

CHW2025
SYMPOSIUM THAILAND

**CHW SYMPOSIUM
WEBINAR SERIES**

Frontline Resilience: How Community Health Workers Are Responding to the Health Impacts of Climate Change

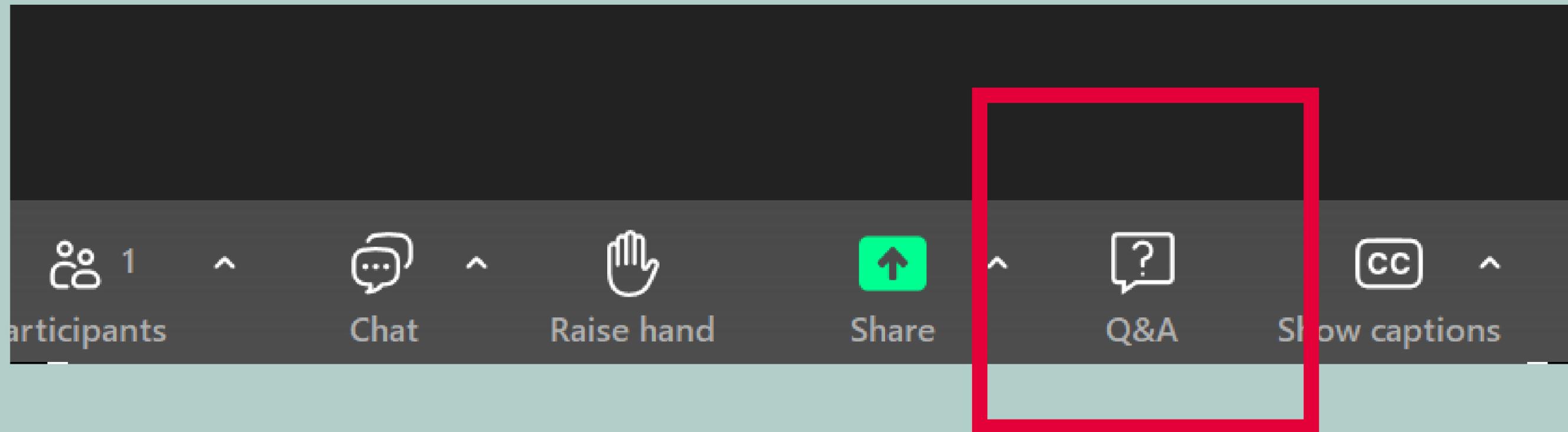


Welcome Siyapah Surathumrong

**Sr. CHW Symposium Manager
Community Partners International**



- **Send us your questions:**



- **This webinar is being recorded**

**Moderator:
Muskaan Khepla**

Research Associate, Planetary Health

**SingHealth Duke-NUS
Global Health Institute, Singapore**



Lyka Castillo

Barangay Health Worker

**Jomalig, Quezon Province,
Philippines**



Renzo Guinto

**Associate Professor & Lead,
Planetary Health**

**SingHealth Duke-NUS
Global Health Institute, Singapore**



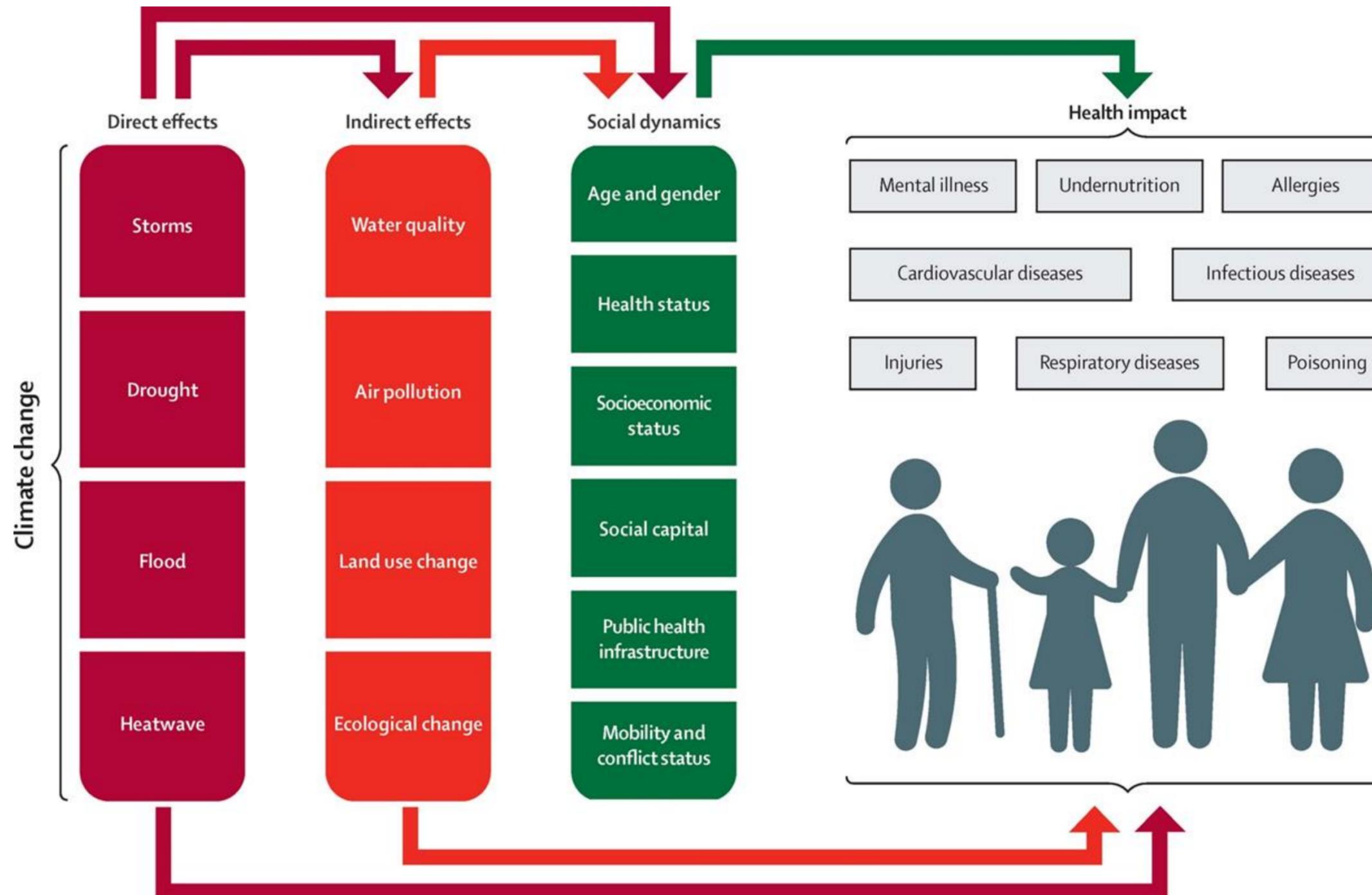
Climate Change and Health

New Realities for Community Health Workers

Renzo R. Guinto, MD DrPH

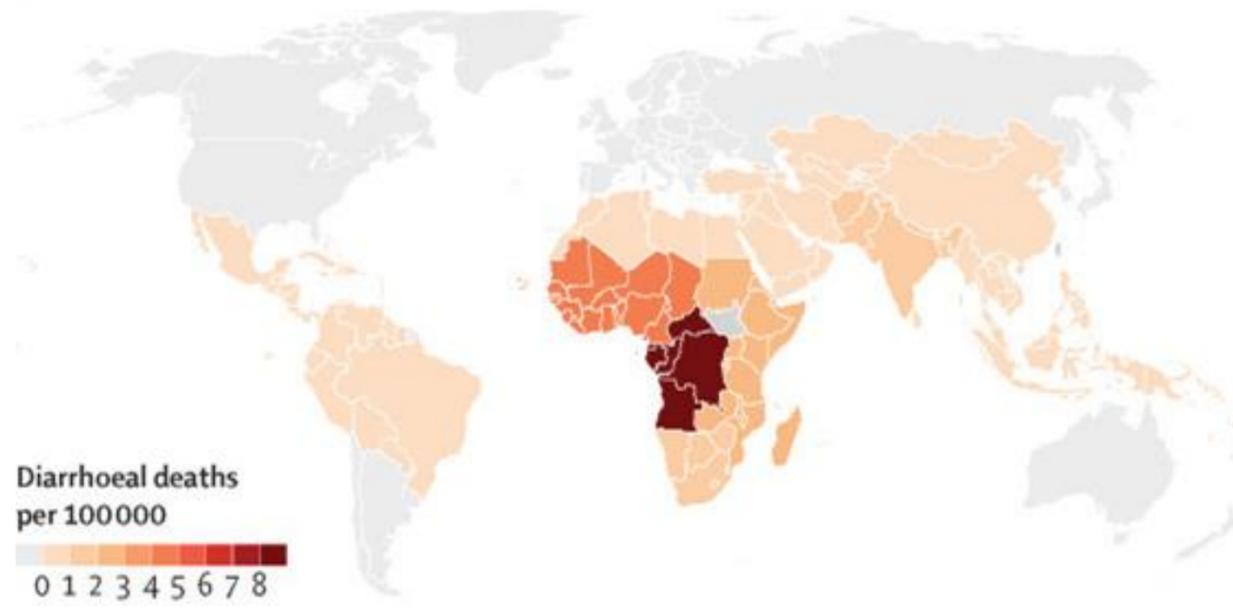
Associate Professor of Global and Planetary Health

Climate Change Affects Human Health

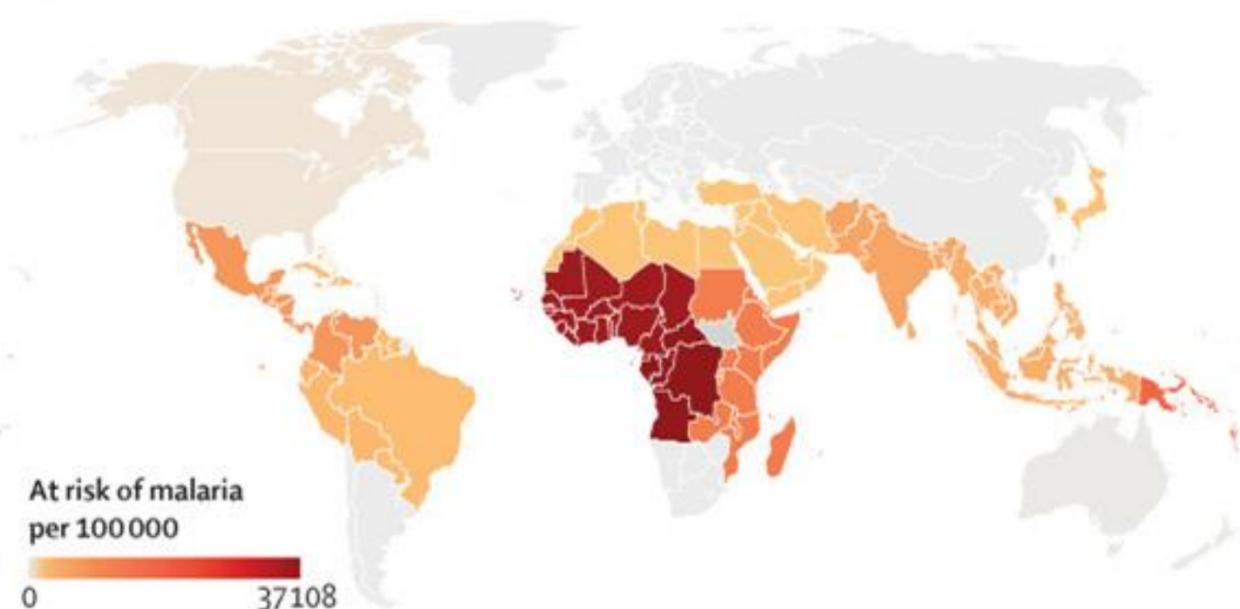


Climate Change Widens Health Inequities

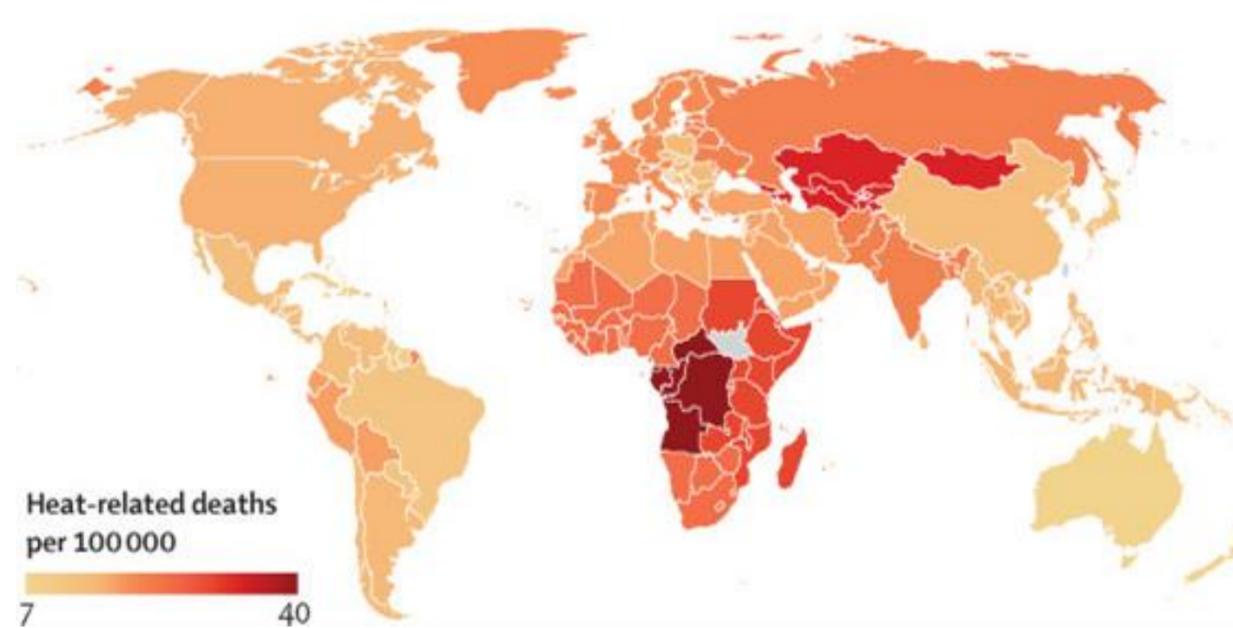
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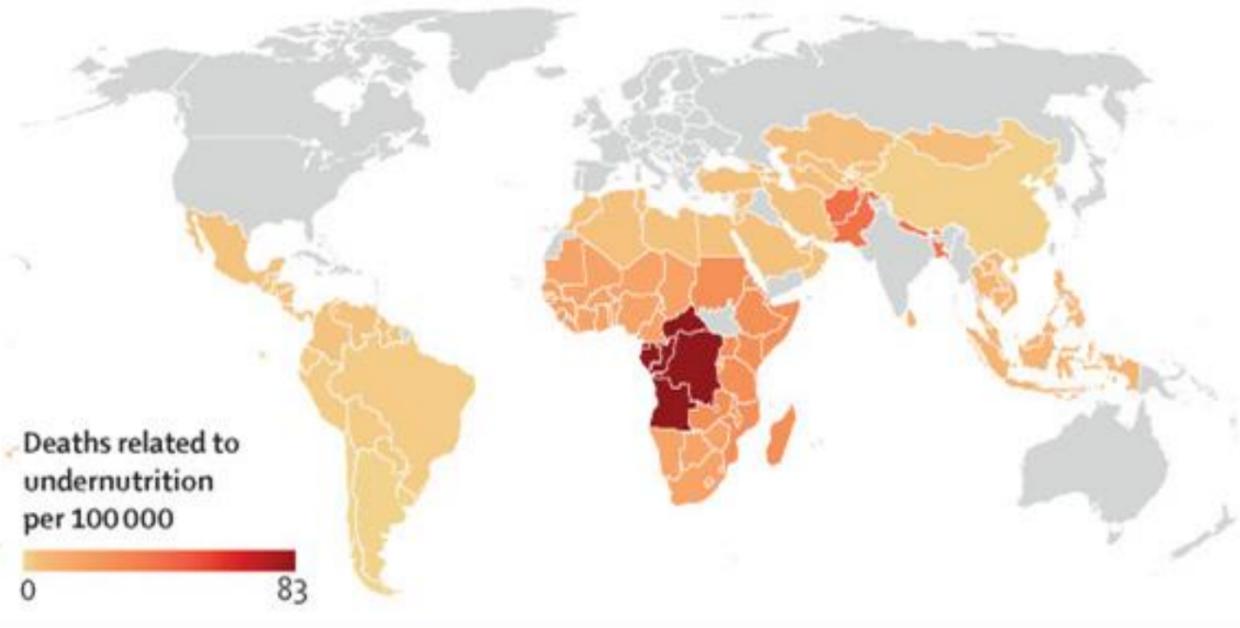
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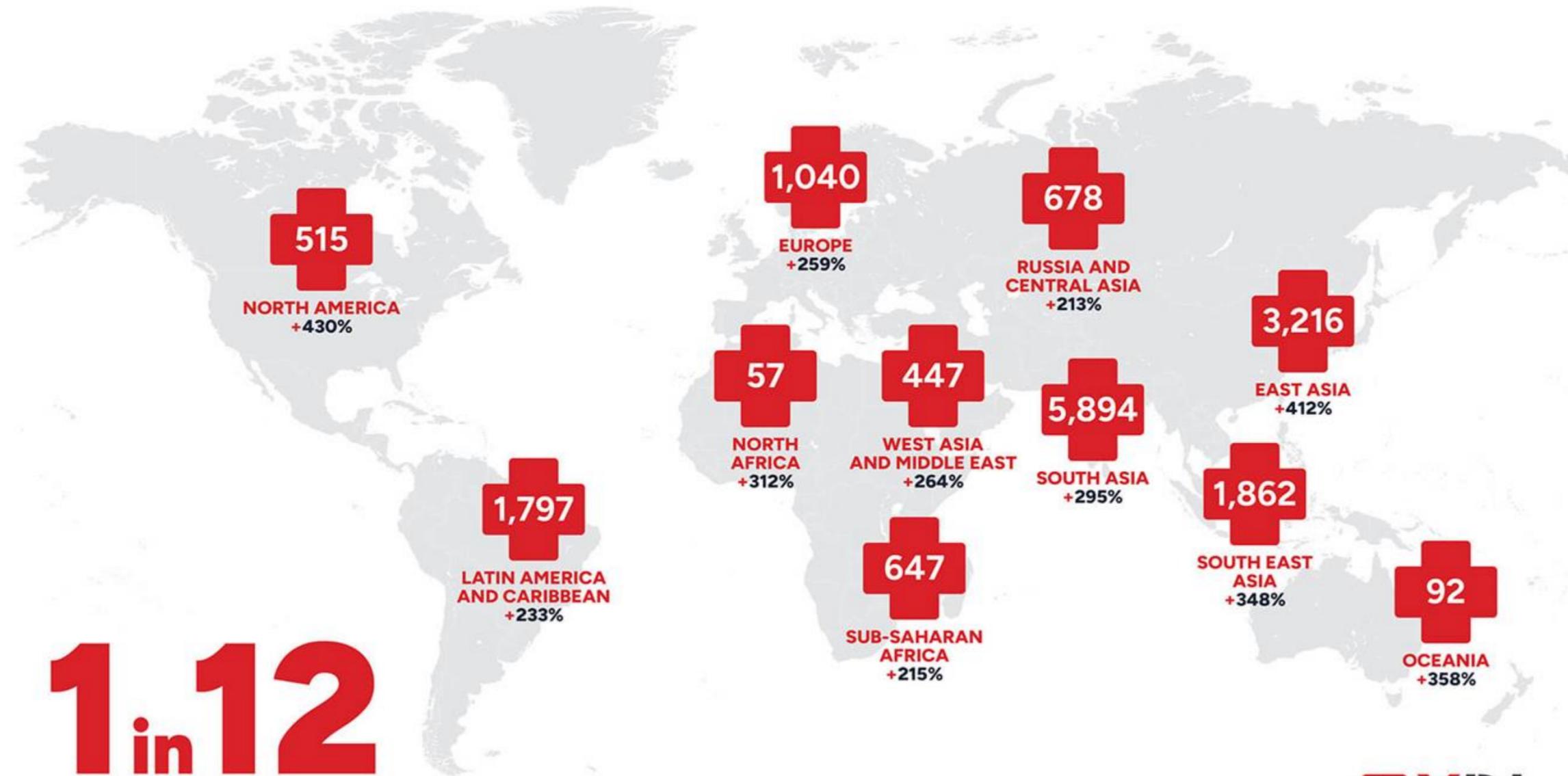


E



Climate Change Disrupts Health Systems

Number of high risk hospitals and percentage increase in risk of damage to hospital infrastructure 2020-2100 at RCP 8.5.

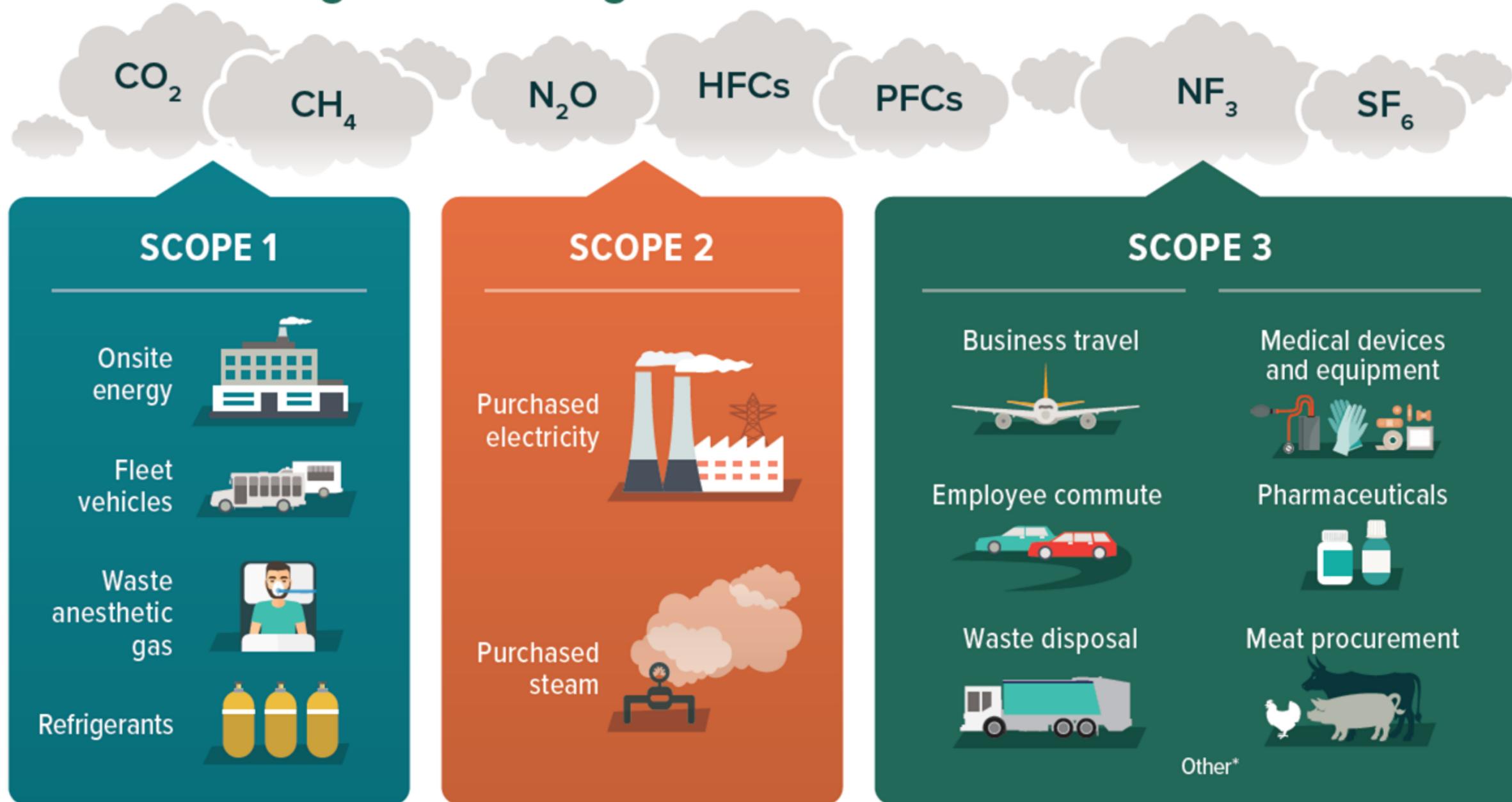


1 in 12

hospitals around the world will be at **high risk** of total or partial shutdown under RCP 8.5 by 2100.

Health Systems Drive Climate Change

Common greenhouse gas emission sources in health care



Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃), and sulphur hexafluoride (SF₆)

*Scope 3 other: These are the most common emissions for health care, but there are other relevant categories in Scope 3. To review all 15 categories covered in Scope 3, visit the [GHG Protocol Scope 3 Guidance](#).

Source: Practice Greenhealth

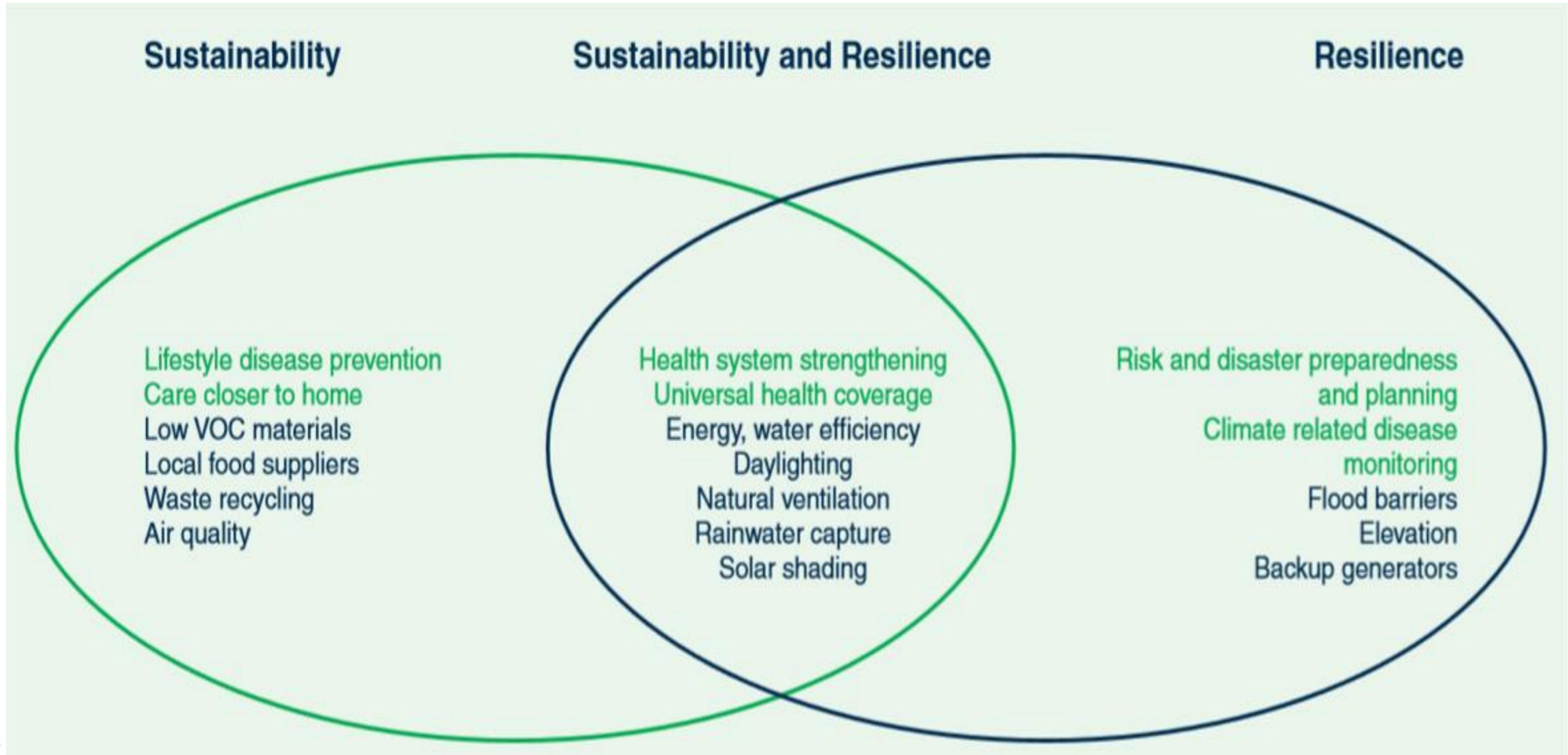
Are we ready to build health systems



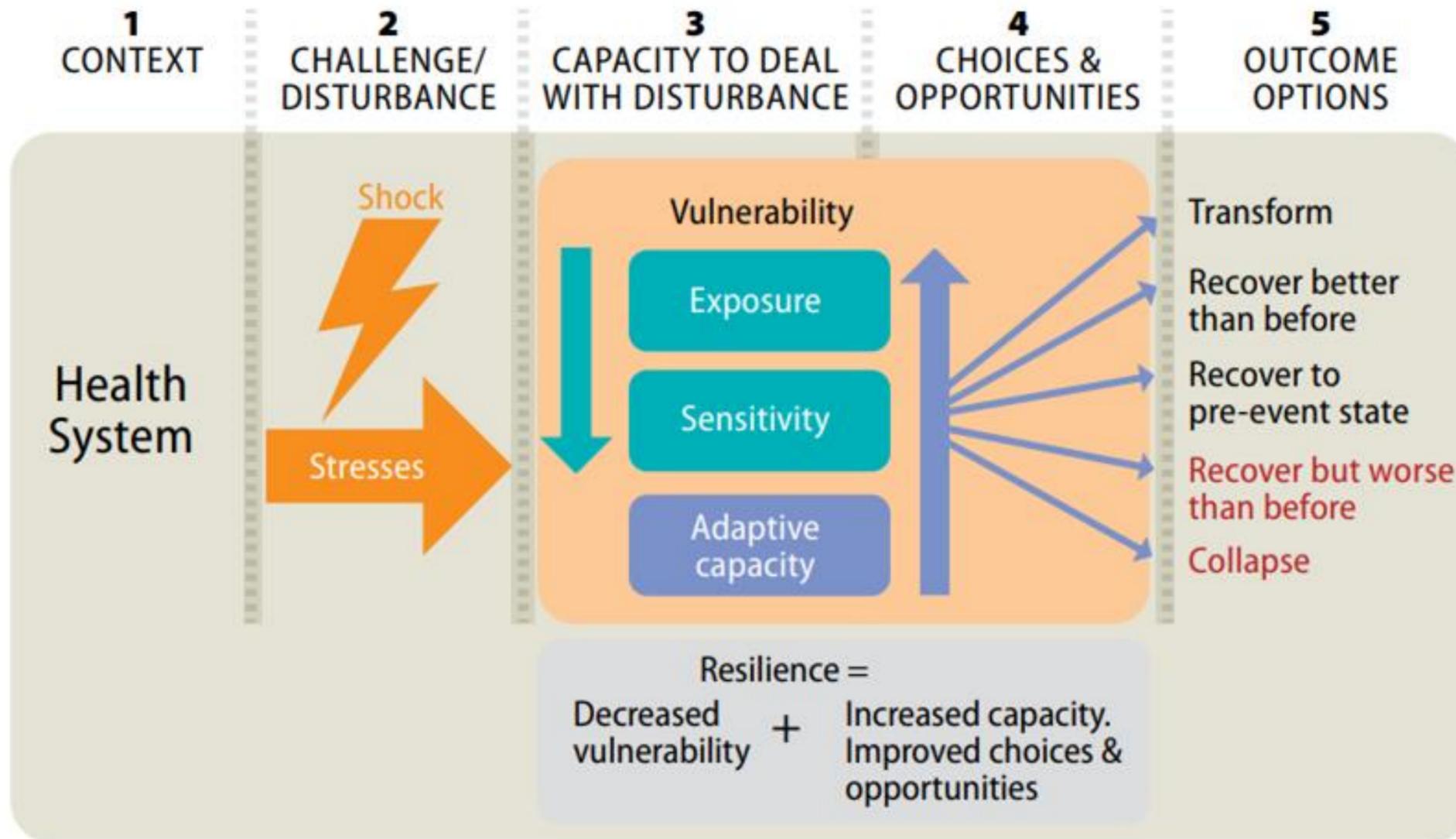
that consider the climate?

(Mayhew, et al., 2013)

Climate-Smart Health Systems



Climate-Resilient Health Systems

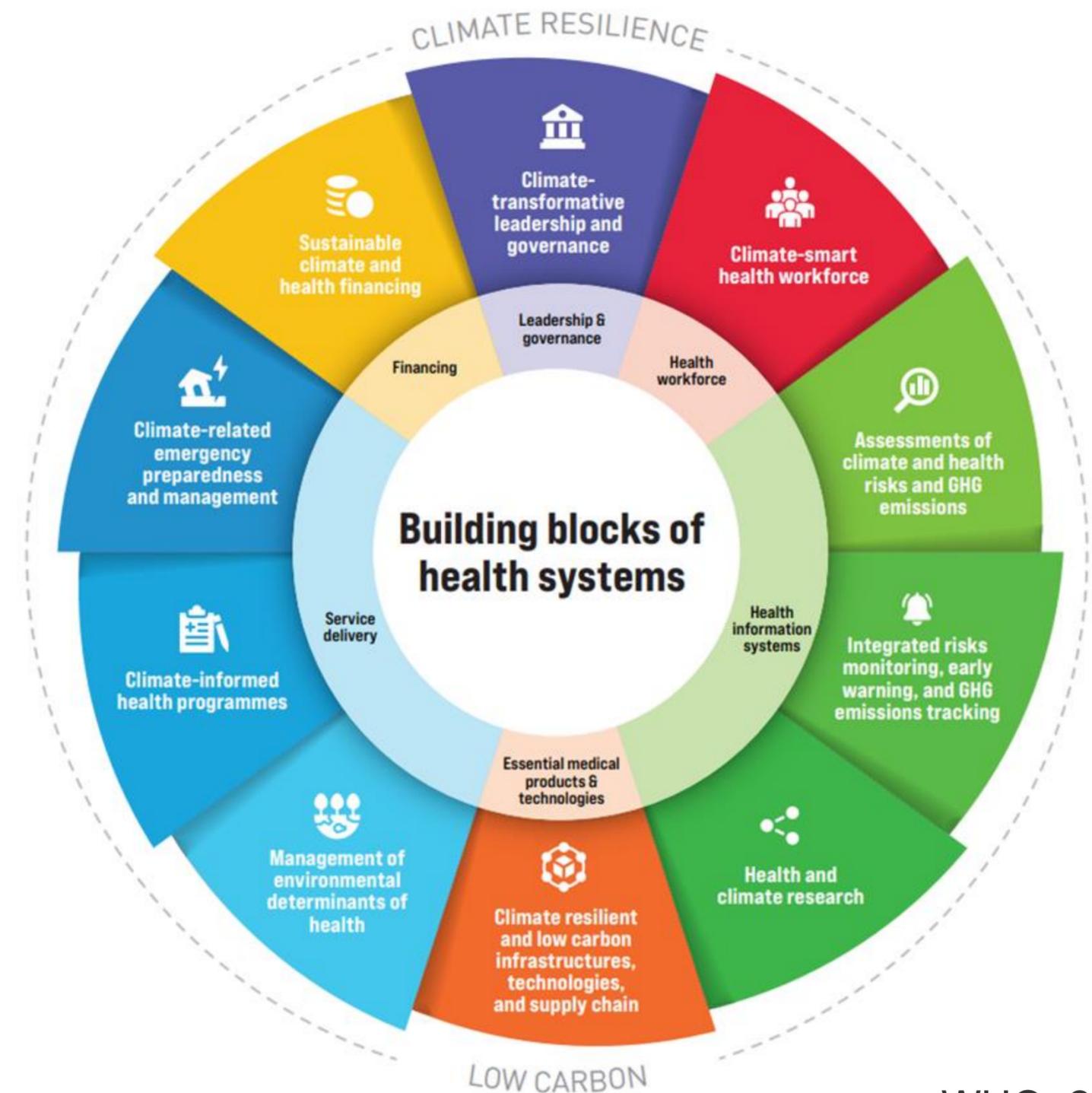


WHO, 2015



Climate-Resilient Health Systems

Where are the
**Community
Health Workers**
in these
frameworks?



Only two years left of world's carbon budget to meet 1.5C target, scientists warn



Advancing Health & Well-being in Asia and Beyond

renzo.guinto@duke-nus.edu.sg



Wendo Sahar

Executive Director & Founder

Dandelion Africa





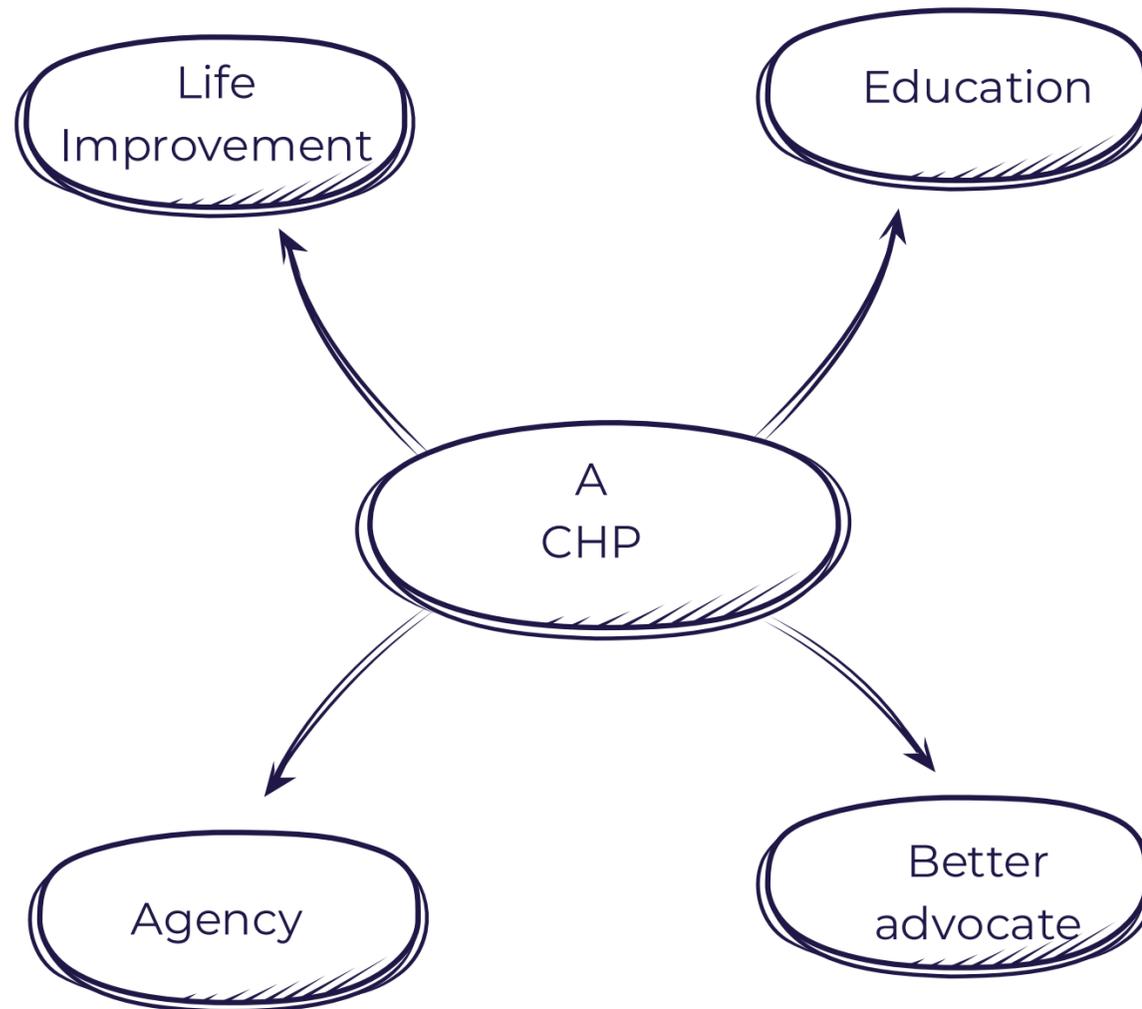
**Dandelion
Africa**

**Community Health
Promoters in
Climate-Resilient
Health**



The Health–Climate Link

Climate change is intensifying health impacts, especially in vulnerable communities, leading to drought, malnutrition, and disease outbreaks. CHPs are essential as they are trusted, embedded first responders in their communities. They provide a vital link between households and formal health systems, addressing barriers like cultural resistance and geographical isolation. Despite their growing role in climate-related health work, CHPs are often unsupported in national adaptation strategies.





Community-Led Solutions for Maternal & Child Health

In rural Kenya, up to 70% of women and children lack access to primary healthcare. Long distances to facilities, poor infrastructure, and cultural norms are significant barriers.

Dandelion Africa's model uses a network of Community Health Promoters who conduct door-to-door visits and link with Backpack Nurses who travel to hard-to-reach areas

CHPs equipped with knowledge and kits reach hard-to-reach communities with essential healthcare services, bridging the gap between remote populations and formal healthcare facilities.



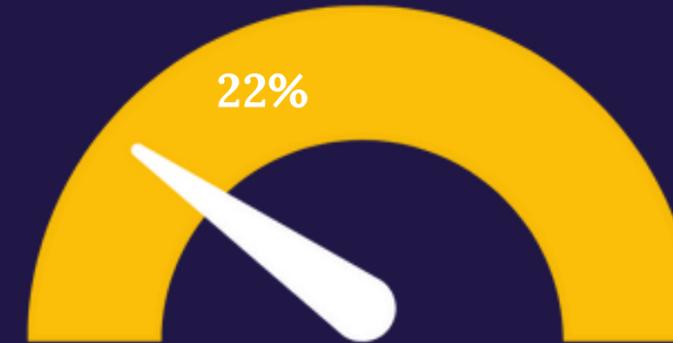
CHPs Providing Door-to-door Services



CHPs have improved Maternal & Child Health outcomes in over **770K** households



Increasing contraceptive prevalence rate



Reducing maternal deaths



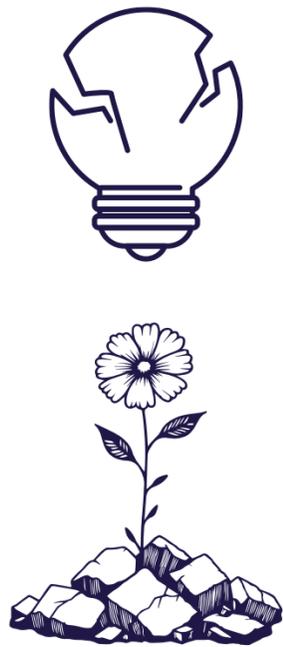
Increasing postnatal coverage



Reducing neonatal deaths

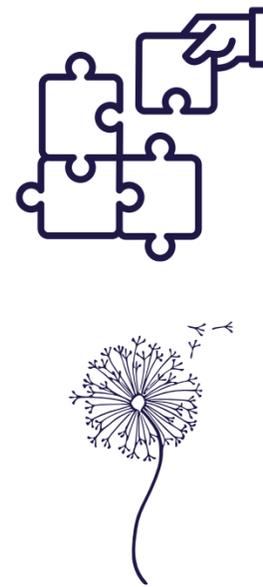
CHPs as Community Leaders

2023



Mothers of Majimazuri travel 11 km for maternity services. Without a local maternity ward, maternal health was a daily struggle.

2024



CHPs from Machungara lobbied for maternity equipment after our advocacy training. A maternity ward was equipped with beds and mattresses provided by the government.

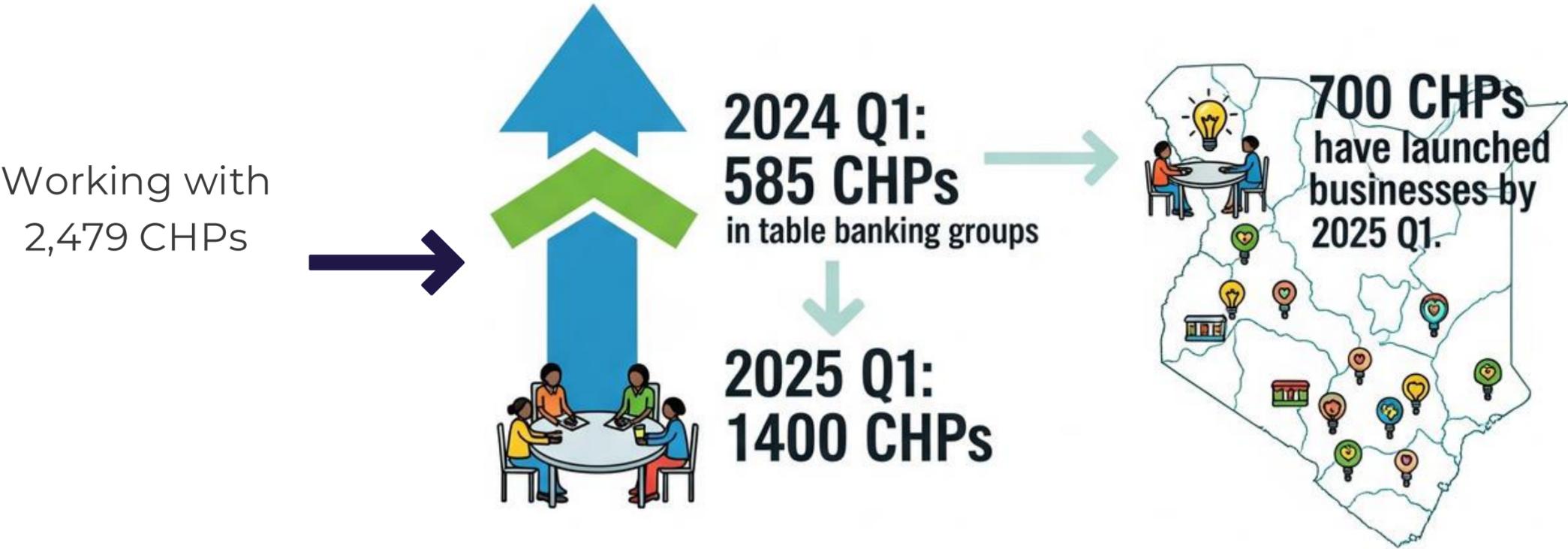
2025



The maternity ward fully opened. The community celebrated the first skilled delivery, a healthy baby and a proud new mother, cared for by the health facility nurse who was part of our EmONC training

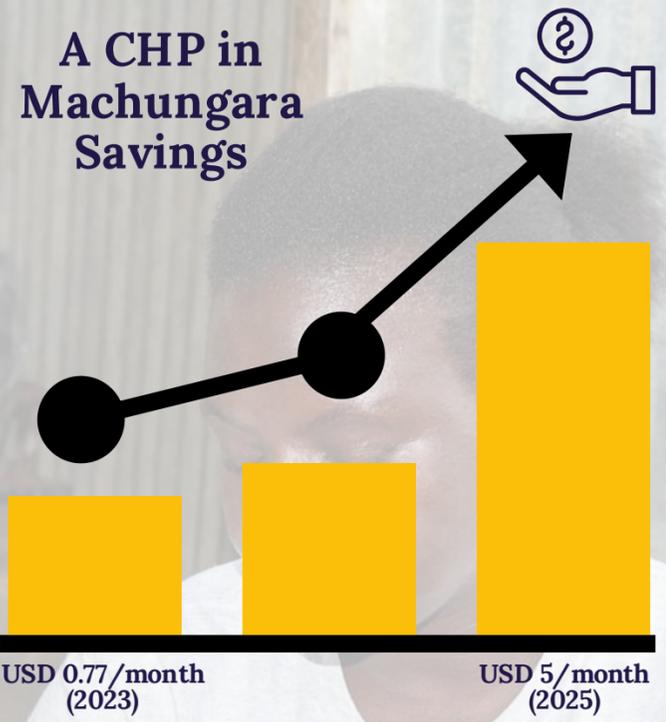
Dandelion Africa's Sustainable Approach

- Health and livelihoods are deeply interconnected.
- We integrate CHPs into our Women's Livelihood Program to empower them with economic, leadership, and advocacy skills.
- Our model improves access to health services while empowering CHPs through table banking, entrepreneurship training, and climate-smart agriculture.
- This enhances their financial independence and capacity to influence change at the household and community levels

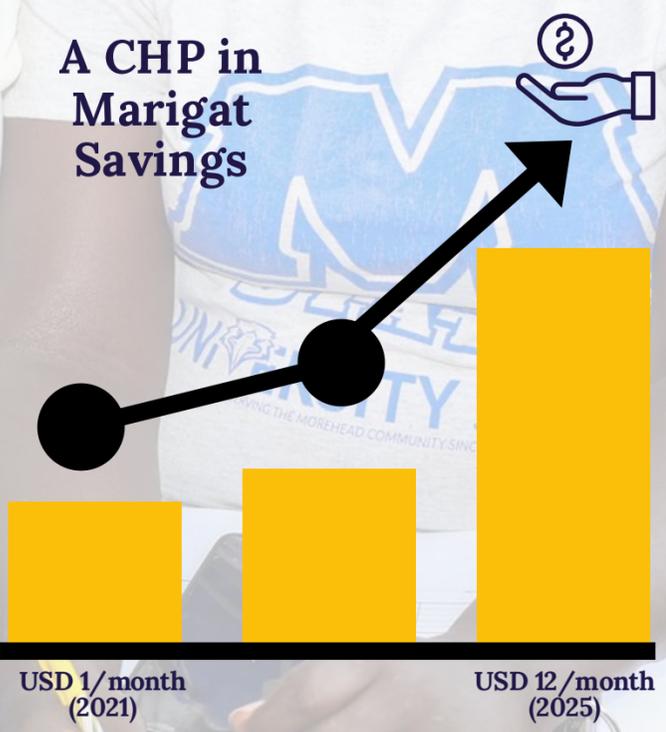




A CHP in Machungara Savings



A CHP in Marigat Savings

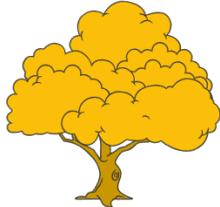


Building Financial & Climate Resilience

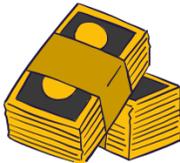


Over 400,000 tree seedlings by Machungara Self Help Group

2024



150,000+ trees sold to Kericho County Government



USD 11,545 earned



Each member received USD 615-770

2025



23,000 seedlings sold to Nakuru County and Kenya Forest Service



USD 2,694 earned



USD 230 For each member

Mentorship by Dandelion Africa on Mushroom Farming

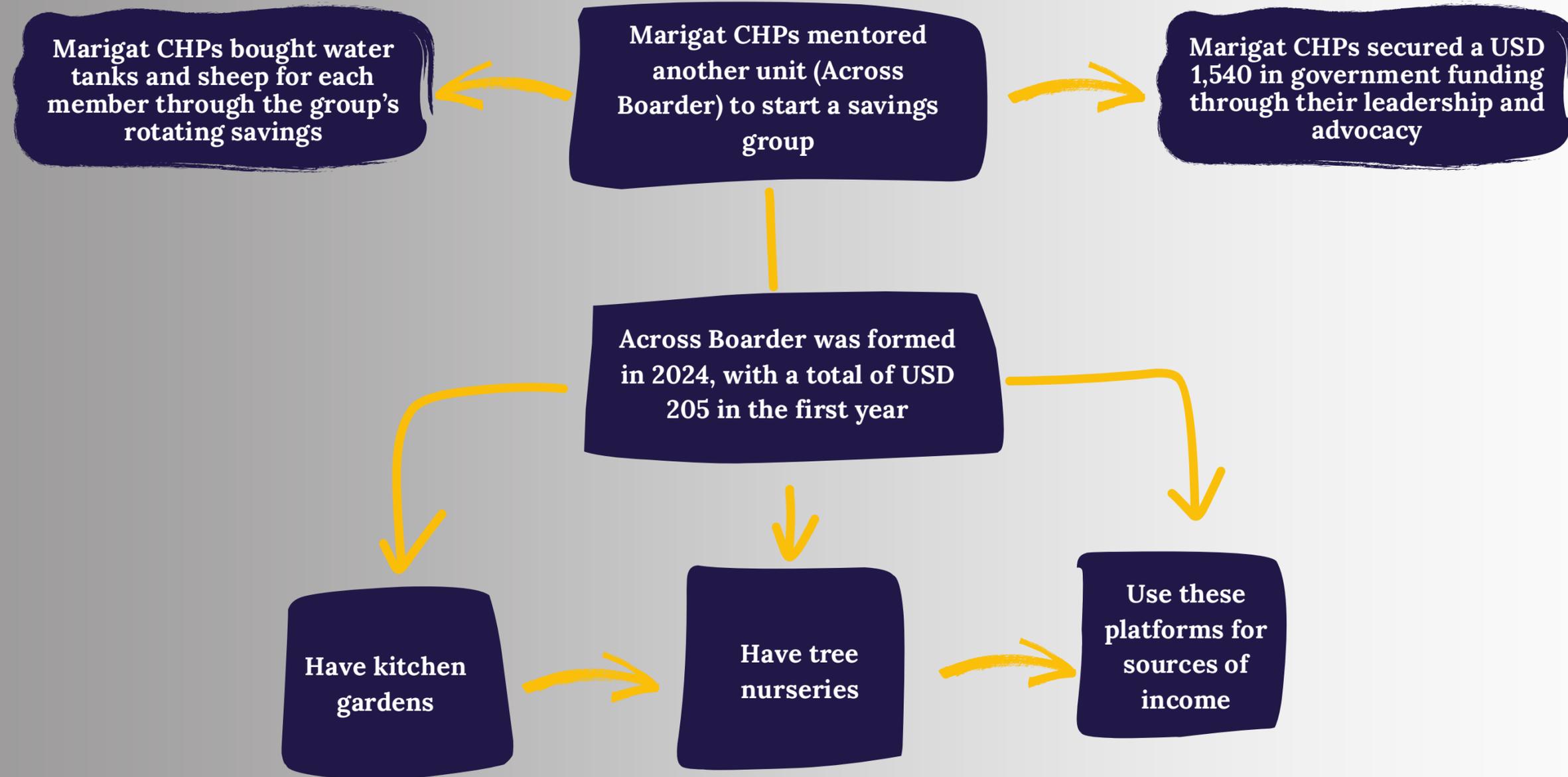


Bi-annual harvests (2 per year)



USD 385 income for the group annually

CHPs Showcasing Climate Change Resilience



CHPs' Voices

"Thanks to our group, saving and farming trees changed my life! I earned USD 770, paid my daughter's school fees, and now she's in university!" says Nancy Njoki from the Machungara self-help group.



"My name is Edith Jerop from the Marigat CHPs. Through table banking, I started a business, earn USD 154+ monthly, and now I own my home, pay my kids' school fees!"



Government Partnerships for Scale



Why We Empower A CHP



Improved Service Delivery: CHPs can dedicate more time to household visits, follow-ups, and health education without financial strain.



Better Family Livelihoods: They can pay school fees, afford healthcare, and meet basic needs for their families.



Increased Community Trust and Influence: Economic independence boosts their confidence and status, making them respected role models.



Sustained Community Health Impact: With personal income, CHPs continue providing services even when external funding is limited.



Enhanced Women's Empowerment and Leadership: Many CHPs are women who, once empowered, break traditional gender barriers and lead by example



Investing in the economic well-being of CHPs is a powerful strategy for building resilient, climate-adaptive communities.



I. Nyoman Sutarsa

Senior Lecturer, Population Health

Australian National University



Climate Resilient Primary Health Care in Indonesia

Roles of community health workers (CHWs)

I Nyoman Sutarsa

Academic Research Lead, and Senior Lecturer in Population Health



Australian
National
University



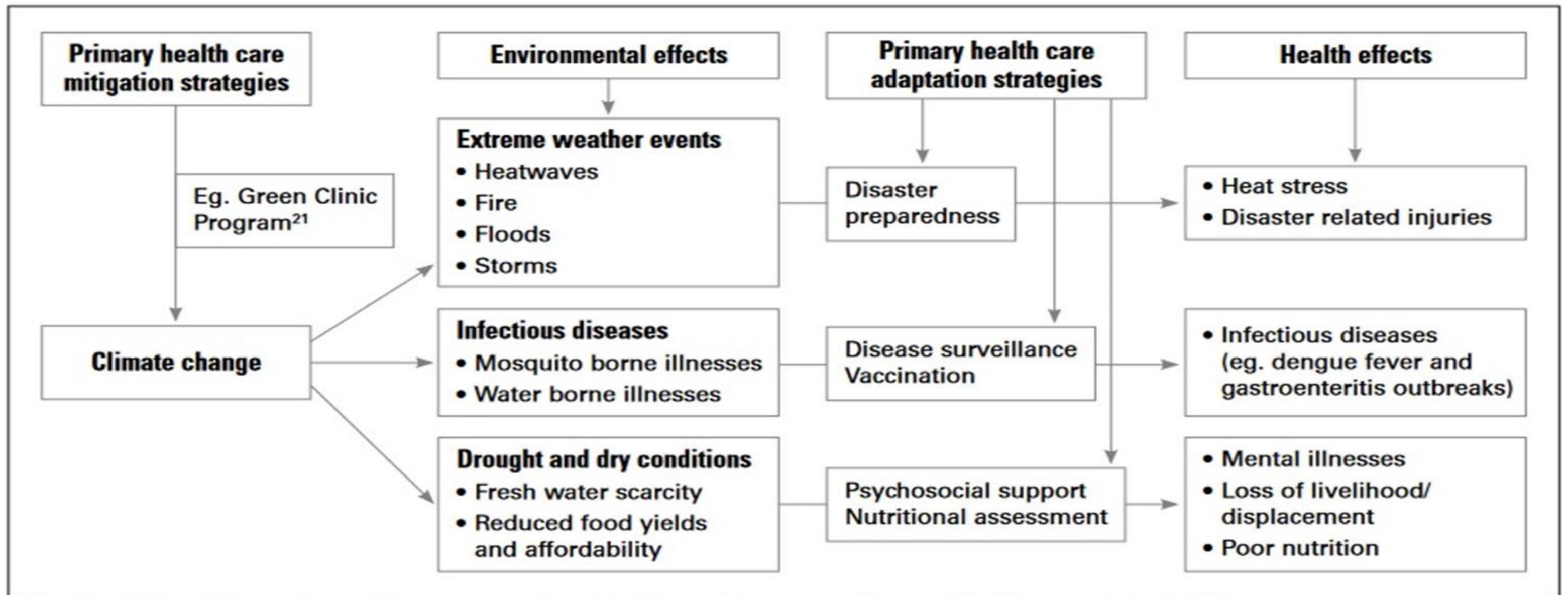
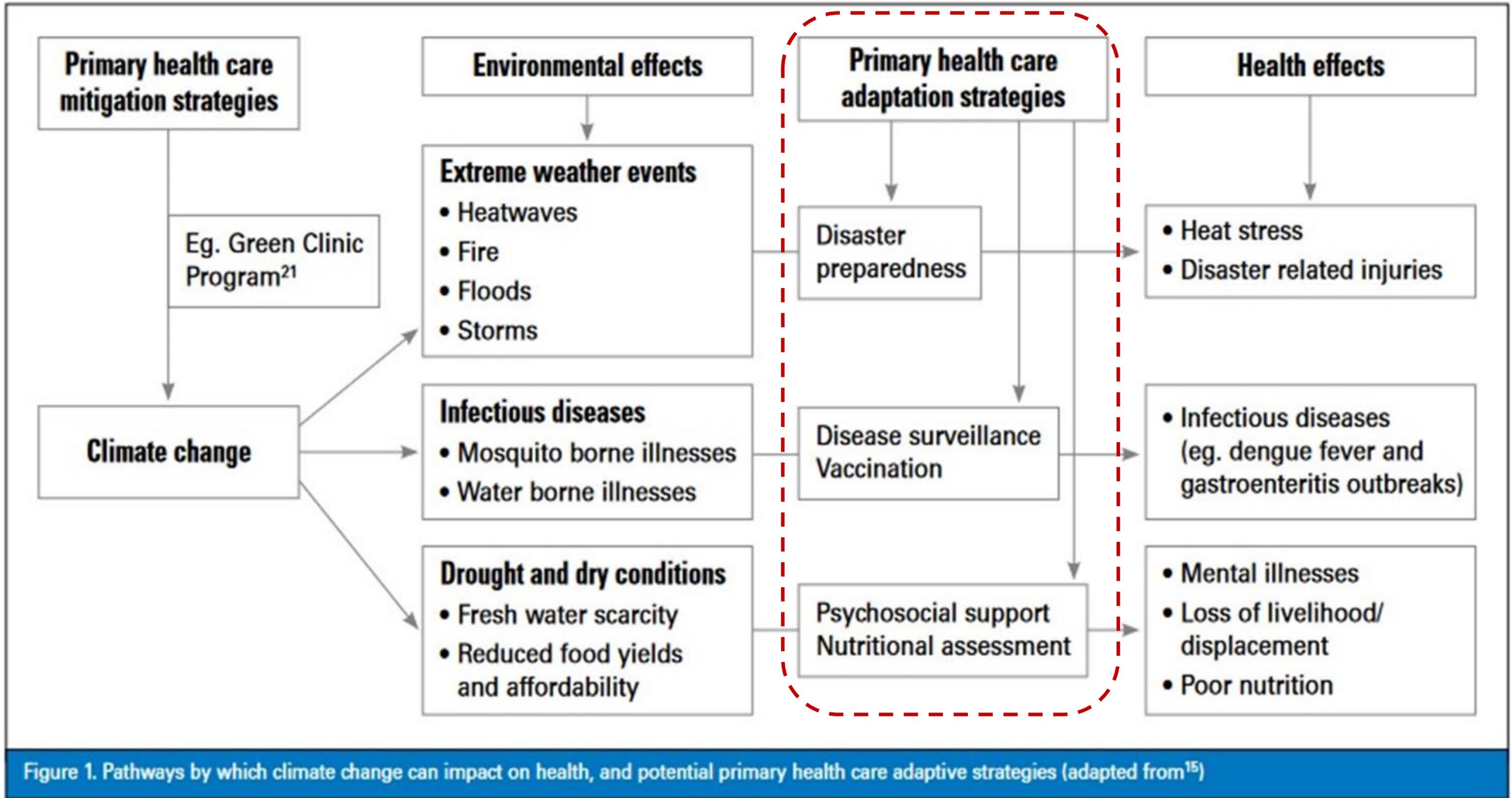


Figure 1. Pathways by which climate change can impact on health, and potential primary health care adaptive strategies (adapted from¹⁵)

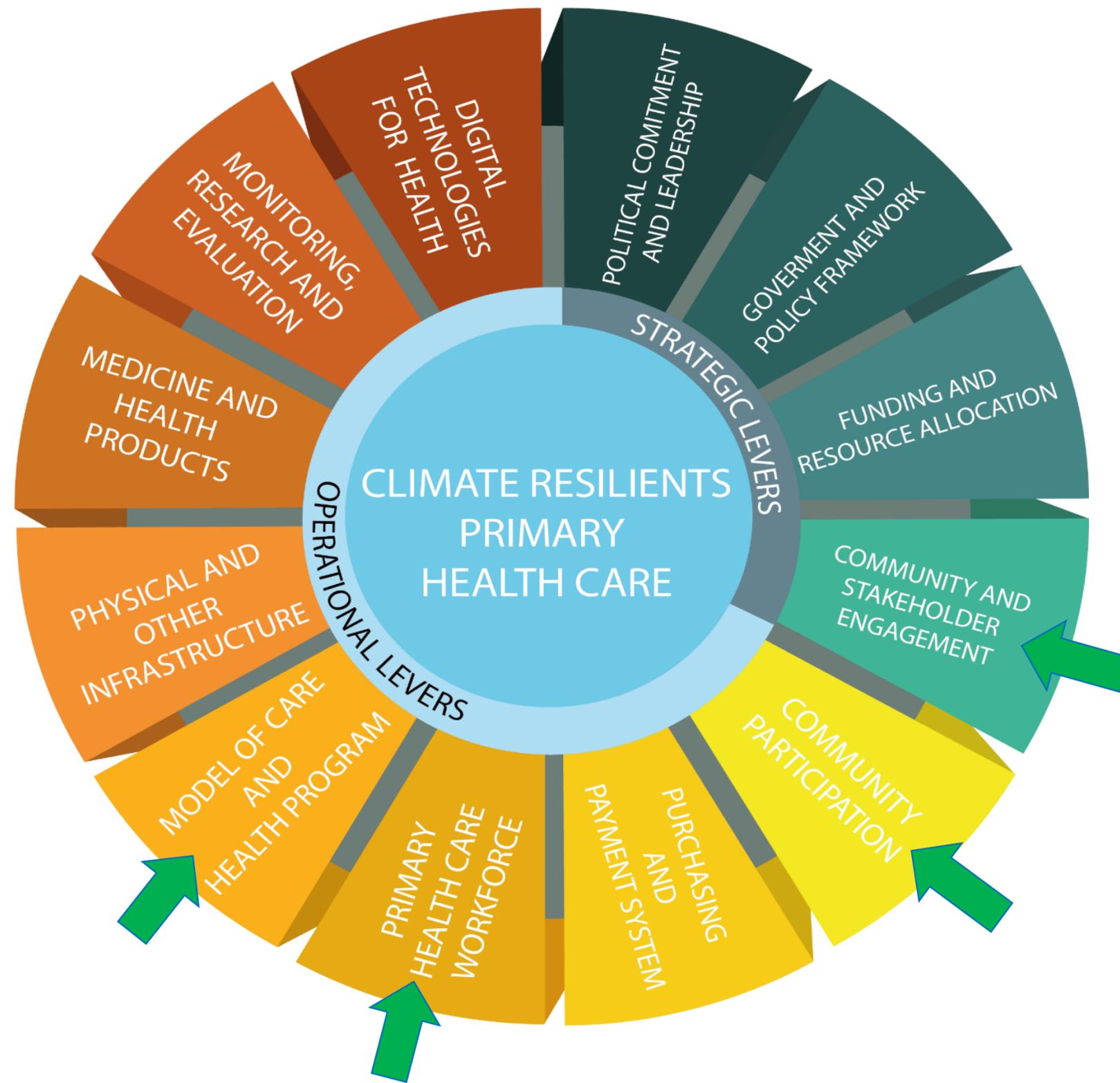
- Mitigating the effects of climate change on health outcomes requires **adaptation** within the health system, especially in **primary care settings** with close proximities with impacted communities.
- Primary care providers (including CHWs) are on the **frontline** in dealing with both direct and indirect health effects of climate change, and many of visible health impacts will be managed by primary care settings.

CHWs



Blashki et al. 2007. Climate change and primary care.



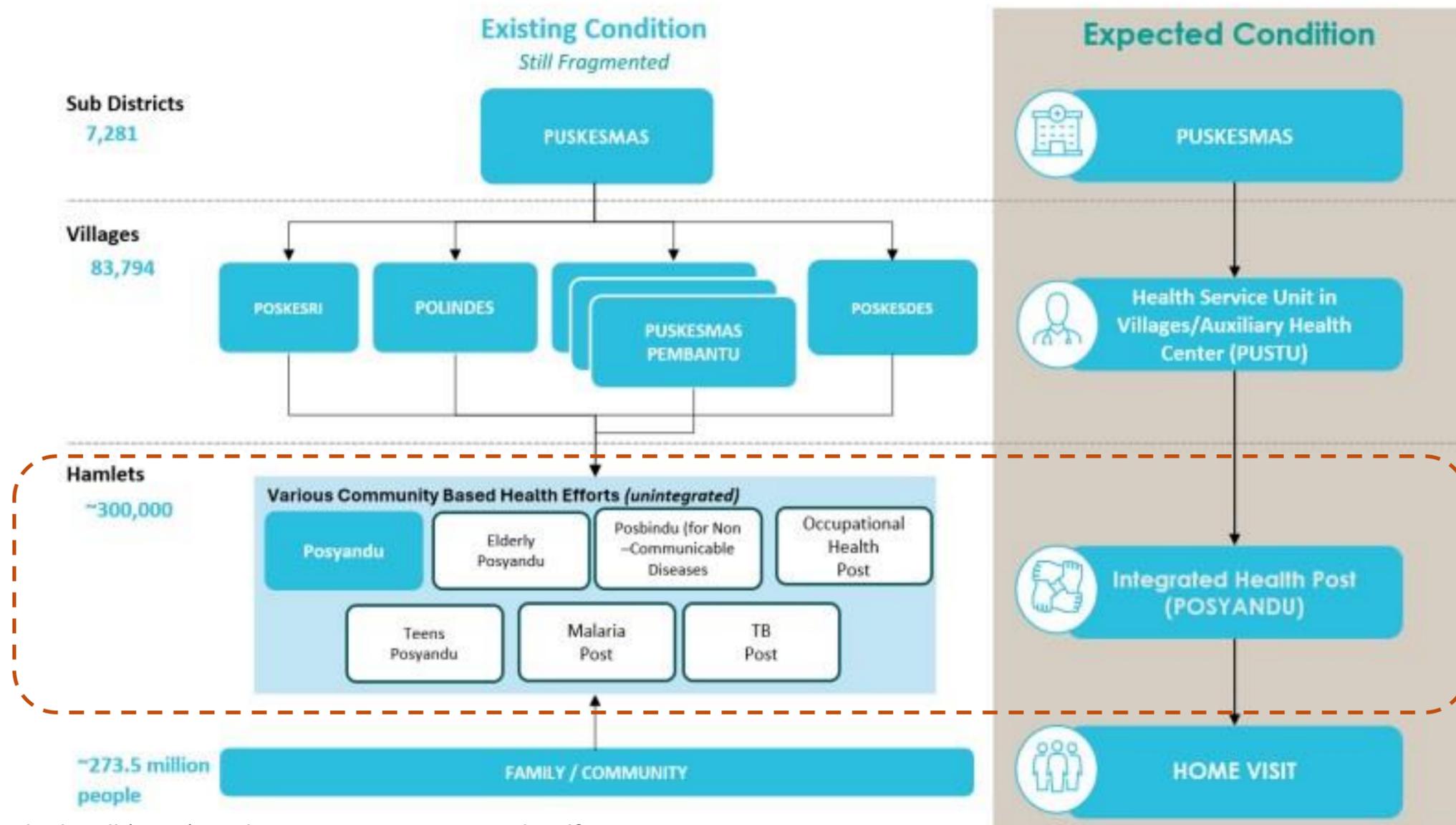


1. Partnership between health facilities with NGOs and civil societies related to climate adaptation for health
2. Collaboration between facility-based and community-based service providers
3. Community engagement in service planning and organization
4. Proactive population outreach
5. Development of climate change risk and vulnerability communication strategies to the community based on local characteristics and culture
6. Active involvement of community in health promotion activity related to climate change

Integrated Primary Health Care in Indonesia

Climate lens and roles CHWs

Figure 2. PHC structure before and after the ILP reform



Climate Lens in CHW Management and Capacity Building

Climate change will have significant health impacts across the life cycle

Climate change will increase intensity of climate events and distribution of vector-borne diseases, as well as food/water borne diseases

Climate change will impact food systems and human nutrition

Climate change will negatively influence occupational hazards, and heat exposure will also influence health information provided to pregnant women, elderly populations, and other vulnerable groups

Climate Lens in CHW Management and Capacity Building

ThinkWell (2025). Reshaping PHC. ILP-Case-Study.pdf

Crispus Mwemaho

**Community Health Worker
& Youth Leader**

**Abayuuti Climate Action Network,
Uganda**



Shobhana Nagraj

**Assistant Professor,
Primary & Community Care**

University of Cambridge



Insights from Community Health Worker programmes & Applications for Climate Action

Dr Shobhana Nagraj

BSc (Hons) MBBS MRCS MRCGP MPhil DPhil SFHEA

Assistant Professor of Primary & Community Care, University of Cambridge

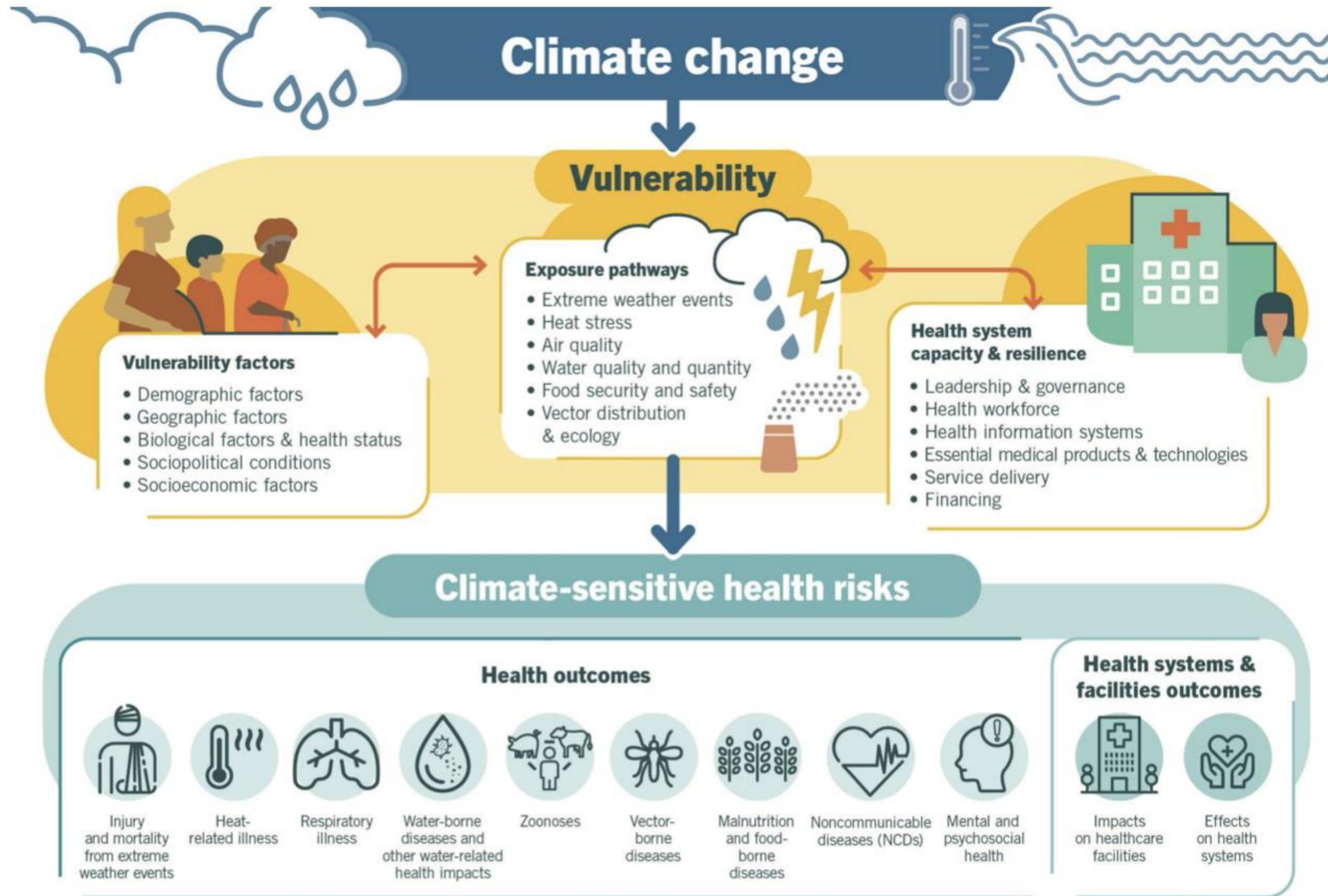
East London NHS Foundation Trust

Honorary Senior Researcher Nuffield Department of Women's & Reproductive Health,
University of Oxford

The World Health Organization (WHO) defines a climate resilient health system as:

“one that is capable to anticipate, respond to, cope with, recover from and adapt to climate-related shocks and stress, so as to bring sustained improvements in population health, despite an unstable climate.”

Healthcare system adaptive capacity & resilience



Source: Quality criteria for health national adaptation plans. Geneva: World Health Organization; 2021.



Roles of CHWs

- Delivering diagnostic, treatment or clinical care
- Encouraging uptake of health services
- Providing health education and behaviour change motivation
- Data collection and record-keeping
- Improving relationships between health systems & communities
- Provision of psychosocial support



**WHAT DO WE KNOW ABOUT
COMMUNITY HEALTH
WORKERS?
A SYSTEMATIC REVIEW OF
EXISTING REVIEWS**

Human Resources for Health Observer Series No 19

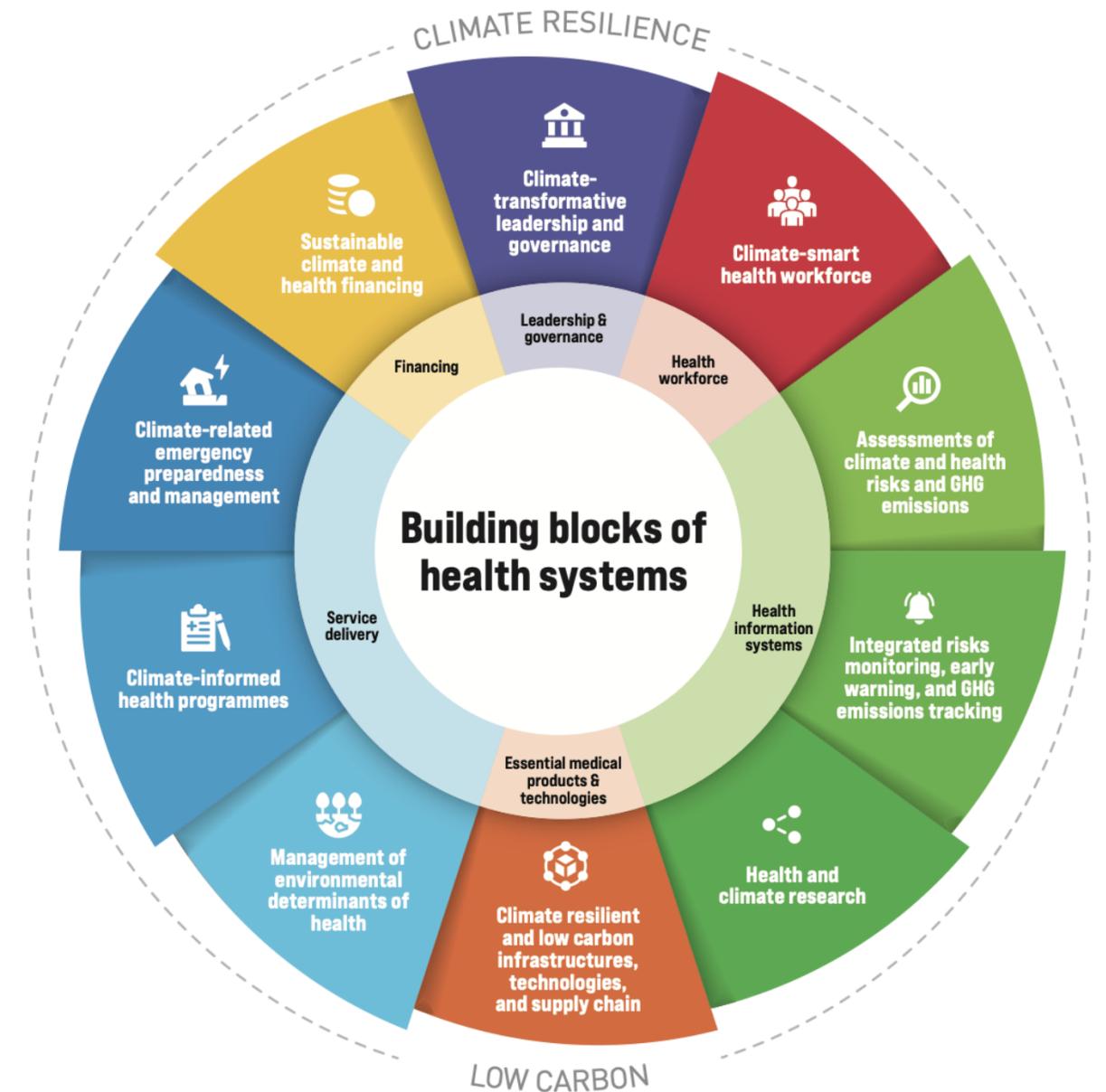
Complexity of tasks is increasing

CHWs do much more than this...

- Trust
- Local, historical knowledge
- Legitimacy
- Broker between community and health system
- Advocate for vulnerable groups → Reduce health inequalities

CHWs, Climate Change & the Building Blocks

- **Health Workforce**
 - Enhance local capacity to respond to climate shocks
 - Quicker responses: early detection of outbreaks
 - Culturally and locally-tailored solutions
- **Service delivery**
 - Health education, preventative care, treatment tasks
- **Health Information Systems**
 - Community-based data collection: household level
 - Detect trends, early detection & monitoring
- **Medicinal Products, Vaccines, technologies**
 - Climate resilience to provide essential services
- **Financing**
 - Reduction of costs through early detection & prevention → local response, less burden on facilities
- **Leadership & Governance**
 - Bridge between community & formal health system
 - Community participation in local health governance



CHWs and Climate Action

- Number and complexity of roles for CHWs is increasing
- Remuneration for work
- Clear task definition
- Catchment population to reflect local realities
- Incentives: financial & non-financial
- Community embeddedness: associated with CHW retention, motivation, performance, accountability and support

How CHW programmes can impact Climate Action

- Preventative & Protective healthcare systems (Climate Smart health workforce)
- Contextually-relevant, community-driven data systems & interventions
- CHWs roles are rooted in the principles of justice and equity
- CHWs as Community Change Agents

What are the needs and views of CHWs towards climate change?

Could we talk more in the language of livelihoods & food insecurity?

Thank you for listening Any Questions?

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Faraz Khalid

**Research & Innovation Officer,
Special Program on
Primary Health Care**

World Health Organization (WHO)



Q & A

Feel free to post your question in the Q&A Box

Join Our Next Webinar in this Series:

- **Voices from the Frontlines: CHWs in Conflict-Affected Communities**

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