

DECLARATION CALLING FOR FAMILY DOCTORS OF THE WORLD TO ACT ON PLANETARY HEALTH



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*from the WONCA Working Party on the Environment, the Planetary Health Alliance, and the Clinicians for Planetary Health Working Group**

Who are we?

The World Organization of Family Doctors (WONCA) is a not-for-profit organization representing 118 member organizations in 131 countries and territories with membership of about 500,000 family doctors. WONCA works to improve the quality of life of the peoples of the world through defining and promoting its values, including respect for universal human rights and gender equity, and by fostering high standards of care in general practice/family medicine.

The Planetary Health Alliance (PHA) supports the growth of the field of planetary health, working with a global consortium of over 130 universities, non-governmental organizations, research institutes, and government entities from over 30 countries around the world in advancing research, education, policy, and public outreach efforts focused on understanding and addressing the human health impacts of global environmental change.

The Clinicians for Planetary Health Working Group, formed by the Planetary Health Alliance, works to galvanize a broad constituency of clinicians and their patients around the importance of recognizing and acting upon increasingly urgent planetary health challenges through lifestyle modifications and activism. This Working Group, along with a range of partner organizations, supports the broader Clinicians for Planetary Health initiative, which focuses on building a global coalition of clinical communities engaged in planetary health, developing and disseminating patient-facing materials, and encouraging activism around planetary health challenges.

WONCA, the PHA, and the Clinicians for Planetary Health Working Group have partnered in this “Declaration Calling for Family Doctors of the World to Act on Planetary Health” to bring awareness of planetary health to family doctors, highlight its relevance to their clinical practices, and motivate them to take action through a variety of channels.

** A full list of the Clinicians for Planetary Health partner organizations and individual members of the Clinicians for Planetary Health Working Group can be found at www.planetaryhealthalliance.org/clinicians.*

What is planetary health?

Planetary health is a field focused on characterizing the linkages between human-caused disruptions of Earth’s natural systems and the resulting impacts on public health. It aims to develop and evaluate evidence-based solutions to safeguard an equitable, sustainable, and healthy world (1).

Human health and wellbeing depend on the natural environment. Yet in the presence of continuing human population growth and widespread excessive consumption patterns, Earth’s natural systems are undergoing fundamental shifts. We are not only depleting natural resources, but also generating massive amounts of waste and toxic pollutants, causing large-scale biodiversity loss, and changing our landscapes, the composition of our atmosphere, and the health of our oceans. As a result, despite the hard-won public health gains of the past decades, we are increasingly faced with degraded air quality, threatened food production, new infectious disease exposures, decreasing access to fresh water, new natural hazards, and negative consequences for our nutrition, mental health, and susceptibility to injury and disease. Taking action is extremely urgent — for example, in the case of climate change, as underscored in the recent IPCC special report (2), we need to make deep cuts in greenhouse gas emissions by 2030 (by about 45% from 2010 levels) in order to prevent temperature rises exceeding 1.5 degrees Celsius above pre-industrial levels, which would lead to even greater increases in various climate-related economic, sociopolitical, and health risks. Accelerating environmental change is projected to drive the majority of the global burden of disease over the coming century, hitting future generations and those who are already most vulnerable, such as certain indigenous populations and low- and middle-income countries, the hardest.

Why should family doctors care about planetary health?

As family doctors are on the frontlines of protecting health, it is important that we recognize the interlinkages between environmental change and emerging health impacts. Although global environmental challenges pose enormous risks for our health and wellbeing, they also provide opportunity for action (3). We need to prepare and respond to new health threats, address the root causes stemming from demographic shifts and our patterns of production and consumption, and make changes in both our institutional structures and our everyday lives. Family doctors are consistently ranked as one of the most trusted sources of information, and we have a unique capacity to understand and communicate the shifting landscape of planetary health challenges and the strategies that individuals can take to simultaneously safeguard their health and that of the environment.

What are the risks of environmental change?

Increasing non-communicable disease burden: Non-communicable diseases (NCDs) — like cardiovascular diseases, chronic lung diseases, obesity, diabetes, and cancer — account for almost three-quarters of global mortality (4). These diseases are sensitive to various environmental variables, including air, water and land pollution, climate change (and its associated extreme storms, drought, and heatwaves), and changes in our food systems.

- About 70% of the 9 million excess deaths caused annually by pollution are due to non-communicable diseases, including cardiac disease, stroke, chronic obstructive pulmonary disease, and lung cancer (5). Air pollution (both outdoor and indoor) alone is responsible for over 7 million deaths annually and has been called the “new tobacco” by the WHO Director-General (6, 7).
- Warmer temperatures associated with climate change could increase the formation of tropospheric ozone, depending on emissions of ozone precursors. Ozone is a major constituent of smog and a contributor to cardiorespiratory disease (8). Warmer temperatures also intensify allergic respiratory diseases (such as asthma) by lengthening pollen seasons and increasing pollen production (9).
- Degrading land — such as burning forests or draining peatlands to clear land for agriculture or extraction — can expose large populations to smoke from fires and increase their risk of associated cardiorespiratory health effects (10, 11).
- Increasing salinity of drinking water associated with sea level rise can negatively impact reproductive health, leaving pregnant women at increased risk of preeclampsia and gestational hypertension (12).
- Foods that are protective against NCDs are expected to become less available, due to globally declining pollinator populations and reduced vegetable and legume production as a result of environmental (including climate) change (13, 14).

Declining nutrition: A variety of factors put our nutrition at risk, leaving us further susceptible to other diseases. As the global population grows, we have to contend with emerging nutritional challenges during a rapid increase in food demand.

- The global decline in pollinator populations makes it harder to grow fruits, vegetables, nuts, and seeds, which can increase the costs of nutritious food and contribute to deficiencies in vitamin A, folate, and other key nutrients (14).
- Rising atmospheric carbon dioxide concentrations decrease key nutrients, such as zinc, iron, and protein, in staple crops, expanding and exacerbating nutritional deficiencies worldwide, particularly in low- and middle-income countries (15).
- Fisheries are collapsing as a result of overfishing and ocean ecosystem transformations, with consequences for key micronutrients, such as iron, zinc, omega-3 fatty acids, and vitamins (16).
- The contamination of food (and the environment) with endocrine disruptors, heavy metals, dioxins, and other pollutants can increase risk of disease (17, 18).
- Climate change and water scarcity can reduce crop yield, particularly at low latitudes, and make farming more difficult and less productive, increasing the costs of food (19, 20).
- Biodiversity loss threatens wild sources of food and the resilience of food systems (21).

New infectious disease exposures: An array of environmental factors affect where pathogens and vectors live and how quickly they reproduce, impacting infectious disease exposures across the globe (22).

- Climate change contributes to extreme storms and causes shifting weather patterns, such as increased temperature, humidity, and rainfall in certain parts of the world, which can create conditions particularly suitable for the spread of infectious diseases, like malaria, Zika, dengue, chikungunya, yellow fever, and Lyme (23).
- Changing biogeochemical flows can have ramifications for ecosystems in favor of infectious disease vectors and pathogens. For example, agricultural runoff of nitrogen and phosphorous can cause eutrophication of water sources, leading to collapse of local fish populations and the growth of toxic algae, ecological changes that have been shown to increase infectious disease exposure (24).
- Changes in biodiversity due to deforestation, other land alterations, and pollution can shift and expand the geographic distribution and seasonality of vectors and pathogens, leading to increased disease transmission, such as diarrheal diseases (25, 26).

Increasing heat-related mortality: Increasing temperatures associated with climate change can also increase heat-related mortality — and if we don’t drastically cut greenhouse gas emissions by 2030, we’ll see even greater numbers of deaths in warmer regions, such as Southeast Asia, by the end of the century (27).

Mental health risks: Depleted resources, rising temperatures, extreme weather events, drought, and other factors can change natural landscapes, disrupt food and water resources, change agricultural conditions, alter land use, weaken infrastructure, raise financial stress, increase risks of violence and aggression, and displace entire communities. Contending with all of these stressors, along with decreased nature contact, can put people at greater risk for depression, post-traumatic stress disorder, anxiety, and suicide (28, 29). Additionally, witnessing environmental degradation and experiencing ecological losses can cause hopelessness, despair, and ecological grief (30).

Key opportunities for intervention

Addressing our global environmental and health challenges ultimately rests on each of us. All of our small actions accumulate — how we exert our political power, what we purchase, what we eat, how we travel, how we work together with our communities, and how we act as stewards of our environment. Our individual efforts will make a difference if combined with those of others; as we make changes in our own lives, we have to simultaneously empower others to do the same.

WONCA represents about 500,000 family doctors around the world — together, we can make a significant difference, working towards a world that simultaneously safeguards our health and that of the environment. We ask family doctors to take action by raising awareness within their communities about planetary health and opportunities for solutions, preparing for and responding to the negative health outcomes associated with disruptions to our natural systems, and to directly work against accelerating environmental change through healthcare sustainability practices, advocacy efforts, and community activism.

What can you do as a family doctor?

1. **Learn more** about planetary health at www.planetaryhealthalliance.org.
2. **Communicate** to patients that their health ultimately depends on the environment, both in their immediate vicinity and globally. We are all responsible for looking after our natural systems.
3. **Respond** to emerging health challenges caused by environmental changes. With planetary health in mind, be aware of and monitor local environmental factors, such as heatwaves and other natural disasters, land clearing, and air quality, which may affect your patients' health or response to treatment.
4. **Prepare** your own practice for possible disasters by assessing and planning for threats such as extreme heat, flooding, or storms (31). Lead your community in understanding that they should have their own disaster management plans.
5. **Advise** patients about important co-benefits — everyday choices and key changes that they can make in their own lives to simultaneously benefit their own health and that of the environment, including:
 - a. **Food choices:** A transition to a more sustainable plant-based diet — rich in fruits, vegetables, nuts, and legumes — can reduce the environmental footprint of agriculture, as recently highlighted by the EAT-Lancet Commission (32, 33). Livestock production currently contributes more greenhouse gases to the atmosphere than the transportation sector — representing 14.5% of all human-caused greenhouse gas emissions (34, 35) — and contributes to other environmental issues like deforestation and antimicrobial resistance. Locally-grown, unprocessed food, such as that from farmers' markets, can increase nutrient availability, promote healthy diets, and tackle undernutrition and obesity while decreasing the greenhouse emissions of food transportation. Reducing food waste personally and through community initiatives is also a crucial part of mitigating the environmental impacts of food production.
 - b. **Active transport:** Forms of transport that involve physical activity, such as cycling and walking, have the dual benefit of reducing emissions and protecting against multiple diseases.
 - c. **Energy choices:** Switching to renewable energy sources and away from fossil fuels, such as coal, could greatly reduce the health and environmental impacts of fossil fuel-related air pollution and greenhouse gas emissions. Access to clean and efficient cooking fuels and technologies not only reduces smoke exposure,

but also decreases the burden on families who would otherwise spend time collecting fuel or trading their food for it.

- d. **Reproductive health:** Ensuring universal access to reproductive healthcare can both improve maternal and child health and limit population growth by reducing unwanted pregnancies (36, 37).
 - e. **Connecting to nature:** Finding ways to spend more time outside in nature -- including in green space in cities — can have benefits for physical and mental health and increase a sense of stewardship for our natural environment (29).
 - f. **Reducing personal environmental impact in other ways:** Recycling, energy audits, composting, reducing air and car travel, carbon offset programs, driving smaller and more energy-efficient cars, and utilizing public transport are crucial steps to mitigating our environmental footprint and the consequent impacts on our health.
 - g. **Engaging in community:** Fostering social connectedness through community-building not only results in mental health benefits, but also can help build the social capital necessary for collective action (38). Connecting with those around you can be particularly effective for planetary health when mobilizing around a common goal, such as bringing more green space, bike lanes, composting services, or farmers' markets to your community.
6. **Lead by example.** Incorporate the above everyday changes into your own life to serve as a model for others. Understand the environmental footprint of health services, including energy and waste services, production of pharmaceuticals, over-prescribing, and over-treatment, and the importance of reducing its corresponding negative impact on human health (39, 40, 41).
 7. **Be active** in advocating for effective evidence-based health policies and engaging with media and stakeholders to raise awareness of planetary health. Join one of the many groups of clinicians around the world already working to address urgent planetary health challenges, such as those listed at www.planetaryhealthalliance.org/clinicians. If there are no groups in your local area, start your own, or contact pha@harvard.edu for assistance.
 8. **Join the [WONCA Working Party on the Environment](#).** Assist in various projects, such as the WONCA Air Health Train the Trainers initiative, and advance research on planetary health in primary care.
 9. **Get involved** in [Clinicians for Planetary Health](#), an effort to galvanize clinicians and their patients around planetary health through lifestyle modifications and activism. Help us develop patient-facing materials that are applicable to as many regional and clinical settings as possible to communicate the urgency of planetary health and spur action.

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