1ST INSPIRE HEALTH FORUM

ADB

Inclusive, Sustainable, Prosperous and Resilient Health Systems in Asia and the Pacific

INSPIRE Health Forum

7-11 July 2025 • A Hybrid Event

1ST INSPIRE HEALTH FORUM

ASK HEALTH ASIA

PARALLEL SESSION

#INSPIREhealth2025

Accelerating Sustainable Practices and Climate Resilience in Asia's Healthcare Sector

Explore how financing strategies, multisector partnerships, and practical innovations in the private sector can support sustainable and resilient health systems and supply chains across Asia, with a call to action.

10 July 2025 • 1:15-3:45 PM

Lecture Theatre 2

PATH | Climate & Health Innovation Program

Neeraj Jain
Director - Growth Operations

Our Climate and Health Approach

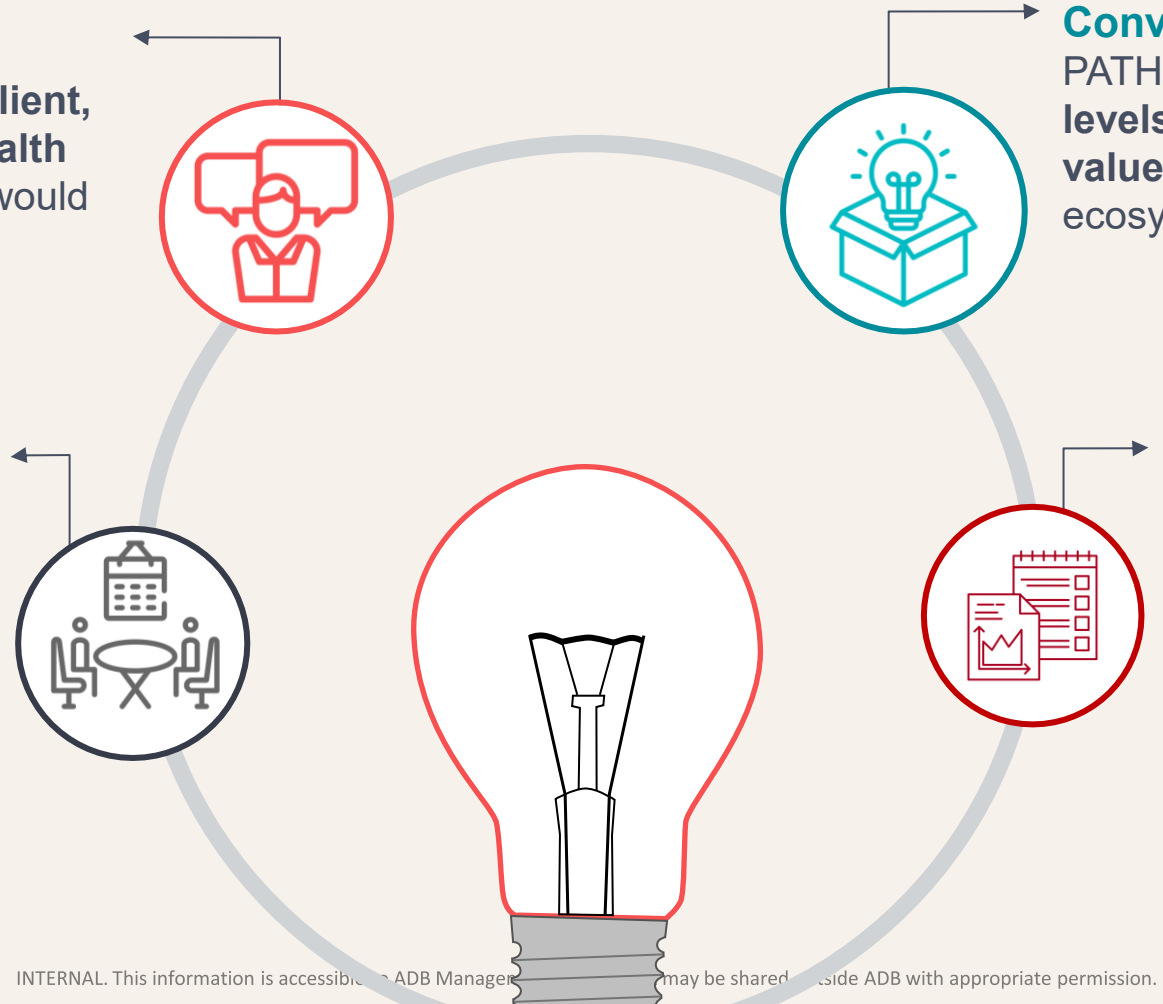
PATH's Climate and Health Program provides expertise towards both **Adaptation and Mitigation** for Health Systems & communities.

Technical Assistance

We assist private, public, & development sectors to **build resilient, climate-smart, & sustainable health systems and communities** that would address the existing climate vulnerabilities for human health.

Convening the Ecosystem

PATH's unique position **across all levels of the public health delivery value chain** helps us bring together key ecosystem stakeholders.



Piloting innovations to catalyze actions

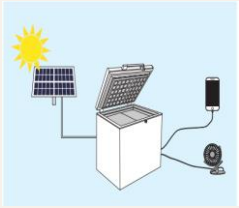
Leveraging our leadership in innovations, we are **working to drive innovations that build climate resilience for health systems & communities**

Evidence generation and thought leadership

PATH's diverse team lends its ability **to engage with a diverse set of stakeholders** on a variety of complex public health issues **and develop research evidences**.

High-impact Climate and Health Innovations Deployed

Since 2010, PATH has focused on Technology deployments for Climate and Health

Program	Need	PATH's support	Impact
1  **Green Vaccine Supply Chain in Tunisia**	**Health systems** make up **~17% of Healthcare's 4.4%** contribution to GHG emissions. Heating, **cooling & refrigeration account to about ~41% of GHG emissions**, whereas **transportation of vaccines/ medicines accounts for ~42%.**	Piloted **innovative green supply chain model** which installed **photovoltaic modules on medical store rooftops** & **Solar Direct Drive refrigerators** to power facilities & vaccine storage systems. Diesel/ petrol vehicles were replaced by **electric vehicles for supply chain.**	Reduced carbon emissions **by 29% for transport and 68% for storage** & total energy costs by 17%
2  **Solarization of Medical Oxygen Systems in India**	Continuously-running large medical equipment like PSA plants **contribute to highest %power consumption** leading to high **%GHG emissions** & under-utilization	**Piloted innovative solarization model for PSA plant** at Govt Children Hospital, Gundlupet, Karnataka & capacitated staff to sustainably reduce fuel consumption & promote green energy.	**~266 tons of annual carbon emissions** reduction & ~280K units of **electricity savings annually**
3  **Piloting Energy Harvest Control Systems for PHCs in Africa**	**Efficient & sustainable Solarization of healthcare facilities & equipment** for low and middle-income countries remains a challenge due to **unreliable grid electricity**.	**Piloted 7 refrigerators with EHC systems** for vaccine storage that not only maintained **reliable energy supply** for refrigeration but also **recycled excess energy to power other equipment** in health facilities.	EHCs could recycle **more than 55% of the generated solar energy to power other devices**.

PATH-Commonwealth ARCH for validating Early-stage Innovations

ARCH (Accelerator for Resilience in Climate & Health) is an end-to-end accelerator platform that sources and deploys technology innovations to improve Climate and Health outcomes

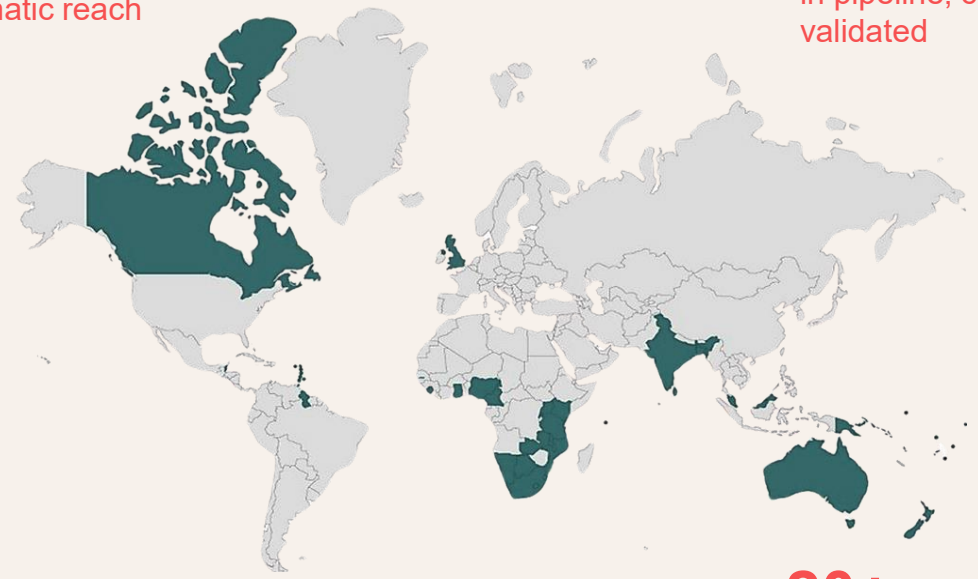
Innovative technology sourcing & refinement to address the needs of vulnerable communities & health systems

Innovation matchmaking & transfer to countries as per climate vulnerabilities

Technical assistance & sustainable capacity building for vulnerable communities to mitigate and adapt to health impacts of climate change

2.5bn+
vulnerable people within programmatic reach

127+
Climate-health innovations in pipeline, currently being validated



56+
Countries to be supported with climate- health TA

20+
Readily deployable high-impact solutions

Pipeline of 127+ innovations across 5 categories – Decarbonizing health supply chains, low carbon health systems, climate resilient health development, mobilizing finance, and community resilience

ARCH Demonstrated the Potential of Tech for Climate and Health

PATH's pilots have demonstrated the potential of technology innovations for addressing multiple emerging climate-health challenges – they are high-impact, cost-effective, scalable and easily adaptable to local needs

Climate-resilient & Sustainable immunization in Tapola, India

Challenge: Limited immunization access in remote, hilly, disaster-prone villages

Technology: Solar-powered active-cooling vaccine carriers

Impact: Reached 18K people; extended immunization **3 hrs**; expanded **reach by 50 km**; reduced emissions by 2.3 kg/ device

Last-mile diagnostics in flood-prone Patan, India

Challenge: Limited diagnostics access for 21K people in flood-prone regions with rising disease risk

Technology: Solar-powered portable suitcase labs

Impact: Enabled **200+ routine tests** per device; reached 21K people; **achieved 97% energy savings** vs. conventional labs

Heat-resilient healthcare in Satara, India

Challenge: Extreme heat (>40°C) disrupting healthcare delivery in in rural areas

Technology: Reflective passive-cooling paints for health facilities

Impact: Reached **11K+ people**; reduced indoor temperatures **by 13°C; avoided 2000 MT of emissions**

Early warnings for climate-driven dengue surge in Odisha, India

Challenge: Climate-driven dengue surge in Odisha (0 to 13K cases/year in 15 yrs)

Technology: AI-driven Climate-Dengue Early Warning System

Impact: Predicts hotspots 4 weeks ahead **(67% accuracy); ~25%** estimated case **reduction**

Clean air for pediatric patients in Delhi, India

Challenge: Air pollution affecting child health; exacerbated by climate change

Technology: Low-cost sustainable air filters retrofitted onto fans

Impact: 60% air quality improvement for 600 children; 54kg emissions & 71% cost reduction

Despite their potential, the scale-up and adoption of these technologies are hindered by an underdeveloped climate and health innovation ecosystem

Lack of Flexible Capital and Growth Support are Critical Barriers to Scaling Climate and Health Technology Innovations

Insufficient Capital

Scaling climate-health solutions requires high upfront capital, longer timeframes, and high risk tolerance – factors that deter traditional investors due to cash flow and risk-return mismatches

Low Market Uptake

Tech commercialization faces economic, operational, and user barriers due to misaligned needs and unproven feasibility, limiting investor and health system trust

Policy Gaps

Climate-health tech scale-up relies on government support for approvals and de-risking private investments, but regulatory hurdles, incomplete impact evidence and unclear uptake targets hinder growth

Fragmented Ecosystem

Fragmentation in the climate-health ecosystem creates bottlenecks in scale-up value chains, hindering rapid innovation and adoption of multiple climate-health technologies.

Thrive Fund in partnership with the Global Innovation Fund (GIF)

The Thrive Fund: Closing the Scale-Up Gap for Climate-Health Technologies

About

Pooled blended finance vehicle which combines patient capital & catalytic technical support to accelerate the adoption of breakthrough innovations that build climate resilience in health systems & communities

Investment Strategy

Focus
Validated solutions (TRL-8* & above) addressing the Climate & Health intersection

Target investees
For-profit companies and social enterprises with high-impact potential

Markets
Africa, South Asia, and Southeast Asia

Target beneficiaries
People living under $5 per day

Instruments
Approx. $500K - $1M in Equity, quasi-equity, debt

Catalytic Support
Business advisory, Technical Assistance & Partnerships support

*TRL: Technology Readiness Level

A Strategic Blend of Growth Investments & Deployment Support to Unlock the Potential of Climate-Health Technologies

Impact-first Investment Approach

Financing

Provide patient growth capital to support commercialization and evidence-building

Rigorous Screening

Dedicated ESG team applies ESG and Climate screenings to all investments using in-house tools

Measurement

In-house Analytics function for rigorous assessment using proprietary Practical Impact methodology to forecast impact

Catalytic Facility for at-scale Deployments

Business Advisory

Innovative Business model development & commercialization support to enable scale-up

Policy Support

Technical assistance & impact assessment to inform policy & enable systems integration

Partnerships

Ecosystem partnerships and networks to unlock synergies, facilitate private sector collaboration, and advance adoption

The Thrive Fund will deploy $120 million over 5 years to strengthen the Climate and Health Resilience of 100 million people

First Investment from Thrive: Blackfrog Tech

Blackfrog is an India-based medical device company. Its Emvolio, a backpack-style solarized, battery-powered portable carrier, maintains vaccine temperatures between 2ºC to 8ºC for 15+ hours, ensuring last-mile immunization in climate-vulnerable & hard-to-reach environments.

Blackfrog was incubated under PATH's Accelerator for Resilience in Climate & Health (ARCH) receiving technical support to test operational models & build evidence:

Use Case	**Renewable** Energy for vaccine **transport**	**Expanded Cold chain** for last-mile facilities	Portability to **reach last-mile** communities
Impact	**18K** Reached	**+3 hrs** immunization time; **+50km** reach	**2.3 kg emissions reduction** annually
Gains	**UNFCCC's top 20** featured solutions	Unlocked **Fiji & Kenya** for expansion	**Unlocked $2M+** growth capital

With support from the fund, Blackfrog is poised to transform vaccine cold chains in climate-vulnerable & hard-to-reach regions by ensuring last-mile vaccination, cold chain resilience, & curbing climate-driven disease spread.

Thank You!

For more information, please contact:

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