

# Safeguarding planetary health: the contribution of community health workers to climate stability, global equity, and social justice

Cornelia Junghans Minton, Cleo Baskin, Joerg Schmid, Matthew Harris



Planetary health, the interdependence of human health and natural systems, is under severe threat. Climate breakdown, biodiversity loss, and chemical pollution are driving overlapping crises that already undermine health and equity. The *Lancet* Commission on planetary health warned in 2015 that “human health and human civilisation depend on flourishing natural systems”. Yet, progress remains too slow; land and marine protections are insufficient, global dietary shifts are lagging, and reliance on fossil fuels persists. Public awareness has grown, spurred by influential voices such as those of Sir David Attenborough, who distilled six interconnected actions from scientific consensus: rewilding land and oceans, transitioning to renewable energy, reducing meat consumption, establishing marine reserves, stabilising human population by bringing growth to zero through education and equity, and prioritising wellbeing within ecological limits over the growth of economic output and resource throughput. Community health workers (CHWs) are health-care providers who live in the community they serve and receive less formal education and training than professional health-care workers, such as nurses and doctors. In this Viewpoint, we argue that trusted, hyperlocal, and globally present CHWs are a largely overlooked workforce in tackling the climate crisis, despite already doing work in adapting to and mitigating climate change. By embedding planetary health within their remit, CHWs can link health, justice, and climate resilience in practical ways, offering one of the most feasible pathways to accelerate progress. Redirecting even a small proportion of fossil-fuel subsidies towards strengthening CHWs to improve global health access could close the global health-workforce gap, reduce gender inequities, redress colonial imbalances, and deliver both climate mitigation and adaptation to ensure a liveable future for all.

## Introduction

Planetary health, defined as the interdependence of human health and natural systems, is under acute threat.<sup>1</sup> Climate breakdown, biodiversity loss, and chemical pollution are already eroding progress towards health equity.<sup>2</sup> Fossil-fuel consumption continues to dominate the global energy output, industrial agriculture accelerates environmental degradation, and global dietary shifts remain slow. Globally, land and marine protections cover less than a fifth of terrestrial surfaces and less than a tenth of ocean and coastal areas are under protection, well short of the UN Environment Programme’s 2030 targets.<sup>3</sup> As the 2015 *Lancet* Commission on planetary health noted, “human health and human civilisation depend on flourishing natural systems and the wise stewardship of those natural systems”.<sup>1</sup> Building on this foundation, solutions need to redefine prosperity around quality of life, equity, and the integrity of natural systems.

Scientific consensus, reflected in the assessments of the Intergovernmental Panel on Climate Change,<sup>4</sup> Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services,<sup>5</sup> and the *Lancet* Commission on planetary health,<sup>1</sup> highlights a common set of priorities for restoring climate and ecological stability. These priorities were powerfully communicated to a broader audience by Sir David Attenborough in his 2020 film *A Life on Our Planet*, which distilled them into six interconnected actions: rewilding land and oceans, transitioning to renewable energy, reducing meat consumption, establishing marine

reserves, stabilising human population to zero growth, and prioritising human and planetary wellbeing rather than the growth of gross domestic product. These priorities are scientifically grounded and technologically feasible, yet implementation lags behind the scale and urgency of the challenge. Meeting these targets will require not only government commitments globally, but also mobilisation of communities and health systems to adapt to climate change, mitigate its impact, and build community resilience.

We argue that community health workers (CHWs), who are trusted hyperlocal providers embedded in millions of communities worldwide, are an overlooked but powerful solution to accelerate progress. By embedding climate stewardship more explicitly within their remit, CHWs can link health, justice, and climate resilience in ways that are both practical and equitable. Redirecting even a small part of the US\$7 trillion spent annually on fossil-fuel subsidies<sup>6</sup> towards funding CHWs would close the global health-workforce gap, advance gender equity, redress colonial imbalances, and deliver measurable contributions to climate mitigation and adaptation.

## The cost of inaction on climate and planetary health

Failure to act decisively on climate and planetary health has profound human, ecological, and economic consequences. First, the immediate and ongoing health harms are already vast; fossil fuels cause around 7 million deaths annually

*Lancet Prim Care* 2026

Published Online  
<https://doi.org/10.1016/j.lanprc.2025.100096>

Department of Primary Care and Public Health, Imperial College London, London, UK (C Junghans Minton PhD, M Harris DPhil); Centro de Estudos Estrategicos, Oswaldo Cruz Foundation, Rio de Janeiro, Brazil (C Baskin MPH); German Climate and Health Alliance, Berlin, Germany (J Schmid MD)

Correspondence to:  
 Dr Cornelia Junghans Minton, Department of Primary Care and Public Health, Imperial College London, London W12 0BZ, UK  
[c.junghans-minton@imperial.ac.uk](mailto:c.junghans-minton@imperial.ac.uk)

from air pollution, which is now the fourth leading cause of death globally.<sup>7</sup> Biodiversity loss drives malnutrition and pandemic risk,<sup>8,9</sup> unmet family planning needs affect 218 million women of reproductive age in low-income and middle-income countries,<sup>10</sup> and unhealthy diets including high meat consumption contribute to 11 million preventable deaths worldwide each year.<sup>11</sup>

Second, the systemic and intergenerational harms of fossil-fuel dependence and industrial farming are far reaching; fossil-derived chemicals, including plastics, pesticides, and synthetic fertilisers, pervade our air, water, soil, and food, driving chronic disease, endocrine disruption, and intergenerational harm on a scale similar to that caused by climate crisis.<sup>12</sup> Industrial agriculture, which is heavily reliant on these inputs, also accelerates biodiversity loss, pollinator decline, environmental toxicity, and antibiotic resistance.<sup>13,14</sup> A global shift towards clean energy and plant-based, ecological diets would simultaneously reduce emissions, toxic pollutants, and diet-related disease.

Last, climate breakdown is intensifying extreme events with devastating consequences. During May 23–24, 2023, human-caused climate change added an average of 26 days of extreme heat exposure worldwide.<sup>15</sup> More than 1 million people were displaced by flooding in the Horn of Africa in late 2023, nearly 2 million people were affected by flooding in central Europe in 2024, and at least 227 people were killed in Hurricane Helene in 2024.<sup>16</sup> Record sea-surface temperatures are already fuelling stronger storms, rainfall, and winds.<sup>17</sup>

These interconnected harms have profound economic costs. A cumulative debt of \$80 trillion from habitat destruction and disruption of food and medical systems worldwide is expected between 2019 and 2035.<sup>18</sup> By contrast, prevention yields consistent high returns. For example, active-travel schemes routinely have high returns on investment in London, UK, and the health benefits alone of this programme have been estimated at about four times greater than the programme cost.<sup>19</sup> Similar gains can be made when prevention is extended to diet,<sup>20</sup> clean energy,<sup>21</sup> and reproductive health,<sup>22</sup> showing that the urgency is not only environmental but also economic.

### CHWs as existing planetary health actors

CHWs already advance planetary health, even if their role is rarely framed as such. By addressing basic health needs, reducing child mortality, promoting nutrition, supporting family planning, avoiding hospitalisations, and managing infectious diseases, CHWs can reduce the vulnerabilities that drive unsustainable resource use and ecological degradation. This mechanism is not just theoretical, but already visible in practice.

In Uganda, Village Health and Conservation Teams combine household health outreach with gorilla conservation, lowering disease risks at the human–wildlife interface while fostering community support for protecting habitats.<sup>23,24</sup> In Madagascar, Blue Ventures' *Safidy* programme integrates reproductive health services with coastal

restoration, enabling families to plan their futures while reducing pressure on fragile marine ecosystems.<sup>25</sup> Around Gorongosa National Park in Mozambique, government CHWs provide essential care to surrounding communities, aligning rewilding initiatives with local wellbeing and reducing conflict about land use.<sup>26</sup> Across these examples, a consistent pattern emerges: when CHWs address basic health needs, they indirectly contribute to climate resilience and ecological stability by simply carrying out their core responsibilities.

In many contexts, this potential is reinforced by the fact that CHWs are themselves Indigenous or work with Indigenous communities, whose stewardship safeguards an estimated 80% of the world's remaining biodiversity.<sup>27,28</sup> Yet, these communities often face threats to their land rights, exclusion from conservation governance, and suppression of traditional knowledge. Recognising and resourcing Indigenous leadership is, therefore, both a matter of justice and one of the most effective strategies for rewilding and resilience.<sup>29</sup> Established governance models such as Territories of Life, areas where Indigenous people and local communities collectively steward land and waters through their own governance systems and which are formally recognised across more than 80 countries, show that conservation is most effective when Indigenous custodianship is central.<sup>30,31</sup> CHWs, as trusted local agents, can strengthen the links between health systems and community stewardship, ensuring that planetary health strategies support rather than undermine ecological justice.

### Mitigation and adaptation while strengthening primary care

The role of CHWs in action for climate extends to both mitigation of and adaptation to climate instability. Previous work has conceptualised these contributions into four broad domains: health promotion and prevention, health-system strengthening, advocacy, and education and research.<sup>32</sup> To illustrate the breadth of these roles, we mapped the contributions of CHWs to core planetary health priorities and the associated health benefits (table).

In terms of mitigating climate change, CHWs contribute through multiple pathways, many of which extend directly from their existing health-promotion roles. For example, CHWs already deliver family planning and maternal–child health services, which reduce demographic pressures and strengthen women's empowerment.<sup>33</sup> The CHWs' remit in nutrition counselling and food security provides a natural starting point for encouraging plant-rich diets that reduce both the risks of non-communicable diseases and emissions. Through household visits, CHWs routinely address risks from cooking smoke, unsafe housing, and poor sanitation. With modest additions, these same visits can promote clean energy use, safe cooling and ventilation, water stewardship, and safer farming practices.<sup>34</sup>

In terms of adaptation to climate instability, CHWs are also instrumental. Their proximity to households allows

For Territories of Life see  
<https://www.iccaregistry.org/en/about/iccas—territories-of-life>

	Existing and potential roles of community health workers in adaptation and mitigation	Potential benefits for health and wellbeing
Transitioning to renewable energy, reducing fossil-fuelled transport and cooking, and improving sustainable housing	Promoting safer household energy (eg, clean cookstoves to reduce smoke and burns); identifying and supporting households with poor housing (eg, damp, heat risk, and infestation); linking households to subsidies or microfinance for clean energy; educating households on small-scale solar and other efficient technologies; mobilising community campaigns for renewable installations in schools and clinics; encouraging walking, cycling, and use of public transport; organising cycle trains and walk buses; advocating for safer streets and local infrastructure; linking residents to retrofitting and insulation schemes; providing education on safe cooling or ventilation	Reduced illness from indoor and outdoor air pollution (eg, respiratory illness, asthma, and lung cancer); reduced burns and injuries; reduced plastic pollution and associated health risks (eg, dementia); reduced chemical pollution linked to farming and associated health risks (eg, Parkinson's disease); increased self-efficacy and household savings; increased physical activity; reduced obesity, diabetes, cardiovascular disease, and inflammation; improved mental health, sleep, and overall wellbeing; reduced excess deaths from cold or heat
Rewilding land and oceans and promoting green literacy	Supporting vector control (eg, mosquito habitats); engaging communities in waste management and water safety; encouraging sustainable farming, agroecology, and seed saving; mobilising households for tree planting, soil restoration, and supporting Indigenous land stewardship; acting as navigators for renewable subsidies, green jobs, and schemes; sharing accessible information on sustainable policies	Reduced heat-related illnesses and death; improved food stability and nutrition; reduced vector-borne illnesses (eg, dengue fever and malaria); reduced gastrointestinal diseases through improved water, soil, and gut microbiomes; increased biodiversity linked to improved mental wellbeing and nutritional value; increased community empowerment; reduced poverty via access to green jobs; improved trust in and uptake of government schemes and initiatives
Reducing meat consumption and shifting to plant-rich diets	Promoting breastfeeding, child nutrition, balanced diets, and food security through community gardens; educating on healthy diets to reduce risk of non-communicable diseases; promoting school meal programmes that align with planetary health	Reduced childhood and adult obesity and malnutrition; reduced diabetes, hypertension, and cardiovascular disease; reduced diet-related cancers; improved child growth and cognitive development; reduced antibiotic resistance
Establishing marine reserves and promoting sustainable water use	Promoting safe water use and sanitation; linking communities to sustainable fish-consumption practices; acting as initial points of access for conservation initiatives; supporting advocacy for marine-protection policies; educating on safe water storage and conservation; monitoring and reporting unsafe water; mobilising rainwater harvesting and grey-water recycling	Reduced waterborne infections, diarrhoeal disease, and dehydration; improved water security for hygiene and nutrition; increased resilience to droughts and floods; reduced risk of malnutrition from food insecurity or declining fish stocks; increased micronutrient security from sustainable marine diets
Prioritising human and planetary wellbeing over growth of gross domestic product and promoting a circular economy	Providing psychosocial support, health promotion, and resilience building at the household level; mobilising advocacy for policies that value health, equity, and sustainability over gross domestic product; strengthening social cohesion through community empowerment; educating on waste reduction, composting, and recycling; mobilising community waste campaigns; linking families to municipal recycling or repair schemes	Improved mental health through reducing climate anxiety and stress-related illness from poor living conditions; improved health through social connection, community trust, and safety; strengthened health equity and access to services; reduced risk of disease from poor waste management; reduced toxic exposure from plastics and chemicals; enhanced wellbeing through cleaner, safer environments
Stabilising the population (eg, education, family planning, and poverty reduction)	Delivering family planning services; supporting maternal and child health; integrating sexual and reproductive health into disaster preparedness; <sup>27</sup> raising awareness of family planning benefits for women's empowerment and resilience; linking families to social protection and embedding sexual and reproductive health within sustainability policies	Increased life potential and reduced maternal mortality by avoiding teenage pregnancies; reduced sexually transmitted diseases (eg, HIV, syphilis, chlamydia, and gonorrhoea); reduced infant mortality; increased life expectancy for women and children

Table: Roles of community health workers in climate action for adaptation and mitigation, with corresponding health benefits

them to contribute to early warning systems, health surveillance, and resilience networks, which are already part of their preventive and promotive remit.<sup>35–37</sup> CHWs provide crucial community infrastructure for responding to climate-related disasters by helping households prepare for heatwaves, floods, and fires; monitoring heat-related and vector-borne illnesses; and acting as sentinels for natural disasters in highly vulnerable areas.<sup>38</sup> In India, accredited social health activists (ASHAs) are trained to promote heat awareness and identify heat-related illness, anchoring them in climate adaptation.<sup>39</sup>

As trusted messengers embedded within their communities, CHWs can disseminate timely information, translate technical risks into locally meaningful advice, and promote practical behaviours that conserve resources and protect the environment (eg, water conservation, safe energy use, and sustainable food production).<sup>40</sup> These practices reinforce both household wellbeing and ecological sustainability.

However, the scale of the planetary health crisis requires CHWs not only as health promoters but also as catalysts for collective action. National policies and international agreements alone will not deliver the scale of transformation required; change will require citizen activation on a large scale. A helpful way to think about this change is to switch from the carbon footprint, a concept highlighting individual responsibility for emissions and shifting responsibility from corporations to individuals, popularised by British Petroleum in 2004, to the carbon handprint.<sup>41–43</sup> The handprint emphasises the positive impact people can create collectively, rather than the guilt associated with individual consumption choices.

CHWs are uniquely positioned to amplify this handprint. They already empower their communities through collective action, building trusted relationships with households, community organisations, and schools and advising on healthy lifestyles, chronic disease support, and community development. If empowered, CHWs have the

potential to be a global force for climate action by mobilising their unique position at the intersection of health and community resilience. Rather than focusing on individual lifestyle changes, CHWs can facilitate collective action by convening workshops, linking households to local resources, and mobilising neighbourhood networks to advocate for healthier and more sustainable environments.

Historical precedent shows the capacity of CHWs as mobilisers. In India, ASHAs and other front-line workers were crucial in mobilising communities for COVID-19 vaccination.<sup>44</sup> In Brazil, CHWs embedded in the Family Health Strategy supported the Zika and dengue responses by conducting home inspections for mosquito breeding sites, providing health education, and aiding incidence reporting.<sup>45–47</sup> In Kenya, CHWs support community food security through kitchen-gardening initiatives, strengthening resilience amid climate stress.<sup>48,49</sup> In these ways, CHWs extend their established role in protecting health to become front-line agents of climate adaptation, while simultaneously reinforcing the preventive and equity functions of primary health care. In each case, environmental protection builds naturally on CHWs' established role in promoting household and community health, making climate action immediate, tangible, and urgent. By embedding such activities into community health systems, CHWs can transform climate action from a matter of personal sacrifice into a shared project of empowerment and resilience. This shift, from thinking how an individual can do less to wondering how we can act together for more, captures the essence of the carbon handprint and emphasises the role of CHWs in driving systemic, rather than symbolic, change.

### What is needed to potentiate CHW action?

To fulfil this potential, CHWs need to be adequately supported through robust health systems and governance frameworks. Without this, there is a risk that an already overstretched workforce, on which many public health programmes depend, will face further overburdening, leading to attrition and burnout. Mitigation strategies include establishing structured career progression, such as South Africa's Level 1–3 CHW certification to promote retention and professionalism;<sup>50</sup> integrating CHWs with other front-line roles, as in Integrated Neighbourhood Teams in the UK<sup>51</sup> to distribute workload more equitably; and ensuring dedicated, stable funding streams, as exemplified by Brazil's Family Health Strategy, in which legal protection for the role reduces dependence on short-term funding and signals political commitment.<sup>47</sup> A conservative figure from The Global Fund indicates that more than 3.8 million CHWs were operating across at least 98 countries in 2024,<sup>52</sup> whereas a 2024 estimate by the Community Health Impact Coalition suggested closer to 4.7 million across 100 countries.<sup>53</sup> These figures reflect substantial global coverage, yet CHWs are unevenly distributed, underpaid, and underpowered in many low-income and middle-income country settings. As of 2025,

Brazil alone has more than 400 000 CHWs as part of its national Family Health Strategy<sup>54</sup> and India's ASHA programme employed more than 1 000 000 CHWs in 2025.<sup>55</sup> Still, the global health system has a shortage of up to 11 million health workers in meeting the universal health coverage goals by 2030.<sup>56</sup> Within this gap, CHWs are a comparatively rapid and cost-effective way of expanding access to primary health care.<sup>57–59</sup>

Brazil provides one of the most institutionalised examples, grounded in the principle of being comprehensive at the household level, hyperlocal, universal and proportionate, and integrated in the health and social-care system.<sup>54</sup> In this model, CHWs are salaried and trained, and each is responsible for around 150 households within a defined catchment area. An integral part of municipal health teams, CHWs conduct regular household visits and community outreach, which makes them trusted and respected actors in both health and resilience.

Professionalisation is the foundation. So far, 50 countries have professionalised CHW programmes<sup>60</sup> and more, including high-income countries, are adopting the Brazilian CHW approach.<sup>61,62</sup> This level of institutional support shows how CHWs, when mobilised effectively, can become powerful agents of climate action.<sup>63</sup> Yet, in many places, CHWs remain unpaid volunteers, excluded from health-workforce planning and not adequately considered in policy design.

Recognition, remuneration, and training are consistently identified as enabling conditions and can be framed through the established 4S framework: CHWs should be salaried, supervised, skilled, and supplied.<sup>64</sup> Salaried employment ensures predictable remuneration, supporting retention, motivation, and gender equity, while effective supervision both guarantees quality and enables the integration of new competencies such as climate health. Skills development is equally crucial; incorporating content on heat risks, water stewardship, or sustainable food practices into existing training can build relevant capacity without overburdening CHWs. Finally, adequate supplies, including medicines, protective equipment, digital tools, and energy-efficient technologies, are necessary for effective functioning in climate-stressed environments. Together, these four pillars provide the institutional foundation for CHWs to contribute meaningfully to planetary health, with complementary policy integration and financing mechanisms, including access to climate finance, further reinforcing these functions.

### The economic case for CHWs: high returns, low cost

If all countries invested in CHWs and deployed them as is done in Brazil, how much would such an endeavour cost and what could that achieve?

If 13.5 million CHWs are needed globally for a population of 8.1 billion people (based on the 1:600 ratio used in Brazil's Family Health Strategy, a widely used example for calculating CHW coverage, wherein each CHW is responsible for approximately 150 households), the estimated cost

would be \$40.5 billion annually, covering salary, training, supplies, and support at \$3000 per CHW per year in low-income and middle-income countries.<sup>65</sup> Higher costs would be expected in high-income countries. This sum is less than 0.4% of global annual health spending, which WHO estimates at approximately \$10 trillion per year.<sup>66</sup> A scaled CHW workforce could contribute to reducing the burden of chronic diseases through prevention and education, reducing deaths from air pollution by supporting clean energy adoption, and strengthening resilience to climate-change impacts, highlighting the potential gains of fully deploying CHWs as a planetary health workforce.

A global scale-up of CHWs as climate-health stewards could be achieved by reallocating only a small proportion of climate finance. Global adaptation and mitigation financing already receives more than \$100 billion annually, yet only around 6% of adaptation funding and 0.5% of multilateral climate funding is currently allocated to projects with a primary focus on health.<sup>67</sup> The Green Climate Fund and Adaptation Fund have both identified health as a vulnerable sector, but funding to date has been piecemeal and not directed towards CHWs. Redirecting these resources could explicitly fund CHWs as a front-line adaptation and resilience workforce.

At the same time, global health financing remains heavily targeted towards specific diseases, with large allocations to HIV, tuberculosis, and malaria. A shift towards system-building investments, such as professional CHWs who are salaried, supervised, skilled, and supplied, would simultaneously advance disease-specific goals and address climate-linked health burdens. One option would be the creation of a Global Planetary Health Workforce Fund, governed with strong leadership from low-income and middle-income countries and Indigenous peoples, modelled on proposals for health and climate solidarity levies and aligned with calls in the *Lancet* Countdown for greater health equity in climate finance.<sup>68</sup> This approach could channel redirected fossil-fuel subsidies, climate levies on top emitters, and repurposed disease-specific funding towards CHW-led climate-health systems. This is a shift from sustainability (which merely maintains a damaged system) to regeneration, restoring both ecosystems and social justice. CHWs, in partnership with Indigenous custodians, can regenerate degraded landscapes and broken health systems while creating dignified and paid work, especially for women.

Governments currently spend \$7 trillion per annum subsidising fossil fuels.<sup>6</sup> Of note, much of the growth in fossil-fuel subsidies is driven by emerging economies, where energy systems are more polluting, regulatory frameworks are weaker, and underpricing is more prevalent, as compared with established economies. According to the International Monetary Fund, the largest portion of subsidies is in east Asia and the Pacific, followed by south Asia and parts of the Middle East, reflecting large-scale fossil-fuel consumption and external underpricing.<sup>6</sup> Redirecting just 0.6% of fossil-fuel subsidies to a planetary

health workforce of CHWs would suffice to scale to the needed 13.5 million CHWs for \$40.5 billion per annum, while simultaneously reducing emissions, detoxifying environments, empowering communities, and advancing both preventive health and food-system transformation, which are the cornerstones of planetary health. Redirecting fossil-fuel subsidies seems to be an obvious way to achieve divestment and community investment goals. An important shift needed is to place responsibility on carbon polluters. The top 5% of global emitters are responsible for around 60% of cumulative emissions.<sup>69</sup> A global climate solidarity levy on carbon-intensive corporations (eg, aviation, fossil fuel, and shipping) could fund CHW workforce development via the Community Health Impact Coalition or others. Many countries already have nascent CHW programmes that just need to be expanded, sustained, and integrated with planetary health goals. Domestic financing mechanisms such as cross-sectoral funds or earmarked taxes on fossil fuels are further levers.

### Call for more research

Despite their enormous potential, the role of CHWs in climate mitigation and adaptation is under-evaluated. For example, their effectiveness in addressing the health impacts of climate change, heat-related illness, vector-borne diseases, food insecurity, and the mental health effects of displacement and ecological loss are all areas in which further research for the role of CHWs is needed. Moreover, to make the case for inclusion of CHWs in climate finance streams, robust evaluation should include both quantitative metrics (eg, reduced disease burden, cost-effectiveness, and emissions savings from household energy transitions) and qualitative outcomes (eg, strengthened community resilience, empowerment of women, and protection of Indigenous knowledge systems). Without such evidence, health will continue to receive only a marginal share of climate funding, and CHWs, who are predominantly women in low-income and middle-income countries, will remain unsupported in their front-line role. Evaluating and documenting their impact is, therefore, a necessary step towards unlocking fair financing and integrating human infrastructure into climate-adaptation strategies. Health is still a negligible feature in climate finance, yet the health returns per money spent on CHWs can be large, especially where mitigation reduces air pollution and adaptation hardens basic public health systems. The task now is to relabel, redesign, and rereport climate spending so that health benefits are both delivered and visible, followed by a scale-up of what works.

### Conclusions

Now is a point in time in which fundamental and necessary choices must be made. The six outlined, evidence-based actions are eminently achievable, but only if implemented at scale and speed. CHWs are the ready-made, justice-centred workforce that can, and to some extent already do, deliver these actions. CHWs already exist in millions

### Search strategy and selection criteria

We conducted a review of studies and commentaries relating to the impact of climate change using the *Lancet* Commission on climate change as a starting point. We searched PubMed for peer-reviewed articles published from database inception to Sept 25, 2025. We restricted our search to English language articles only on the role of community health workers (CHWs) globally in six domains of climate action, based on the evidence from the Intergovernmental Panel on Climate Change and Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. No additional inclusion or exclusion criteria were used beyond limiting the review to English-language articles. We also conducted a mixed-methods literature search to examine the role of CHWs in activities relevant to planetary health and climate-related prevention. First, we searched MEDLINE from database inception to Oct 25, 2025, using a structured strategy that combined MeSH terms and free-text terms across three concepts: (1) CHWs and equivalent cadres globally (including lay health workers, community health volunteers, and health workers); (2) planetary health relevant framings, including environmental health, climate change, sustainability, and air pollution; and (3) action aligned with recognised planetary health co-benefits for health, including active travel and transport, healthy and sustainable diets, household energy and cooking, housing and energy efficiency, water and sanitation, protection of land and ecosystems, health education and behaviour change, family planning, and poverty and social determinants of health. No geographical or study design restrictions were applied. Recognising that key evidence relevant to planetary health lies outside traditional biomedical databases, we also conducted a purposive search of grey literature and non-indexed sources. This included major global assessments and commissions; policy and guidance documents from international organisations; and reports from governmental bodies, non-governmental organisations, and professional networks relevant to CHWs, primary care, and environmental sustainability. We also included selected analytical blogs, programme descriptions, and case studies that provided insight into implementation, policy, or community-level practice not captured in peer-reviewed literature. Additional sources were identified through expert knowledge of the field and artificial intelligence (ChatGPT version 5.1) was used to identify any grey literature and important documents that may have been missed after all searches had been completed.

and are trusted, embedded, and motivated. The limitation is in terms of sustained investment, training, and integration into planetary health goals. The question is no longer whether the world can afford to invest in CHWs, but whether it can afford not to. As global eyes are on Brazil following the 30<sup>th</sup> Conference of the Parties in 2025, a country pivotal to planetary climate regulation and biodiversity with one of the world's most comprehensive and effective CHW programmes, right now is a unique opportunity to highlight, recognise, and resource CHWs not only as essential providers of health care, but as front-line stewards of planetary health as well.

#### Contributors

CJM conceptualised the Viewpoint and wrote the first draft. CB, JS, and MH contributed to the development of the Viewpoint and writing of the first draft. All authors had final responsibility for the decision to submit for publication.

#### Declaration of interests

JS is Co-Chair of the Climate Change and Health Special Interest Group of the German Society of General Practice and Family Medicine. CB works for the Community Health Impact Coalition. CJM and MH are co-leads of the Community Health and Wellbeing Workers programme of the National Association of Primary Care.

#### Acknowledgments

We thank Andrew Haines for helpful comments on the manuscript. This Viewpoint is independent research partly funded by the National Institute for Health and Care Research Applied Research Collaboration Northwest London. During the preparation of this work, the authors used ChatGPT version 5.1 to identify references and relevant literature. After using ChatGPT version 5.1, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

#### References

- Whitmee S, Haines A, Beyrer C, et al. Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–*Lancet* Commission on planetary health. *Lancet* 2015; **386**: 1973–2028.
- Pörtner HO, Roberts DC, Tignor MMB, et al. Climate change 2022: impacts, adaptation and vulnerability. 2022. [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_FullReport.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FullReport.pdf) (accessed Dec 2, 2025).
- UN Environment Programme. Protected Planet Report 2024. Oct 28, 2025. <https://www.unep.org/resources/report/protected-planet-report-2024> (accessed Dec 2, 2025).
- Intergovernmental Panel on Climate Change. AR6 synthesis report: climate change 2023. 2023. [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf) (accessed Dec 2, 2025).
- Daszak P, Amuasi J, das Neves CG, et al. Workshop report on biodiversity and pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services. 2020. [https://files.ipbes.net/ipbes-web-prod-public-files/2020-12/IPBES%20Workshop%20on%20Biodiversity%20and%20Pandemics%20Report\\_0.pdf](https://files.ipbes.net/ipbes-web-prod-public-files/2020-12/IPBES%20Workshop%20on%20Biodiversity%20and%20Pandemics%20Report_0.pdf) (accessed Dec 2, 2025).
- Black S, Liu A, Parry IWH. IMF fossil fuel subsidies data: 2023 update. Aug 24, 2023. <https://www.imf.org/-/media/files/publications/wp/2023/english/wpiea2023169-print.pdf.pdf> (accessed Dec 2, 2025).
- WHO. Air pollution. 2021. <https://www.who.int/health-topics/air-pollution> (accessed Dec 2, 2025).
- Lawler OK, Allan HL, Baxter PWJ, et al. The COVID-19 pandemic is intricately linked to biodiversity loss and ecosystem health. *Lancet Planet Health* 2021; **5**: e840–50.
- Sharma I, Birman S. Biodiversity loss, ecosystem services, and their role in promoting sustainable health. In: Singh P, Yadav N, eds. The climate-health-sustainability nexus: understanding the interconnected impact on populations and the environment. Springer Nature, 2024: 163–88.
- Sully EA, Biddlecom A, Darroch JE, et al. Adding it up: investing in sexual and reproductive health 2019. July, 2020. <https://www.guttmacher.org/report/adding-it-up-investing-in-sexual-reproductive-health-2019> (accessed Dec 2, 2025).
- GBD 2017 Diet Collaborators. Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet* 2019; **393**: 1958–72.
- Woodruff TJ. Health effects of fossil fuel-derived endocrine disruptors. *N Engl J Med* 2024; **390**: 922–33.
- Manyi-Loh C, Mamphweli S, Meyer E, Okoh A. Antibiotic use in agriculture and its consequential resistance in environmental sources: potential public health implications. *Molecules* 2018; **23**: 795.
- Aizen MA, Aguiar S, Biesmeijer JC, et al. Global agricultural productivity is threatened by increasing pollinator dependence without a parallel increase in crop diversification. *Glob Chang Biol* 2019; **25**: 3516–27.
- Climate Central. Climate change and the escalation of global extreme heat. May 28, 2024. <https://www.climatecentral.org/report/climate-change-and-the-escalation-of-global-extreme-heat> (accessed Dec 2, 2025).

- 16 World Weather Attribution. Climate change and high exposure increased costs and disruption to lives and livelihoods from flooding associated with exceptionally heavy rainfall in central Europe. Sept 25, 2024. <https://www.worldweatherattribution.org/climate-change-and-high-exposure-increased-costs-and-disruption-to-lives-and-livelihoods-from-flooding-associated-with-exceptionally-heavy-rainfall-in-central-europe/> (accessed Dec 2, 2025).
- 17 Seneviratne SI, Zhang X, Adnan M, et al. Weather and climate extreme events in a changing climate. In: Masson-Delmotte V, Zhai P, Pirani A, et al, eds. Climate change 2021: the physical science basis. Contribution of working group I to the sixth assessment report of the Intergovernmental Panel on Climate Change. Cambridge University Press, 2021: 1513–766.
- 18 Clements B, Gupta S, Liu J. Settling the climate debt. September, 2023. <https://www.imf.org/en/Publications/fandd/issues/2023/09/settling-the-climate-debt-clements-gupta-liu> (accessed Dec 2, 2025).
- 19 National Audit Office. Active travel in England. June 7, 2023. <https://www.nao.org.uk/wp-content/uploads/2023/06/active-travel-in-england-summary.pdf> (accessed Dec 2, 2025).
- 20 Springmann M, Godfray HCJ, Rayner M, Scarborough P. Analysis and valuation of the health and climate change cobenefits of dietary change. *Proc Natl Acad Sci U S A* 2016; **113**: 4146–51.
- 21 Guðlaugsson B, Ahmed TG, Dawood H, Ogwumike C, Short M, Dawood N. Cost and environmental benefit analysis: an assessment of renewable energy integration and smart solution technologies in the InteGRIDy project. *Cleaner Energy Syst* 2023; **5**: 100071.
- 22 Meyer-Rath G, Jamieson L, Mudimu E, et al. Who pays and what pays off in sexual and reproductive health? A review of the cost and cost-effectiveness of interventions and implications for future funding and markets. *Lancet* 2025; **406**: 2152–67.
- 23 Kalema-Zikusoka G, Rubanga S, Mutahunga B, Sadler R. Prevention of *Cryptosporidium* and *GIARDIA* at the human/gorilla/livestock interface. *Front Public Health* 2018; **6**: 364.
- 24 Kalema-Zikusoka G, Gaffikin L. Issue 17: sharing the forest: protecting gorillas and helping families in Uganda. July 7, 2011. <https://www.wilsoncenter.org/publication/issue-17-sharing-the-forest-protecting-gorillas-and-helping-families-uganda> (accessed Dec 2, 2025).
- 25 Blue Ventures. *Safidy*: the freedom to choose. <https://discover.blueventures.org/safidy-10-years/> (accessed Dec 2, 2025).
- 26 Gorongosa National Park. 2021 Gorongosa Annual Report. Jan 14, 2021. <https://www.yumpu.com/en/document/read/66210012/2021-gorongosa-annual-report> (accessed Dec 2, 2025).
- 27 Sobrevila C. The role of Indigenous peoples in biodiversity conservation: the natural but often forgotten partners. May, 2008. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/995271468177530126/the-role-of-indigenous-peoples-in-biodiversity-conservation-the-natural-but-often-forgotten-partners> (accessed Dec 2, 2025).
- 28 Redvers N, Lokugamage AU, Barreto JPL, Bajracharya MB, Harris M. Epistemicide, health systems, and planetary health: re-centering Indigenous knowledge systems. *PLoS Glob Public Health* 2024; **4**: e0003634.
- 29 Derham TT, Mathews F, Johnson CN. Rewilding and indigenous community-led land care. *Conserv Lett* 2025; **18**: e13090.
- 30 Zanjani LV, Govan H, Jonas HC, et al. Territories of life as key to global environmental sustainability. *Curr Opin Environ Sustain* 2023; **63**: 101298.
- 31 ICCA Consortium. Territories and areas conserved by indigenous peoples and local communities. <https://www.iccaconsortium.org/discover/> (accessed Dec 2, 2025).
- 32 Behera MR, Behera D, Satpathy SK. Planetary health and the role of community health workers. *J Family Med Prim Care* 2020; **9**: 3183–88.
- 33 Scott VK, Gottschalk LB, Wright KQ, et al. Community health workers' provision of family planning services in low- and middle-income countries: a systematic review of effectiveness. *Stud Fam Plann* 2015; **46**: 241–61.
- 34 Afridi F, Debnath S, Somanathan E. A breath of fresh air: raising awareness for clean fuel adoption. *J Dev Econ* 2021; **151**: 102674.
- 35 Alhassan JAK, Wills O. Public health surveillance through community health workers: a scoping review of evidence from 25 low-income and middle-income countries. *BMJ Open* 2024; **14**: e079776.
- 36 Boyce MR, Katz R. Community health workers and pandemic preparedness: current and prospective roles. *Front Public Health* 2019; **7**: 62.
- 37 Ballard M, Johnson A, Mwanza I, et al. Community health workers in pandemics: evidence and investment implications. *Glob Health Sci Pract* 2022; **10**: e2100648.
- 38 Domingo A, Little M, Beggs B, Brubacher LJ, Lau LL, Dodd W. Examining the role of community health workers amid extreme weather events in low- and middle-income countries: a scoping review. *Public Health* 2024; **236**: 133–43.
- 39 Balachandra A. Can earlier training for India's frontline health workers help combat rising heat risk? <https://www.climate-resilience.org/can-earlier-training-for-india-frontline-health-workers-help-combat-rising-heat-risk> (accessed Dec 2, 2025).
- 40 Field E. Can community health workers mitigate environmental health risks to improve maternal and child health outcomes? 2021. <https://dupri.duke.edu/research/can-community-health-workers-mitigate-environmental-health-risks-improve-maternal-and> (accessed Dec 30, 2025).
- 41 Wackernagel M, Rees W. Our ecological footprint: reducing human impact on the Earth. New Society Publishers, 1998.
- 42 Reynolds P. The truth about carbon footprints. May 5, 2025. <https://www.clf.org/blog/the-truth-about-carbon-footprints/> (accessed Dec 2, 2025).
- 43 Grönman K, Pajula T, Sillman J, et al. Carbon handprint—an approach to assess the positive climate impacts of products demonstrated via renewable diesel case. *J Clean Prod* 2019; **206**: 1059–72.
- 44 UNICEF. Leadership of frontline health workers in breaking gender barriers using digital platforms during the COVID-19 immunization drive in India. <https://www.unicef.org/media/166221/file/en-case-study-leadership-female-healthworkers-India-2024.pdf> (accessed Dec 2, 2025).
- 45 Cazola LH de O, Tamaki EM, Pontes ERJC, de Andrade SMO. The incorporation of activities to control dengue by community health agents. *Rev Saude Publica* 2014; **48**: 113–22 (in Portuguese).
- 46 Harris M. Integrating primary care and public health: learning from the Brazilian way. *London J Prim Care (Abingdon)* 2012; **4**: 126–32.
- 47 Macinko J, Harris MJ. Brazil's family health strategy. *N Engl J Med* 2015; **373**: 1278.
- 48 Mbugua S, Kamau-Mbuthia EW, Jordan I, et al. Nutrition education and kitchen garden intervention improves dietary diversity among 6–59 months-old children in Kenya. *Tropentag* 2018. Sept 17–19, 2018 (abstr).
- 49 Consultative Group on International Agricultural Research. Stories from the field: biodiversity in Kenya. Aug 18, 2015. <https://a4nh.cgiar.org/2015/08/18/stories-from-the-field-biodiversity-in-kenya/> (accessed Dec 2, 2025).
- 50 Jooste S, Ramlagan S, Magobo R, et al. A national skills audit of community health workers and outreach team leaders employed by the National Department of Health, 2023. Cape Town: Human Sciences Research Council. 2023. <https://repository.hsrc.ac.za/handle/20.500.11910/23183> (accessed Dec 2, 2025).
- 51 Healthcare Central London. The octopus—a model for community led care and support. 2024. <https://healthcarecentrallondon.co.uk/what-we-do/the-octopus/> (accessed Dec 2, 2025).
- 52 The Global Fund to Fight AIDS, Tuberculosis and Malaria. Community health workers. May 1, 2024. <https://www.theglobalfund.org/en/resilient-sustainable-systems-for-health-community-health-workers/> (accessed Dec 2, 2025).
- 53 Community Health Impact Coalition. Count CHWs. <https://joinchic.org/resources/count-chws/> (accessed Dec 2, 2025).
- 54 Ministério da Saúde. Brasil possui mais de 400 mil agentes de saúde em atuação. July 19, 2024. <https://www.gov.br/saude/pt-br/assuntos/noticias/2024/julho/brasil-possui-mais-de-400-mil-agentes-de-saude-em-atuacao> (accessed Dec 2, 2025).
- 55 Press Information Bureau. Special guests at Republic Day: Union Health Ministry hosts ASHAs and applauds their contributions towards the success of various health initiatives. Jan 25, 2025. <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2096075&reg=3&lang=2> (accessed Dec 2, 2025).
- 56 WHO. Health workforce. <https://www.who.int/health-topics/health-workforce> (accessed Dec 2, 2024).

- 57 O'Donovan J, Baskin C, Stansert Katzen L, et al. Costs and cost-effectiveness of community health worker programs focussed on HIV, TB and malaria infectious diseases in low- and middle-income countries (2015–2024): a scoping literature review. *PLoS Glob Public Health* 2025; 5: e0004596.
- 58 O'Donovan J, Kumar MB, Ballard M, et al. Costs and cost-effectiveness of integrated horizontal community health worker programmes in low- and middle-income countries (2015–24): a scoping literature review. *BMJ Glob Health* 2025; 10: e017852.
- 59 Brown C, Bhatti Y, Harris M. Environmental sustainability in healthcare systems: role of frugal innovation. *BMJ* 2023; 383: e076381.
- 60 Community Health Impact Coalition. PROCHW Policy Dashboard. <https://joinchic.org/resources/prochw-policy-dashboard/> (accessed Dec 2, 2025).
- 61 Macinko J, Harris M, Giugliani C, et al. The international importance and impact of the Brazilian Family Health Strategy: health system learning and adaptation in the UK, Angola, Belgium and South Africa. 2025. <https://cienciaesaudecoletiva.com.br/artigos/the-international-importance-and-impact-of-the-brazilian-family-health-strategy-health-system-learning-and-adaptation-in-angola-belgium-south-africa-and-the-united-kingdom/19630?id=19630> (accessed Dec 2, 2025).
- 62 Junghans C, Antonacci G, Williams A, Harris M. Learning from the universal, proactive outreach of the Brazilian Community Health Worker model: impact of a community health and wellbeing worker initiative on vaccination, cancer screening and NHS health check uptake in a deprived community in the UK. *BMC Health Serv Res* 2023; 23: 1092.
- 63 Community Health Impact Coalition. Climate change. <https://joinchic.org/resources/climate-change/> (accessed Dec 2, 2025).
- 64 Cometto G, Ford N, Pfaffman-Zambruni J, et al. Health policy and system support to optimise community health worker programmes: an abridged WHO guideline. *Lancet Glob Health* 2018; 6: e1397–404.
- 65 Wadge H, Bhatti Y, Carter A, Harris M, Parston G, Darzi A. Brazil's Family Health Strategy: using community health care workers to provide primary care. Dec 13, 2016. <https://www.commonwealthfund.org/publications/case-study/2016/dec/brazils-family-health-strategy-using-community-health-care-workers> (accessed Nov 17, 2025).
- 66 WHO. Global spending on health: emerging from the pandemic. Dec 9, 2024. <https://www.who.int/publications/i/item/9789240104495> (accessed Sept 30, 2025).
- 67 Green Climate Fund. Bridging the climate–health gap. May 29, 2024. <https://www.greenclimate.fund/insights/bridging-climate-health-gap> (accessed Dec 2, 2025).
- 68 Romanello M, Walawender M, Hsu S-C, et al. The 2024 report of the *Lancet* Countdown on health and climate change: facing record-breaking threats from delayed action. *Lancet* 2024; 404: 1847–96.
- 69 European Commission. GHG emissions of all world countries. 2023. [https://edgar.jrc.ec.europa.eu/report\\_2025](https://edgar.jrc.ec.europa.eu/report_2025) (accessed Dec 2, 2025).

© 2025 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).