

# ENVIRONMENTAL HEALTH RESEARCH SCAN

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<p><b><u>AIR QUALITY</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Indoor air</a></li> <li>• <a href="#">Outdoor air</a></li> <li>• <a href="#">Radon, Other</a></li> </ul>	<p><b><u>CLIMATE CHANGE</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Extreme weather</a></li> <li>• <a href="#">Flooding</a></li> <li>• <a href="#">Sea level rise</a></li> <li>• <a href="#">Wildfires, Other</a></li> </ul>	<p><b><u>DISEASES, VECTORS, PESTS</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">COVID-19</a></li> <li>• <a href="#">Animal vectors</a></li> <li>• <a href="#">Insect vectors</a></li> <li>• <a href="#">Pests, Other</a></li> </ul>
<p><b><u>FOOD</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Food safety</a></li> <li>• <a href="#">Food security</a></li> <li>• <a href="#">Growing food, Other</a></li> </ul>	<p><b><u>BUILT ENVIRONMENT</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Green&amp; blue spaces</a></li> <li>• <a href="#">Housing</a></li> <li>• <a href="#">Noise</a></li> <li>• <a href="#">Planning &amp; design</a></li> <li>• <a href="#">Transportation, Other</a></li> </ul>	<p><b><u>PUBLIC HEALTH FUNDAMENTALS</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Communication</a></li> <li>• <a href="#">Health promotion</a></li> <li>• <a href="#">Health impact assessment</a></li> <li>• <a href="#">Health equity</a></li> <li>• <a href="#">One Health, Other</a></li> </ul>
<p><b><u>WATER</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Drinking water</a></li> <li>• <a href="#">Recreational water</a></li> <li>• <a href="#">Small water systems</a></li> <li>• <a href="#">Wastewater, Other</a></li> </ul>	<p><b><u>NON-CLIMATE RELATED DISASTERS</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Earthquakes</a></li> <li>• <a href="#">Marine</a></li> <li>• <a href="#">Terrestrial, Other</a></li> </ul>	<p><b><u>OTHER TOPICS</u></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cannabis products</a></li> <li>• <a href="#">Tobacco, nicotine products</a></li> <li>• <a href="#">Ionizing, non-ionizing radiation</a></li> <li>• <a href="#">Personal services establishments, Other</a></li> </ul>
<p><b><u>SPECIFIC POPULATIONS</u></b> (children, <a href="#">Indigenous Peoples</a>, <a href="#">older adults</a>, other)</p>		

*Environmental Health (EH) Research Scan: Aims and Scope*

NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with [NCCEH's vision](#) to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. This research scan is not peer reviewed; it does not cover all research, news, and information, and NCCEH is not responsible for the accuracy of the content from media or databases. Not all links are open access; some are abstract links where paid journal subscription is required.

## EDITOR PICKS

### Environmental public health and the Core Competencies for Public Health in Canada: Release 2.0: contribution and impact [journal article].

Lydia Ma, Manager, National Collaborating Centre for Environmental Health, and co-authors

*“The release of Core Competencies for Public Health in Canada: Release 1.0 in 2008 was a significant milestone in strengthening the environmental public...”*



### Residential wood smoke: perceptions, health risks, and mitigating exposures [journal article].

Ryan Huff, Environmental Health and Knowledge Translation Scientist, NCCEH

*“This paper examines the evidence on the disconnect between what people believe about residential wood smoke, and what is actually measured, along with the resulting health risks.”*



### Community science for mosquito surveillance in Canada: a toolkit for program design and implementation [journal article].

Negar Elmieh, Environmental Health and Knowledge Translation Scientist, NCCEH, and co-authors

*“This toolkit not only helps ensure that volunteer participation is meaningful and effective, but it also enhances the capacity to respond to emerging challenges in vector control, laying the groundwork for sustainable, community-driven surveillance efforts.”*



### NCCEH Spotlight: Cold weather health impacts among people experiencing homelessness [blog].

Rebecca Goulding, Environmental Health and Knowledge Translation Scientist, NCCEH

*“Researchers from the United Kingdom Health Security Agency (UK HSA) recently published a [narrative systematic review](#) on exposure to cold weather and health risks among people experiencing homelessness (PEH) in high income countries.”*



### Extreme cold [subject guide].

National Collaborating Centre for Environmental Health

*“The resources listed are intended to assist environmental public health professionals with the management of extreme cold events, including health and safety precautions to take during cold weather, and considerations for issuing extreme cold alerts.”*



## EDITOR PICKS, CONTINUED

Flood zones are danger zones: be aware of the risks.

O’Keeffe J, Eykelbosh A, Cleven V. National Collaborating Centre for Environmental Health

*“Flood zones can pose a number of hazards as people evacuate, and when they return to their homes, farms, or businesses following a flood. Some of these hazards may be difficult to spot. This poster lists some of the key hazards to be aware of.”*



Nature-based solutions to address flood risks in coastal communities.

monitoring efficacy: co-benefits.

Commission for Environmental Cooperation

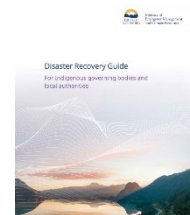
*“...This series of guidance documents was designed to support the uptake of Nature-Based Solutions (NBS) in coastal communities across Canada, Mexico and the United States, by providing decision makers and practitioners with practical information and guidance related to NBS co-benefits...”*



Disaster Recovery Guide for Indigenous governing bodies and local authorities.

British Columbia Ministry of Emergency Management and Climate Readiness

*“Designed as a resource for recovery leaders, the Disaster Recovery Guide for Indigenous governing bodies and local authorities (the Guide) provides actionable tools and sector-based guidance to navigate post-emergency recovery.”*



Building strength through shelter: policy prescriptions for Indigenous healthy energy homes.

Canadian Climate Institute, Indigenous Climate Energy

*“...This report emphasizes the urgency of both the housing crisis facing Indigenous people across the country and the opportunities for transformative change through collaborative policy-making. The report calls for a co-ordinated response...”*



## EDITOR PICKS, CONTINUED

### Five things to know about staying cool during heat exposure.

Glen Kenny, University Research Chair in Human Environmental Physiology, University of Ottawa, and co-authors



*“This article summarizes five things to know about staying cool during extreme heat exposure: 1. Cooling during heat waves is essential for protecting health...”*

### Colour-coded weather alerts.

Environment and Climate Change Canada



*“As of November 26, 2025, all weather alerts will be colour coded. The colours will tell you at a glance what risks the weather may pose to you.”*

### Global cooling watch 2025. Key messages.

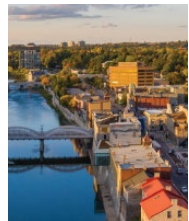
United Nations Environment Programme



*“This report provides pathways to sustainable and equitable access to cooling in a world with growing frequency and intensity of extreme heat events.”*

### Climate toolkit for housing and infrastructure.

Housing Infrastructure and Communities Canada



*“This toolkit provides a suite of open-access tools, resources, and support services to help infrastructure owners and decision-makers develop projects that build resilience and contribute to Canada's path to net-zero emissions.”*

### Climate and health priorities for Canada - 2025.

Canadian Public Health Association



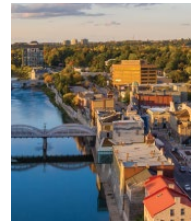
*“This document summarises key priority areas of focus for Canada, supported by evidence from indicators in the 2025 Report of the Lancet Countdown.”*

## EDITOR PICKS, CONTINUED

Measuring progress in healthy public policy: indicators and tools for practice.

Ontario Agency for Health Protection and Promotion (Public Health Ontario).

*“The process of building healthy public policies is complex, can be circular, and often has long time horizons. The outcomes, indicators and tools presented in this Focus On will assist practitioners in measuring their progress towards building HPP...”*



Inked in tradition: a environmental public health exploration of traditional indigenous tattoo methods in Canada [journal article].

W. Wilberforce Obwona Ogaba and Kelsie Dale (pictured on right)

*“This review explores the cultural resurgence of these practices alongside the potential health risks posed by their application, especially in informal or unregulated settings.”*



Mapping change in cycling infrastructure across Canada: what, where, and for whom?

Meghan Winters, CIHR Applied Public Health Chair in Gender and Sex in Healthy Cities, Simon Fraser University, and co-authors

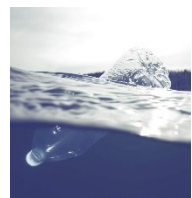
*“Using a national dataset, we detected an increase in cycling infrastructure in Canadian communities, with mobility and health implications for many equity-deserving...”*



Breaking the plastic wave 2025. an assessment of the global system and strategies for transformative change.

Pew Trust

*“In this update, we draw on this improved information landscape to provide a deeper understanding of the environmental, economic, health and social impacts of plastic.”*



NCCEH eNews (Nov 2025): Artificial turf playing fields: a review of the evidence on health impacts and environmental concerns; more...

National Collaborating Centre for Environmental Health

*This monthly eNews highlights recent environmental health publications and more!*



November research scan [research scan].

National Collaborating Centre for Environmental Health



## ENVIRONMENTAL HEALTH RESEARCH SCAN

### SELECTED RESOURCES

1. Goulding R. **NCCEH Spotlight: Cold weather health impacts among people experiencing homelessness [blog]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2025 Dec 12. Available from: <https://ccnse.ca/resources/blog/ncceh-spotlight-cold-weather-health-impacts-among-people-experiencing-homelessness>.
2. Huff RD. **Residential wood smoke: perceptions, health risks, and mitigating exposures [journal article]**. Environ Health Rev. 2025;68(4):58-65. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2025-020>.
3. Ma L, Betker C, Haworth-Brockman M, Neil-Sztramko S. **Environmental public health and the Core Competencies for Public Health in Canada: Release 2.0: contribution and impact [journal article]**. Environ Health Rev. 2025;68(4):70-4. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2025-019>.
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6. National Collaborating Centre for Environmental Health. **Extreme cold [subject guide]**. Vancouver, BC: National Collaborating Centre for Environmental Health (NCCEH); 2025 Dec 12. Available from: <https://ncceh.ca/resources/subject-guides/extreme-cold>.
7. Pons W, Elmieh N, Sarkar A, Armijos-Carrion A, Chapman T, Hans A, et al. **Community science for mosquito surveillance in Canada: a toolkit for program design and implementation**. Can J Public Health. 2025. Available from: <https://doi.org/10.17269/s41997-025-01134-1>.

### 1. AIR QUALITY

INDOOR AIR

OUTDOOR AIR

1. Burkart K, Wozniak S, Anenberg S, Pereda A, Gilbertson N, Ashbaugh C, et al. **Global, regional and national estimates of the burden of childhood asthma attributable to NO<sub>2</sub> exposure for 204 countries and territories from 1990 to 2023: a Global Burden of Disease study 2023**. eClinicalMedicine. 2025;90. Available from: <https://doi.org/10.1016/j.eclinm.2025.103580>.

2. Gardner-Frolick R, Jain S, Martinussen N, Chambliss S, Jackson D, Zimmerman N, et al. **Incorporating Community Knowledge Into Analysis of Air Quality Monitoring Network Data.** *GeoHealth*. 2025;9(7):e2025GH001378. Available from: <https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2025GH001378>.
3. Gillet AP, Dong H, Liu L, Akiki C, Zhang X, Tian L, et al. **Assessment of chemical extracts of urban air for endocrine disruption using a serie of in vitro bioassays: a case study in Montreal, Canada.** *Chemosphere*. 2025;393:144760. Available from: <https://www.sciencedirect.com/science/article/pii/S0045653525007088>.
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8. Prasad P, Aravindhavel A, Mehta SK, Pooja P, Kakkanattu SP, Rao YJ, et al. **A case study on the intrusions of the dust and smoke aerosols and their direct radiative impacts on the surface heating.** *Air Quality,Atmos Health*. 2025. Available from: <https://doi.org/10.1007/s11869-025-01834-0>.

#### RADON, OTHER

1. Giang A, Li T. **Collocation testing of consumer-grade electronic radon sensors in Canadian homes.** *Indoor Environments*. 2025;2(4):100141. Available from: <https://www.sciencedirect.com/science/article/pii/S2950362025000700>.
2. Gravel S, Pomerleau M, Wong T, Poulin P, Labrèche F. **Identifying high-risk workplaces for radon: The role of buildings' foundations and underground water sources.** *Ecotoxicol Environ Saf*. 2025;307:119454. Available from: <https://www.sciencedirect.com/science/article/pii/S0147651325017993>.

## 2. FOOD

#### FOOD SAFETY

1. European Food Safety Authority. **Literature review on micro- and nanoplastic release from food contact materials during their use.** Parma, Italy: EFSA; 2025 Oct. Available from: <https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/sp.efsa.2025.EN-9733>.

#### FOOD SECURITY

1. Harvest. **Harvest voices 2025.** Winnipeg, MB: Harvest; 2025 Dec. Available from: <https://www.harvestmanitoba.ca/stories/harvest-voices-2025/>.

#### GROWING FOOD, OTHER

1. Ji K, Rong Y, Zhang Z, Chen Y, Hu R, Chu Y, et al. **Neonicotinoids and human health: Environmental fate, toxicity mechanisms, and future directions.** Pestic Biochem Physiol. 2025;215:106636. Available from: <https://www.sciencedirect.com/science/article/pii/S0048357525003499>.

### 3. WATER

#### DRINKING WATER

#### RECREATIONAL WATER

1. Huang S, Jiang F, Dong Q, Yu J, Fan K, Wang Z, et al. **The impact of climate change induced extreme weather events on microbial dynamics and public health: an in-depth review on water quality and ecosystem resilience.** Front Environ Sci. 2025;Volume 13 - 2025. Available from: <https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2025.1674490>.

#### SMALL WATER SYSTEMS

1. Sosah FK, Odoom A, Anim-Baidoo I, Donkor ES. **How long do pathogens persist and survive in water? A systematic review.** Front Microbiol. 2025;16:1654785. Available from: <https://doi.org/10.3389/fmicb.2025.1654785>.

#### WASTEWATER, OTHER

## 4. CLIMATE CHANGE

### EXTREME WEATHER

1. Ameyaw EK, Lassi ZS, Wade JM. **Facing the future: The nexus between climate change and women's health.** *Women's Health.* 2025;21:17455057251400070. Available from: <https://journals.sagepub.com/doi/abs/10.1177/17455057251400070>.
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9. Housing Infrastructure and Communities Canada, Canadian Urban Institute. **Climate toolkit for housing and infrastructure.** 2025; Available from: <https://housing-infrastructure.canada.ca/climate-toolkit-trousse-climat/index-eng.html>.
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11. Madrigano J. **Adapting to health risks—changing climate, shifting burden.** *JAMA Network Open.* 2025;8(11):e2542278-e. Available from: <https://doi.org/10.1001/jamanetworkopen.2025.42278>.
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## FLOODING

1. Chen H, Krueger R, McGlade-Bouchard C, Jones D, Mikhail M, Hull T, et al., editors. **Review of Climate-Resilient Building Retrofits for Adaptation to Floods, Extreme Heat, Wildfire, and Wind**2025; Cham: Springer Nature Switzerland.

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#### SEA LEVEL RISE

1. Commission for Environmental Cooperation. **Nature-based Solutions to Address Flood Risks in Coastal Communities. Monitoring Efficacy**. Montreal, QC: Commission for Environmental Cooperation; 2025 Apr. Available from: <https://www.cec.org/publications/monitoring-efficacy/>.
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#### WILDFIRES, OTHER

1. Feng X, Mickley LJ, Kaplan JO, Kelp M, Li Y, Liu T. **Large role of anthropogenic climate change in driving smoke concentrations across the western United States from 1992 to 2020**. *Proceedings of the National Academy of Sciences*. 2025;122(49):e2421903122. Available from: <https://www.pnas.org/doi/abs/10.1073/pnas.2421903122>.
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- management.** Environmental Research Letters. 2025;20(8):084073. Available from: <https://dx.doi.org/10.1088/1748-9326/adeff6>.
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## 5. BUILT ENVIRONMENT

### GREEN & BLUE SPACES

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