Health and Climate Network

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A Just Energy Transition for a healthy fossil fuel free world

A just energy transition is increasingly viewed as important in confronting the energy and climate crises. The G7, along with middle income partners including India, Indonesia and South Africa, is looking to establish Just Energy Transition Partnerships (JETPs) to support coal phase-out[1]. Just energy transition is also a core demand among those calling for a Fossil Fuel Non-Proliferation Treaty[2], which envisions a decisive phase-out of all fossil fuel production and use.

The Intergovernmental Panel on Climate Change (IPCC)[3] and the International Energy Agency (IEA)[4] both show pathways for keeping the global temperature rise below 1.5°C which require no new exploration of fossil coal, oil and gas, and a rapid phase out of fossil fuels in the coming decades. With the call for a just energy transition, the shift from a fossil fuel to a renewable energy economy must focus on social and ecological justice, considering the needs of the most vulnerable, and acknowledging that low and middle income countries have a right to development.

Creating a healthy fossil fuel free world requires re-imagining a new clean energy future. The energy transition needed to address climate change should not simply replace the current, centralised fossil-based energy systems with a low-carbon facsimile, with profits captured by the old public and private fossil fuel companies[5]. Instead, it should deliver a system of diverse technology, innovative solutions, and decentralised ownership, with a focus on people, health, and the environment.

Prioritising a just energy transition means thinking of energy differently, with passive cooling, active transport, changing consumption norms, reducing demand, and decentralised systems. To be a truly just transition it must engage workers, impacted people, consumers, those without energy access, and health professionals; and ensure the transformation is restorative, by remediating the damage done to nature and health during the fossil fuel era.

The potential health benefits of the transition to a fossil fuel-free society are extensive, averting millions of premature deaths due to air pollution each year, primarily from noncommunicable diseases, and ending the known occupational health risks faced by coal miners and oil and gas workers. Additionally, it can generate dramatic physical and mental health gains among those using active transport, accessing healthier diets and living and working in healthier cities.

This briefing reviews health benefits available through an effective just energy transition, and presents key principles and policy recommendations needed to deliver a clean energy future for thriving healthy societies.

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HCN Briefing 6

Health benefits of a fossil fuel free world

Fossil fuels have left a legacy of premature deaths and ill-health[6]. Clean energy alternatives implemented through a just energy transition process can save lives and present opportunities for healthier outcomes.

The world's fossil fuel-based energy systems – encompassing electricity, transport, industry, and heating – are the single largest source of greenhouse gas emissions, responsible for nearly three-quarters of global emissions[7]. Phasing out fossil fuels can help the world avoid the worst health impacts of climate change[8], including illness, injury, and death caused by extreme climate events such as floods, bushfires, and heatwaves; increased spread of mosquito- and tick-borne diseases; a rise in cardiovascular disease caused by extreme heat; food insecurity; increased risks to mental health and wellbeing; and effects on livelihoods, migration, and conflict.

Additionally, a just energy transition also offers significant immediate health benefits[9]. This includes reducing workplace injury and diseases related to coal, oil and gas production, such as lung disease and cancer. Rehabilitation of the air, land and water systems around major fossil fuel infrastructure will also greatly benefit the often marginalised communities who live near coal mines, oil fields, power plants, energy depots, and waste sites.

Clean indoor and outdoor air would greatly reduce respiratory illness. The WHO estimates that around 7 million people die annually from air pollution[10], while recent study suggests this could be much higher, with estimates of 8 million death caused by air pollution[11] from fossil fuels alone.Air pollution causes around a quarter of adult deaths from stroke and heart disease, it is the underlying cause of almost a third from lung cancer and is responsible for over two-fifths from chronic obstructive pulmonary disease.

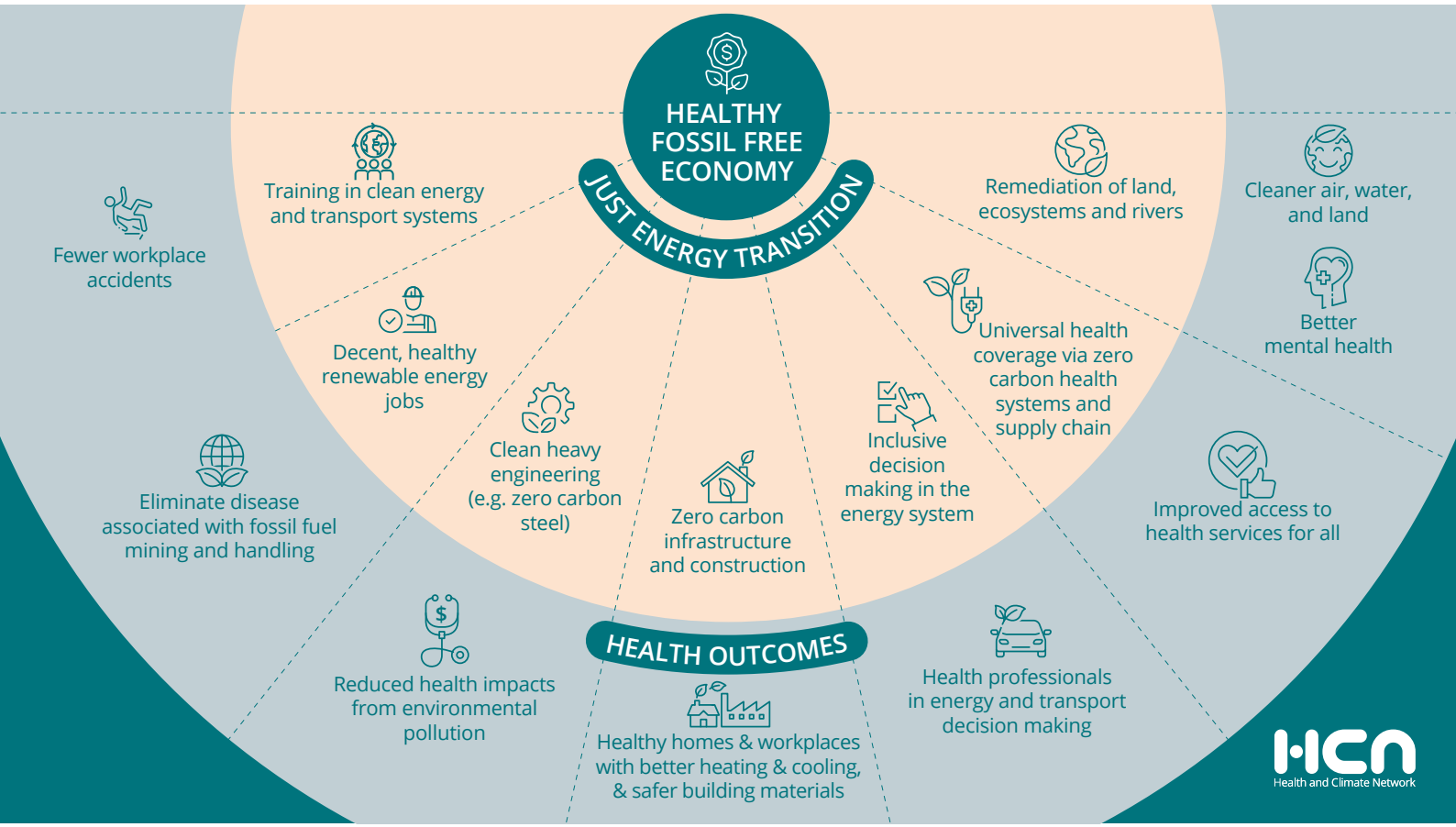
Just energy transition solutions can greatly enhance physical and mental health outcomes (See figures below). Thy can provide better living and work environments and healthier cities[12], including active transport systems getting populations walking and cycling helping to reduce obesity; healthy, warm, and efficient homes reducing damp and mould in homes; and increased natural spaces for urban cooling improving wellbeing and mental health.

At least half the world's population still do not have full coverage of essential health services. Access to modern renewable energy for health facilities as part of a just energy transition programme can directly benefit the health of the world's most vulnerable people[13]. Benefits include improved health facilities with renewably powered lighting and cold storage for medicines. Additionally, clean energy access for productive uses will increase income for lower income households raising their ability to access health services and welfare.

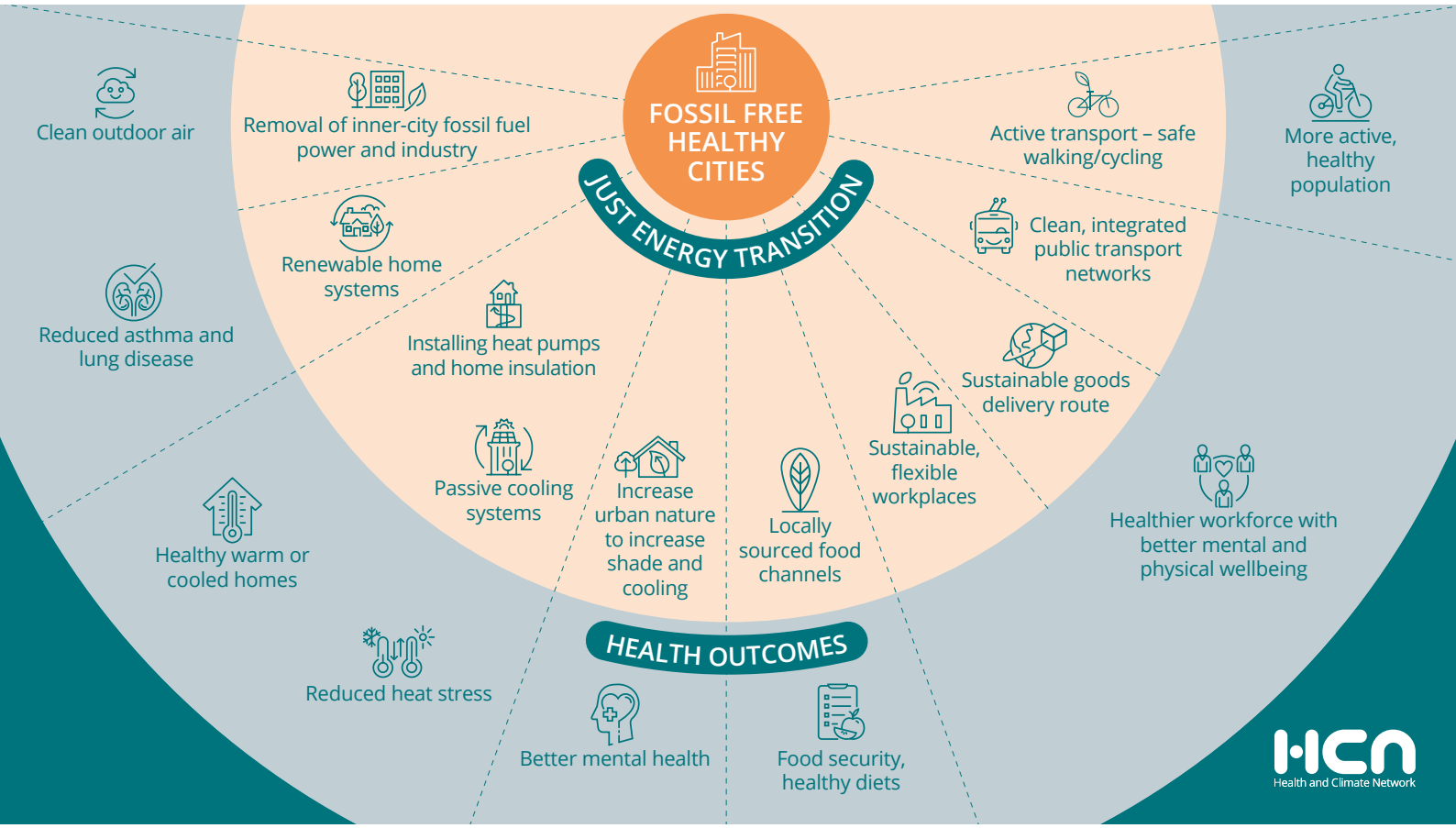
At a household level, in addition to removing harmful indoor air pollution, there are a number of health implications of greater clean energy access. Improved lighting and cooking has been shown to improve home hygiene and reduce household injury from traditional cookstoves such as burns from open fires[14]. Added benefits include providing clean water pumping and food storage[15] such as cooling, providing improved access to locally produced food and better nutrition.

The figures below present three components of delivering a just transition to a healthy fossil fuel free society, for economy, cities, and energy access. These illustrate the potential for significant health gains from taking a just energy transition approach.

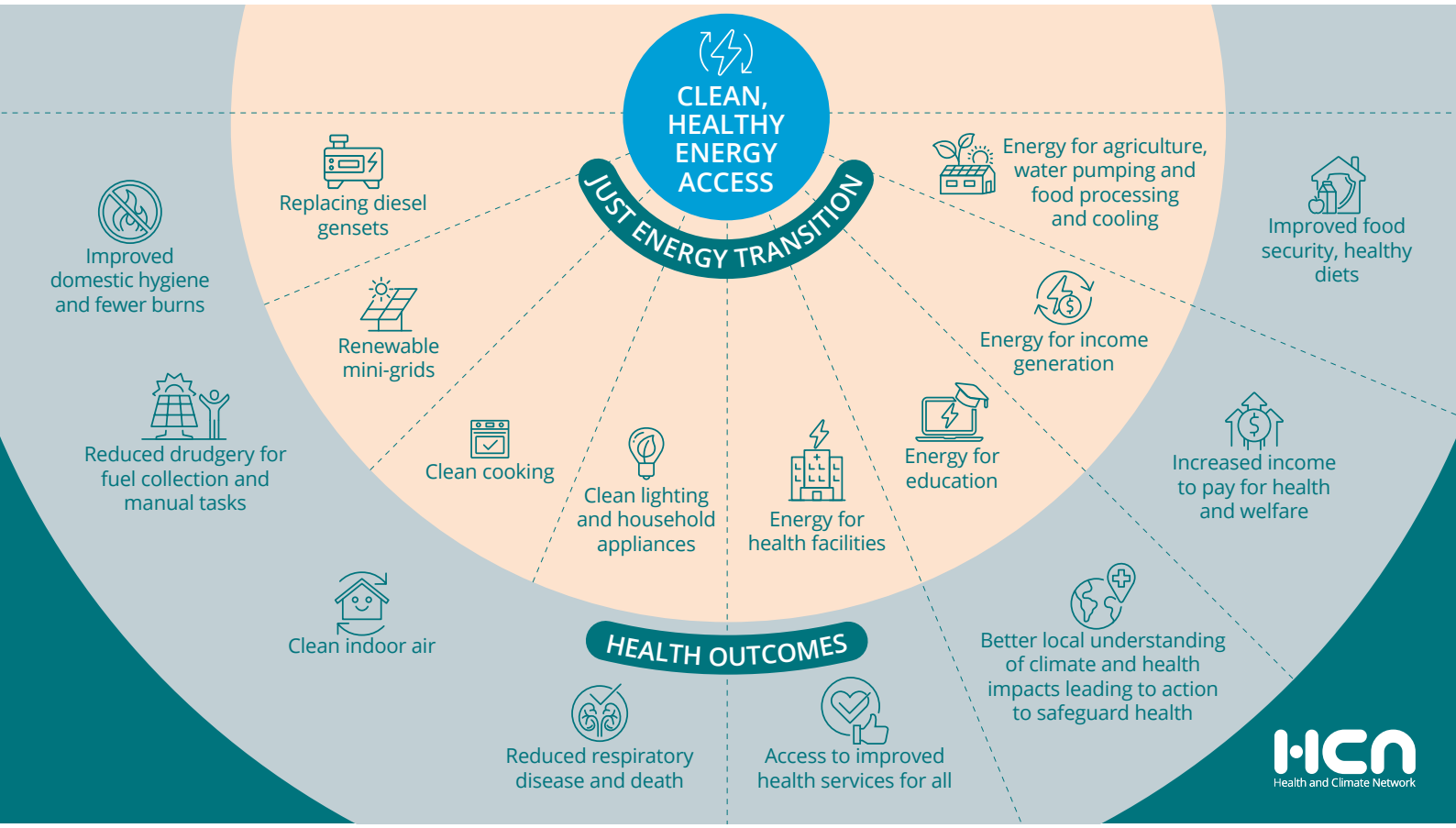
A healthy fossil fuel free economy requires shifting the workforce from extractive and fossil fuel based energy systems, while opening access to clean and healthy employment. It is focused on delivering sustainable development goal 8 (SDG8) on decent work and a sustainable economy while taking climate action. It should require the fossil fuel industry to remediate natural systems damaged by fossil fuel extraction and use. It should transition industry and infrastructure towards being zero-carbon. And health systems including their supply chain should set a track to be fossil fuel free.



Healthy, fossil fuel free cities must be designed to be energy efficient, and to find new ways of living, travelling, and working which allow for healthier lifestyles and safer urban spaces. They should break down health inequalities. Delivering sustainable development goal 11 (SDG11) on sustainable cities while responding to the climate crisis will require innovative technologies and urban planning which remove fossil fuel dependency. These solutions in turn can provide clean air, locally produced nutritious food, natural spaces for good mental health and a safer, healthier workforce.



Healthy fossil fuel free energy access is a commitment under sustainable development goal 7 (SDG7). Almost one billion people worldwide live without electricity, and 3 billion cook daily on health damaging open fires. Lack of energy restricts access to effective healthcare including vaccines which need cold storage, and modern education; foods rot without processing or cold storage, and employment opportunities remain limited. Clean energy access can help build thriving, healthy and climate resilient communities.



Underlying principles and policies for a just transition to a healthy fossil fuel free world

The Health and Climate Network (HCN) gathered civil society and academic experts from the energy and health sectors together in a workshop in July 2022 to discuss the priorities for a healthy just energy transition. The experts jointly recommended the following principles and policies for delivering a healthy fossil fuel free world.

Principles

We recommend three principles that will ensure a just energy transition that works for people, health, and planet.

1. Inclusive and integrated decision making

The extractive model of energy production has made many people poor and unhealthy; it benefits the few at the expense of the many. The just energy transition initiatives, such as JETP, should not be co-opted for corporate gain but deliver equitable and shared benefit.

Community benefits from energy transitions should be aimed at correcting the underlying inequalities built into our current energy system and helping redress the inequities faced by young people, women, marginalised, racial minorities, and Indigenous people from the current system. Ensuring that energy transition policies and finance are inclusive will require that the voices of the most vulnerable are heard and acted on.

Responding to these voices will require forward-looking, climate resilient approaches to a just transition from fossil fuels delivering additional co-benefits such as:

- alleviating energy poverty, reducing household air pollution, and offering community ownership of energy systems;
- creating decent jobs, in particular alternative decent livelihoods for the fossil fuel workforce;
- stimulating small business and local enterprise;
- increasing mobility and improving transport options; and
- improving access to quality, climate resilient healthcare

2. Track the health impacts and benefits of just energy transition

Measuring, monitoring and tracking of human health for all energy transition policies, with context specific assessment of the burden of health, will maximise the health gains. Disaggregation of health outcomes across socio-economic income groups can be an effective way to assess whether energy transition benefits are focused on well-off communities or are better distributed across wider society. This should include highlighting the mental health benefits of living in a fossil fuel free economy. Tracking should include testimonies from people with lived experiences, and work with academics with the ability to quantify health losses and damages.

Fossil fuel and emission heavy industries are already damaging health, therefore a focus on tracking health impacts of fossil fuel development can demonstrate how these industries are bad for health at every stage of the process. It is important to track and economically quantify health damages, both short and long term.

A new wave of extractive practices for minerals in renewable technologies and batteries is increasingly having negative social, environmental and health impacts. All mining and processing operations for renewable energy technology should work to robust environmental, health and social standards, with mandatory health impact assessments ongoing throughout the lifespan of the mining, processing and disposal of minerals.

3. Restoring nature and health

A healthy and just energy transition must move away from the damaging and unhealthy legacy of the fossil fuel era; and should deliver remediation for nature and for people. Damages from the fossil fuel economy including health impacts and destruction of nature should be redressed, with fossil fuel companies held accountable by providing finance for remediation and restoration.

Health systems need to be strengthened, building resilience to the changing climate, and ensuring health care and its supply chain is part of the just energy transition.

A just energy transition must consider all planetary boundaries[16] when transitioning to the new energy systems, ensuring there is a balance of all environmental factors for air, land, water, and nature. This means using an approach which recognizes and accounts for the overshoot of natural boundaries alongside threats to people's basic social and human rights, such as articulated by the 'doughnut economics' model[17].

Policy recommendations

The following policy recommendations aim to deliver a healthy just energy transition for the economy, cities and energy access.

- **Get the finances right for a healthy just energy transition**

Just energy transition requires a re-direction of finances and resources – such as climate finance, subsidies, windfall taxes, and wealth tax - from fossil fuels and towards enabling fossil fuel free economies, transport, energy access and enhanced health co-benefits. This will require the concerted effort of governments and multilateral banks, and the cooperation and regulation of private banks and investors. A transfer of the billions of dollars of subsidies which currently go to fossil fuels should be redirected into just energy transition, with well targeted subsidies for renewable energy and for target beneficiaries, including for health protection for low-income populations.

Annual global fossil fuel subsidy expenditure of US$607 billion in 2021 and predicted to be higher with the price volatility in 2022, could be better invested by governments towards SDG outcomes[18]. The global fossil fuel subsidies could finance the global energy access funding gap 7.5 times over[19]. The COP26 Glasgow Statement on International Finance for Clean Energy Transition, if implemented well, could shift $28 billion of international public finance out of fossil fuels and towards clean energy. Public finance institutions need to set policies which drive this transition in a just and equitable way[20].

Fossil fuel phase out must have leadership from state owned enterprises, and fossil fuel companies need to diversify their portfolio, including through government regulation. Threats to the energy transition – such as investor disputes which are increasingly included in international trade deals, or limits on intellectual property rights – should be removed.

- **Joined-up planning at ministerial level for development, health, and climate**

Delivering clean, renewable energy access gives a quadruple win for climate resilience, mitigation, health, and development. It can help deliver the Paris Agreement on climate change and the SDGs. Health, environment and development ministries working together on energy access can deliver programs and policies centred around air quality management and can highlight that fossil fuel phaseout can have positive benefits for health and employment. Critical to a just energy transition is universal access to effective health care that responds to the changing climate.

- **Mandated monitoring of health impacts with an equity lens**

To fully recognise the health and resulting economic benefits of a just energy transition will require an assessment of the health burden alongside environmental impact assessments for new investments in areas such as clean energy generation, low carbon transport, and sustainable food systems. This can help minimise the health impact and maximise health benefit.

Disaggregated data, for gender, age, ethnicity and disability, is essential to earmark policy interventions for most vulnerable communities. Using international standards and evaluation frameworks will increase credibility, and support decision making on whether plans are feasible.

Community access to this data is important to build public awareness and support, and to build political support for a just energy transition. This will require benchmarks for health focused interventions when policy makers design just energy transition and sharing of examples of best practice.

- **Urban planning within planetary boundaries and for shared benefit**

City planning needs to ensure urban development avoids overshooting environmental planetary boundaries – for land, air, water and nature - while at the same time delivering benefits for urban communities. For shared benefit this means ensuring that fossil fuel free policies are equitably implemented across the city.

The vast majority of urban climate mitigation and adaptation policies can have significant health benefits, for example: shifting to active mobility and public transport (15-minute city[21]); mass retrofit housing programmes towards zero carbon buildings; and integrating adaptation into programmes such as heat protection and nature restoration. Clean air zones can have a positive impact on the health of marginalised people.

- **Prioritise clean, healthy cooking solutions**

Strongly factoring health outcomes into clean cooking and energy programmes can help accelerate action. Public health indicators should be used by government agencies to monitor the progress of policies, for example consumer subsidies having health indicators built-in to monitor progress. Prioritising clean cooking puts the focus on women and child health, freeing-up time for family and income, delivering gender specific health outcomes. A focus on health outcomes will require cooking solutions which are affordable and provide targeted benefits for women, rural communities, and the most marginalised.

References

[1] G7 Leaders' Communiqué 28 June 2022 consilium.europa.eu/en/press/press-releases/2022/06/28/g7-leaders-communique

[2] The Fossil Fuel Non-proliferation Treaty fossilfueltreaty.org

[3] Inter-gvernmental Panel on Climate Change Assessment Report 6 Working group 6: Mitigation of Climate Change, 2022 ipcc.ch/report/sixth-assessment-report-working-group-3

[4] International Energy Agency, World Energy Outlook 2021: Keeping the door to 1.5 °C open iea.org/reports/world-energy-outlook-2021/keeping-the-door-to-15-0c-open

[5] Life After Coal, Just Energy Transition Open Agenda, May 2022. lifeaftercoal.org.za/wp-content/uploads/2022/04/Life-After-Coal-Just-Transition-Open-Agenda-Book-May-2022.pdf

[6] A comprehensive summary of the health impacts of fossil fuel phase out is found here: Cradle to grave fossil fuel briefing, Global Climate and Heath Alliance, 2022. climateandhealthalliance.org/wp-content/uploads/2022/07/Cradle-To-Grave-Fossil-Fuels-Brief.pdf

[7] Climate Watch, 2020, Historical GHG emissions. climatewatchdata.org/ghg-emissions?breakBy=sector&chartType=percentage&end_year=2017&start_year=1990

[8] IPCC AR6 WGII chapter 7 ipcc.ch/report/ar6/wg2/ and summarised here: assets.nationbuilder.com/caha/pages/27/attachments/original/1647402933/IPCC_Briefing_-_SM.pdf

[9] Cradle to grave fossil fuel briefing, Global Climate and Heath Alliance, 2022. climateandhealthalliance.org/wp-content/uploads/2022/07/Cradle-To-Grave-Fossil-Fuels-Brief.pdf

[10] World Health Organization (WHO), 2018, 9 out of 10 people worldwide breathe polluted air, but more countries are taking action. https://www.who.int/news/item/02-05-2018-9-out-of-10-people-worldwide-breathe-polluted-air-but-more-countries-are-taking-action

[11] Vohra, K. et all, Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem, Environmental Research, Vol 195, April 2021 sciencedirect.com/science/article/abs/pii/S0013935121000487

[12] Examples of healthy city interventions can be found here: Health and Climate Change Urban Profiles https://www.who.int/teams/environment-climate-change-and-health/climate-change-and-health/evidence-monitoring/urban-profiles

[13] World Health Statistics who.int/health-statistics

[14] Clean cookstoves lead to 40% reduction in burns in children, Liverpool School of Tropical Medicine, 26 October 2016 lstmed.ac.uk/news-events/news/clean-cookstoves-lead-to-40-reduction-in-burns-in-children

[15] Energy for food security, World Food Programme wfp.org/energy-for-food-security

[16] The nine planetary boundaries, Stockholm Resilience Centre stockholmresilience.org/research/planetary-boundaries/the-nine-planetary-boundaries.html

[17] About Doughnut Economics doughnuteconomics.org/about-doughnut-economics

[18] Support for fossil fuels almost doubled in 2021, slowing progress toward international climate goals, according to new analysis from OECD and IEA, OECD, 2022 oecd.org/newsroom/support-for-fossil-fuels-almost-doubled-in-2021-slowing-progress-toward-international-climate-goals-according-to-new-analysis-from-oecd-and-iea.htm

[19] Getting on Target: Accelerating energy access through fossil fuel subsidy reform, GSI Report, July 2018 iisd.org/system/files/publications/getting-target-accelerating-energy-access.pdf

[20] Turning Pledges Into Action: How Glasgow Statement signatories can meet their commitment to shift international public finance out of fossil fuels and into clean energy by the end of 2022 IISD Report, June 2022 iisd.org/system/files/2022-06/turning-glasgow-statement-into-action.pdf

[21] The 15-Minute City 15minutecity.com/

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The drivers of climate crisis and its many impacts present a growing threat to the health and wellbeing of people and our planet. The *Health and Climate Network* advocates across sectors to deliver urgent responses to the climate crisis which deliver health for all.