves, promoted as efficient and appropriate, were subsidized for rural households in poor and remote districts (Alternative Energy Promotion Centre, 2018).

NRREP's mandate also included improving the living standard in rural areas and increasing employment, with a focus on gender. To this end, strategies for gender, equality, and social inclusion (GESI) were included in multiple program aspects, including development objectives, immediate objectives, outputs and activities, and indicators and targets.

#### 3.2.2 RESULTS

By 2017, 680,000 households were reached with either improved biomass stoves or biogas systems. The program met 70 percent of financial targets (e.g., percent of allocated subsidy funding spent) and 57 percent of distribution targets (e.g., number of cooking solutions delivered) (Alternative Energy Promotion Centre, 2018). The program tracked outputs but not impacts; therefore, the actual cobenefits achieved are unclear.

Through NRREP, the government of Nepal planned to mainstream GESI strategies in the energy sector by providing equal access to and control of renewable energy technologies as a tool for economic growth (Government of Nepal, 2012). Progress has been made toward this goal. Women in the impacted communities are increasingly being consulted and included in decision-making, but it is unclear if GESI has been systematically included in the energy sector.

### **3.2.3 STRENGTHS AND WEAKNESSES**

NRREP successfully reached remote areas of the country and provided some needed services to these communities. The three components of the program were designed to address critical gaps in the renewable energy landscape for underserved communities. For example, financing is a critical barrier to access to clean cooking in rural areas. The Central Renewable Energy Fund addressed this through both subsidies and credit. Likewise, promoting appropriate alternatives, such as biogas and improved biomass cookstoves, increases access. Finally, the program also engaged multiple levels of governance, from the international to the local, leveraging the strengths of each level (e.g., the local governments' close engagement with their communities). Throughout, implementers set key output targets, monitored these, and made some modifications in response (Evidence on Demand, 2016).

However, NRREP did experience some limitations. First, as internal evaluation focused on outputs, activities were not designed for long-term sustainability and capacity building, but instead on meeting numerical targets as quickly as possible. For example, consumer financing was supposed to start with subsidies and transition primarily to credit as a more sustainable option, but this did not occur. The subsidy mechanism was also complex and difficult to access, particularly for poorer target beneficiaries. As end-users were not directly engaged in the monitoring component of the program, it is unclear if the deployed solutions were used, and, therefore, if any co-benefits were achieved (Evidence on Demand, 2016).

Finally, NRREP was housed in AEPC but implemented by a variety of entities, creating a lack of stakeholder ownership and accountability. Coordination between the multiple ministries and layers of governance, from the national to the community-level, was limited. Combined with the breadth of desired outcomes and targets, this led to uncertainty as to who had ownership over which parts of the program (Evidence on Demand, 2016). While engaging multiple partners can be beneficial, it must be done thoughtfully. Partners should be selected to provide a variety of complementary expertise, and program governance should be well-defined.



Image 6. A Nepalese woman with her biogas cookstove.

## »LIMITATIONS AND CONCLUSION

The government of Nepal has a strong commitment to clean cooking. Despite significant damage to energy infrastructure during the 2015 earthquakes, the government continues to advance the country's clean cooking goals (Wendelbo et al., 2016). As noted, this includes a recent objective of nationwide electric cooking access. As planning and implementation to reach this goal begins, the government has an opportunity to bring together partners with expertise from multiple sectors and to engage them thoughtfully to achieve this ambitious goal. The lessons offered in this case study and accompanying package may offer insights to support this work. There are limitations to these analyses. In the three decades that Nepal has formally tackled this issue, numerous interventions have been put into place, and this sample of two may not be representative. The available evaluations and data on the interventions may not fully capture the cobenefits achieved.

Nonetheless, the detailed description of BSP and NRREP may be useful for policymakers and other relevant stakeholders to consider when crafting clean cooking interventions.

## **»REFERENCES**

- Alternative Energy Promotion Centre. (2014). National Rural & Renewable Energy Programme. Retrieved from aepc.gov.np/uploads/docs/2018-07-10\_AEPC-NRREP%20Booklet%202014.pdf
- Alternative Energy Promotion Centre. (2018). A Year in Review Fiscal Year 2074/2075 (2017/18). Retrieved from aepc.gov.np/documents/annual-progress-report-aepc
- Alternative Energy Promotion Centre. (2019). Homepage: Alternative Energy Promotion Centre. Retrieved from Alternative Energy Promotion Centre website: aepc.gov.np/
- Asian Development Bank. (2017). Nepal Energy Sector Assessment, Strategy, and Road Map. Retrieved from adb.org/sites/default/files/publication/356466/nepal-energy-assessment-road-map.pdf
- Bajgain, S., & Shakya, I. (2005). The Nepal Biogas Support Program: A Successful Model of Public Private Partnership for Rural Household Energy Supply. Kathmandu: SNV-Netherlands Development Agency.
- BBC News Asia. (2015, December 12). Nepal Blockade: Six Ways It Affects the Country. Retrieved from bbc. com/news/world-asia-35041366
- Biogas Sector Partnership–Nepal. (2019). Introduction of BSP-Nepal. Retrieved from bspnepal.org.np/about. html
- Dhital, R. P. (2018). Intervention in Renewable Energy Technologies due to Major Earthquake in Nepal. (University of Oldenburg) Retrieved from uol.de/en/ppre/newsletter/2018/volume-38/news/reports/ intervention-in-renewable-energy-technologies-due-to-major-earthquake-in-nepal/
- Evidence on Demand. (2016). Effectiveness of NRREP at achieving its planned outputs and outcomes. Retrieved from dx.doi.org/10.12774/eod\_cr.november2016.renewableenergy2
- Government of Nepal. (2012). National Rural and Renewable Energy Programme Nepal: Programme Document. Retrieved from policy.asiapacificenergy.org/node/2650
- Mendis, M., & van Nes, W. (1999). Policy and Best Practice Document 4: The Nepal Biogas Support Program: Elements for Success in Rural Household Energy Supply. Retrieved from share4dev.info/kb/ documents/3692.pdf

- Ministry of Energy, Water Resource, and Irrigation. (2018). The Energy, Water Resources and Irrigation Whitepaper, Current Situation and Future Direction.
- Nakarmi, A., Dhital, R. P., Kumar, P., Bahadur Karki, A., & Sharma, I. (2015). Biogas as Renewable Source of Energy in Nepal. Theory and Development. Retrieved from researchgate.net/publication/303787356\_ Biogas\_as\_Renewable\_Source\_of\_Energy\_in\_Nepal\_Theory\_and\_Development
- Nepal Biogas Promotion Association. (2019). About. Retrieved from sites.google.com/site/nepalbiogas/ about
- Nepal Electricity Authority. (2018). Nepal Electricity Authority Annual Report 2017/18. Retrieved from nea. org.np/annual\_report
- Prakriti Consult. (2018). Final General Report for Biogas User's Survey 2017/18 for Nepal Biogas Support Program-PoA CDM Program Activity-4. Retrieved from atmosfair.de/wp-content/uploads/anlage-6monitoring-report-biogas-nepal.pdf
- Sustainable Architecture & Energy Scaling Up Project. (2010). Biogas Support Programme (BSP) Nepal. Retrieved from snv.org/public/cms/sites/default/files/explore/download/biogas\_support\_programme\_ nepal\_2010.pdf
- The Tribune. (2015, October 8). Nepal Looks for Alternate Fuel Supplies as Crisis Deepens. Retrieved from tribuneindia.com/news/world/nepal-looks-for-alternate-fuel-supplies-as-crisis-deepens/143326.html
- United Nations. (2017). World Population Prospects: The 2017 Revision. Department of Economic and Social Affairs, Population Division. New York City: United Nations. Retrieved from Department of Economic and Social Affairs, Population Division: population.un.org/wpp/Publications/
- Wendelbo, M., et al. (2016). The Crisis Response to the Nepal Earthquake. Retrieved from eias.org/wpcontent/uploads/2016/02/The-Crisis-Response-to-the-Nepal-Earthquake-\_-Lessons-Learned-colour-1. pdf
- World Bank Group. (2017a, March 29). Nepal | Fostering Healthy Households through Improved Stoves. Retrieved from esmap.org/node/57862
- World Bank Group. (2017b). Investment Prospectus for Clean Cooking Solutions in Nepal. Retrieved from documents.worldbank.org/curated/en/916571494854063344/pdf/115023-ESM-PUBLIC-Investment-Prospectus.pdf

- World Bank Group. (2018). Nepal: Climbing Higher: Policy Notes. Retrieved from documents.worldbank.org/ curated/en/637451537351408020/Policy-Notes
- World Health Organization. (2016a). Global Health Observatory data repository. Retrieved from apps.who. int/gho/data/node.main.BODHOUSEHOLDAIRDTHS?lang=en
- World Health Organization. (2016b). Percentage of the Population Using Clean and Polluting Fuels and Technologies for Cooking. Retrieved from apps.who.int/gho/data/node.main.134
- World Health Organization. (2018). World Health Organization Fact Sheet. Retrieved from Household Air Pollution and Health: who.int/en/news-room/fact-sheets/detail/household-air-pollution-and-health
- Yale University. (2018). 2018 Environmental Performance Index: Air Quality. Retrieved from epi.envirocenter. yale.edu/2018-epi-report/air-quality



Image 7. A Nepalese family.

## »ACKNOWLEDGEMENTS

The authors would like to thank everyone involved in the creation of this case study package. This package would not have been possible without the engagement and feedback from the Crosssectoral Collaboration for Clean Cooking working group, which included the Clean Cooking Alliance, PATH, Duke University, Stockholm Environment Institute, UN Food and Agriculture Organization, Johnson & Johnson, International Food Policy Research Institute, Bridge Collaborative, The Global LPG Partnership, and Gold Standard.

The Cross-sectoral Collaboration for Clean Cooking Case Study Package was spearheaded by the Bridge Collaborative, Clean Cooking Alliance and PATH. It was primarily authored by Maria Jolly (Clean Cooking Alliance), Neeraja Penumetcha (Clean Cooking Alliance), Katharine Kreis (PATH), and Stephanie Zobrist (PATH). The report has benefited from information and insights from many experts. We would like to thank Josh Goldstein (Bridge Collaborative), Marc Jeuland (Duke University), Rob Bailis (Stockholm Environment Institute-US Center), Cyril Engmann (PATH/ University of Washington), Amy Roll (University of Washington), Jessica Fanzo (UN Food and Agriculture Organization), Elisa Puzzolo (The Global LPG Partnership/University of Liverpool), Godfrey Sanga (Energy 4 Impact), Bert van Nieuwenhuizen (SNV), Kevin Kinusu (Kenya Biogas Program), Philip Dahlin (Johnson & Johnson), Elizabeth Bryan (International Food Policy Research Institute), and Vikash Talyan (Gold Standard). We would also like to thank Karuna Bajracharya, Daniel Wanjohi, Patricia Mbogo, Julie Ipe, Amy Todd, Katie Pogue, Shrikant Avi, and Seema Patel.

This report was developed with support from an anonymous foundation.



The Clean Cooking Alliance works with a global network of partners to build an inclusive industry that makes clean cooking accessible to the three billion people who live each day without it. Established in 2010, the Alliance is driving consumer demand, mobilizing investment to build a pipeline of scalable businesses, and fostering an enabling environment that allows the sector to thrive. Clean cooking transforms lives by improving health, protecting the climate and the environment, empowering women, and helping families save time and money. Learn more at **CleanCookingAlliance.org**.

### 

PATH is a global organization that works to accelerate health equity by bringing together public institutions, businesses, social enterprises, and investors to solve the world's most pressing health challenges. With expertise in science, health, economics, technology, advocacy, and dozens of other specialties, PATH develops and scales solutions—including vaccines, drugs, devices, diagnostics, and innovative approaches to strengthening health systems worldwide. We work in more than 70 countries to transform bold ideas into sustainable solutions that improve health and well-being for all, reaching more than 150 million people, on average, each year. Learn more at **path.org**.

## BRIDGECOLLABORATIVE

The Bridge Collaborative is a global change agent driving a fundamental shift in how we think, plan, fund and work across sectors to make bigger change faster. We unite people and organizations from across the health, development, and environment sectors with the shared evidence. networks, and leadership to understand and solve connected challenges. Established in 2016, the Bridge Collaborative is a partnership spearheaded by four founding organizations: The Nature Conservancy, PATH, the International Food Policy Research Institute, and Duke University. Our growing global alliance of scientists, practitioners, and organizations is moving beyond business as usual with the aim of creating a more equitable and sustainable world. Learn more at bridgecollaborativeglobal.org.