

Nurses, climate change and health

Climate change is the single greatest health threat facing humanity with profound implications for human health and well-being. There is a growing and powerful body of evidence showing the escalating scope and severity of health harms and amplified global health inequities as climate variability and change continue.¹ There are multiple connections between climate and health directly affecting health, undermining the social determinants of health and affecting social and human systems. Nursing practice is increasingly affected as more people experience the health impacts of climate change and as these increasingly strain health care systems.¹ As trusted leaders working with people, health care and community organizations and policy makers, nurses are critical climate actors. Increased and accelerated climate action by nurses, including driving climate mitigation and adaptation strategies, policies and programmes, is key to the future of people's health and the planet.

Climate change and health are connected in a number of ways. It directly impacts health through damages and illness caused by extreme weather events such as heat waves, storms, floods and wildfires and indirectly through environmental systems including the rise in air pollution and changing patterns of vector-, food- and water-borne diseases. Climate change also interacts with social and human systems affecting health by contributing to undernutrition, heat stress, mental illness, population displacement, risk of violent conflict, slowing of economic growth and poverty reduction.² The impacts of climate change on health outcomes are moderated by pre-existing vulnerability factors such as demography, geography, biology and health status, socio-political conditions, socioeconomic factors and, importantly, by the strength of health systems and their capacity for adaptation and resilience.^{2,3}

Climate change is a direct result of human activities, primarily through the increase in emissions of greenhouse gases (GHGs) arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production.⁴ The health care sector directly and indirectly produces GHG emissions through energy consumption, transport, and product manufacture, use and disposal. Health care systems are responsible for over 4% of net global emissions, which is the same annual GHG emissions from 514 coal fired power plants.^{1,3,5} With this level of contribution to emissions, in order to decrease global emissions, the health sector needs to decrease

emissions and work towards more sustainable practices. This includes supporting a health promotion model, reducing health facility emissions and setting low-carbon, zero-emission procedures to decarbonize the health care supply chain.⁶ This will require charting a course for health care zero emissions by 2050. Every hospital, health facility and health system worldwide will need to enact zero emission policies to lower these net emissions of the health care sector.⁶ The shift toward zero emissions is not just a local or national endeavour; it requires a coordinated global response, with all health care stakeholders participating in the transformation.

The health issues caused by global climate change intersect with and compound the health threats caused by other planetary health issues (the interdependence of human health, animal health, and the health of the environment) such as biodiversity loss, pollution of air, water and soil, and deforestation.⁷ All of these crises are rooted in human behaviours, therefore modifying these behaviours is a significant mitigation and adaptation strategy. The values, knowledge and practice of nursing can help drive these necessary changes.

The Intergovernmental Panel on Climate Change (IPCC) has determined that in order to prevent severe health consequences and avert the premature mortality of millions, the world's average temperature must not exceed that of preindustrial times by more than 1.5°C.³ Without significant reductions in global GHG emissions, limiting global warming will be out of reach.⁸ Ending fossil fuel dependence is needed to achieve this. A just and equitable phase-out of fossil fuels and a transition towards sustainable energy, transportation, waste management and agricultural systems could save annually 3.3 million lives from air pollution, 11.5 million lives from healthier food systems, and improve physical and mental health.⁹

Climate change does not impact everyone equally and those who contributed least are most impacted. Climate change is widening health and social inequities, making climate action an issue of social justice and an opportunity to address these inequities.¹ Those most impacted by climate change include women, infants and children, people over 65 years, Indigenous Peoples, people with disabilities, and other marginalized groups.¹ Accelerated action to halt disruptions to natural systems and to mitigate the impacts on human health and well-being calls for connecting climate justice with social and health justice, ensuring that the most vulnerable are included and their rights protected. The Lancet Countdown calls for climate and environment

justice by addressing inequalities through creating policies that are more equitable for all.

The climate crisis is also not gender neutral and disproportionately impacts women and girls while amplifying the inequality and discrimination they already experience. In many regions, women bear the primary responsibility for securing food, water, and fuel and are employed largely in the agricultural sector in low- and middle-income countries. Gradual environmental degradation and extreme weather impact women's ability to secure income and resources for their families.¹⁰ The cascading effects of climate change compound potential harms and vulnerabilities to women and young girls. Displacement, resource scarcity, food insecurity and disruption of services to violence survivors exacerbates the risks of violence against women and girls.¹⁰ Extreme heat is associated with higher incidence of premature births, stillbirths and exposure to vector-borne illnesses can cause miscarriage, anemia and birth anomalies.¹¹

The 2023 report of the Lancet Countdown, the international collaboration monitoring health consequences of climate change, underscores the imperative for a health-centred response for accelerated action to limit climate change and its health impacts and emphasizes that "health professionals are uniquely positioned to guide actions to safeguard the human right to health and a healthy environment".¹ ICN's Code of Ethics for Nurses calls for all nurses to advocate for equity and social justice in resource allocation, access to healthcare and other social and economic issues.¹² Climate, social and health justice connect many priority issues such as the Sustainable Development Goals, universal health coverage, gender equity, and disaster and pandemic prevention and preparedness. Nurses have significant understanding of science behind health conditions and necessary treatments or interventions; and therefore, are in ideal positions to drive change and action in the domains of research, education, practice, policy and advocacy in support of climate action.¹³ Notable progress and achievement in the nursing profession's climate action agenda has included nursing associations, leaders, educators and scientists leading large scale initiatives.

The International Council of Nurses' position and recommendations

As the global voice of nursing, ICN:

- Recognizes the important opportunity to harness the significant health co-benefits of climate change mitigation and adaptation policies.
- Strongly believes that nurses have a shared responsibility to sustain and protect the natural environment from depletion, pollution, degradation and destruction.
- Strongly agrees that the leadership, integrity and commitment of the health community is paramount to accelerating health-centred climate action required to safeguard human health and calls on all members of this community to make climate action a priority.¹
- Believes that to prevent worsening climate change and promote planetary health, nurses need the skills and competencies to advocate for effective climate and environmental health policies.
- Recognizes that building climate change resilience must include efforts to improve and sustain the social and environmental determinants of health through sustainable development.⁴
- Advocates for strengthened policy interventions that target the connection between social, gender and health inequities, as well as environmental injustice in accordance with the needs and perspectives of the communities they impact.^{14,15}

ICN encourages national nurses' associations (NNAs) to:

- Work to enable nursing leadership and nurses to support health care organizations to contribute to local climate change mitigation and adaptation through implementation of environmental policies and sustainable practices.
- Engage in national and multisectoral measures to mitigate the impact of climate change on the population with a focus on vulnerable groups, populations more exposed to disease and injury and women and girls.

- Work to highlight and address the disproportionate impacts of climate change on women and girls.
- Be involved in developing national action plans and policies for mitigation, adaptation and resilience strategies as well as contribute to environmental health and justice policymaking.
- Recognize potential biases about local impact to the global environment when assessing local climate and environmental actions. Align local efforts to global goals in the climate action agenda and adapt global solutions to impact local changes.
- Raise awareness of the health implications of climate change and how to assess and address climate change risks to health by developing policy documents on the subject. Partner with universities/researchers to conduct peer-reviewed studies of health impacts to help validate and draw attention to the experiences of disadvantaged communities.^{14,15}
- Embed the concept of sustainability in nursing practice as well as climate change-related knowledge into nursing curricula and in post-registration continuing education.¹⁶
- Collaborate with other health professional organizations, intergovernmental organizations, environmental and health organizations and other civil society groups when developing health-adaptation policies and programmes.
- Engage with media to promote public awareness of the harmful effects of climate change on health and to promote mitigation strategies.
- Strengthen existing and create new partnerships with humanitarian organizations and other NNAs to increase collaborative action.
- Encourage the use of established educational guidelines on key climate competencies such as those developed by the Global Consortium on Climate and Health Education and utilize courses and resources available from the WHO Civil Society Working Group to advance action on Health and Climate Change.¹⁷
- Commit to educate health care professionals on the competencies required to create a sustainable future and climate resilient communities and health systems.

- Advance health equity and champion wellness goals to remove health care disparities and outcomes that are exacerbated by environmental impacts on health.

ICN calls on governments and/or global health organizations to:

- Ratify the Paris Agreement without further delay and close the commitment gaps of the Fossil Fuel Non-Proliferation Treaty, the Global Methane Pledge and climate justice goals set for COP28 to enforce the imperatives of environmental justice and collective accountability.
- Accelerate rapid, just and equitable phasing out of fossil fuels, prioritizing interventions with health co-benefits in the energy sector and food system and commit to ending the expansion of new fossil fuel infrastructure and production.¹⁸
- Scale-up financing for climate resilient communities and health systems including developing models for health workers to engage in sustainable practices and tax incentives for achieving carbon neutral health care operations.
- Ensure that low- and middle-income countries are supported to strengthen their health systems, improve the health of their communities and reduce the environmental impact of health care.¹⁹
- Reduce the risks expected from climate change by making choices in how technology and industry are advanced and make investments in infrastructure and public policies that have less environmental impact. This includes:
 - Well-designed urban transport systems to reduce use of motorized vehicles and promote active transport to reduce urban air pollution and support physical activity and mental health.^{19,20}
 - Housing with efficient insulation and protection from extreme weather events to cut energy consumption, reduce exposure to cold and heat, reduce infectious and vector-borne diseases, and in some countries, reduce the need for burning of biomass fuels and associated indoor air pollution.^{19,20}

- Policies and support for individual choices that promote plant-based diets and moderate consumption of animal products to reduce the associated significant GHG emissions and non-communicable disease burden.²¹
- Invest in climate change and public health research, monitoring and surveillance to improve understanding of the health co-benefits of climate mitigation and the health implications of adaptation measures at the community and national levels.^{19,20}

ICN calls on individual nurses in their roles as clinicians, educators, researchers, policy influencers or executives to:

- Educate self, peers and next generations of nurses about climate impacts on health, as well as green actions to promote climate health.
- Engage in multidisciplinary advocacy and policy work to collectively influence practice, power and finance to transform the public narrative on climate change and create effective action.²²
- Adopt a “managing-up” practice of advocacy and activism with employers, community leaders and others to ensure awareness and knowledge about climate impacts on health specific to their functions and which actions they could take to mitigate climate change and support climate justice.
- Advocate for policies that promote the reduction of health care waste and ensure correct waste management.
- Lead or participate in initiatives to transition your institution (hospital, clinic, agency or workplace) or community to 100% renewable electricity.²²
- Actively engage in environmental health committees and policy-making that focus on the safety and protection of health workers and the management and regulation of the health care environment. Make the connection of resilient health systems and public health promotion to actions that support sustaining well-being of health workers and prevention of burnout.

- Empower individuals, families and communities to make healthier climate-related lifestyle choices (i.e. active transportation, green energy use, dietary changes) to decrease the contribution to GHGs.
- Engage with other sectors to support strategies that lower GHGs such as urban redesign, enhanced public transportation and modifying indoor technologies (i.e. cookstoves) to reduce emissions.
- Work with communities to build resilience to the impacts of climate change, using strategies driven by the local context and needs that seek to address underlying vulnerabilities. Strategies include vulnerability assessments to develop resilience plans, incorporating uncertainty in resilience planning, including marginalized groups into decision making, scaling successful adaption interventions, and monitoring and evaluation.²³

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