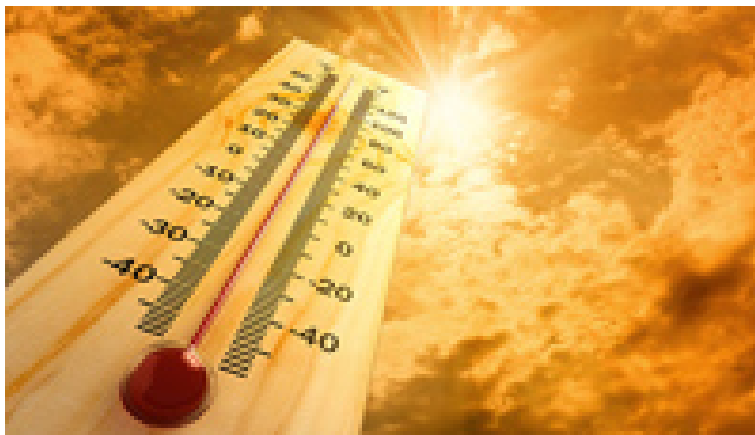


# ENVIRONMENTAL HEALTH RESEARCH SCAN

## WITH COVID-19 SECTIONS

### VOL 5 (7) JULY 2021



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#### *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. "We focus on health risks associated with the physical environment and identify evidence-based interventions to mitigate those risks." This review is not official or 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. How to access the items? Click on the link related to each entry and it should take you to the item. Not all links are open access; some are abstract links where paid journal subscription is required. **COVID-19 Publications** are listed in the sections above and there are also **COVID-19 Additional Topics** at the end of this issue.

## EDITOR PICKS

Two approaches, one shared learning journey to support climate-health adaptation planning [blog].

Ronald Macfarlane, Sarah Warren, Kerry Ann Charles-Norris

*“[...] Indigenous world views need to be actively sought and meaningfully incorporated so that climate adaptation plans reflect on-the-ground realities holistically...” more*



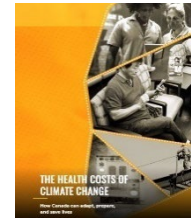
Extreme heat [topic page]

*“This topic pages aims to provide practitioners with curated resources regarding the management of and adaptation to extreme heat events. The selection of peer-reviewed articles provides more detailed information on health impacts to vulnerable populations.”*



The health costs of climate change. How Canada can adapt, prepare, and save lives. Canadian Institute for Climate Choices

*“[...] Climate-related hazards affect health more when social and economic protections are weak. People are most vulnerable to hazards when exposure and/or sensitivity are high and when they have fewer resources to cope...” more*



Climate change, human health and adaptation – highlights from the CICC report Kim Perrotta

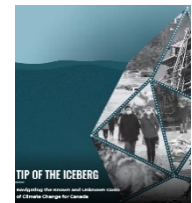
*“A new report, The Health Costs of Climate Change and How Canada Can Adapt, Prepare and Save Lives, identifies the heavy toll of climate change on human health and finds Canada poorly prepared to save lives... more.”*



Tip of the iceberg: Navigating the known and unknown costs of climate change for Canada.

Canadian Institute for Climate Choices

*“[...] The uncertainty inherent in climate change requires acting decisively on what we already know while also developing improved foresight...” more*



BCCDC recommends getting ready for the smoke now rather than waiting  
Cameron Thomson, reporting; Sarah B Henderson (right), Scientific Director of Environmental Health Services at the BCCDC

*“The British Columbia Centre for Disease Control is warning residents to prepare for what could be a smoke-filled summer.”*



## Elucidating the community health impacts of odours using citizen science and mobile monitoring.

Angela Eykelbosh, Knowledge Translation Scientist, NCCEH, and co-authors

*“...we examine the potential effects of odours and introduce Smell Vancouver, a citizen science-based research project to explore Vancouver’s evolving smellscape.”*




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## ENVIRONMENTAL HEALTH RESEARCH SCAN

### SELECTED STAFF PUBLICATIONS

#### NCCEH

1. Eykelbosh A, Maher R, Monticelli DdF, Ramkairsingh A, Henderson S, Giang A, et al. **Elucidating the community health impacts of odours using citizen science and mobile monitoring.** Environ Health Rev. 2021;64(2):24-7. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2021-010>.
2. National Collaborating Centre for Environmental Health. **Extreme heat (revised) [topic page].** Vancouver, BC: NCCEH; 2021 Jun 29. Available from: <https://ncceh.ca/environmental-health-in-canada/health-agency-projects/extreme-heat>.
3. National Collaborating Centre for Environmental Health. **NCCEH eNews (Jun 2021): Masking during the COVID-19 pandemic – An update of the evidence; more...** Vancouver, BC: NCCEH; 2021 Jun 17. Available from: <https://tinyurl.com/djvu8rjz>.
4. National Collaborating Centre for Environmental Health. **June research scan with COVID-19 sections [blog].** Vancouver, BC: NCCEH; 2021 Jun 16. Available from: [https://ncceh.ca/content/blog/june-research-scan-covid-19-sections?\\_ga=2.144526067.75857847.1623800674-1954772642.1612110344](https://ncceh.ca/content/blog/june-research-scan-covid-19-sections?_ga=2.144526067.75857847.1623800674-1954772642.1612110344).
5. O’Keeffe J. **Masking during the COVID-19 pandemic – An update of the evidence [guidance document].** Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jun 16. Available from: <https://ncceh.ca/documents/guide/masking-during-covid-19-pandemic-update-evidence>.
6. O’Keeffe J. **Choral Canada webinar - We can sing safely! [webinar].** Vancouver, BC: NCCEH; 2020 06 17 Jun 17. Available from: <https://ncceh.ca/events/choral-canada-webinar-we-can-sing-safely>.

### INDIGENOUS ENVIRONMENTAL HEALTH

1. Batal M, Chan HM, Fediuk K, Ing A, Berti P, Sadik T, et al. **Importance of the traditional food systems for First Nations adults living on reserves in Canada.** Can J Public Health. 2021;112(1):20-8. Available from: <https://doi.org/10.17269/s41997-020-00353-y>.
2. Chan HM, Singh K, Batal M, Maruska L, Tikhonov C, Sadik T, et al. **Levels of metals and persistent organic pollutants in traditional foods consumed by First Nations living on-reserve in Canada.**

- Can J Public Health. 2021;112(1):81-96. Available from: <https://doi.org/10.17269/s41997-021-00495-7>.
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  4. Marushka L, Batal M, Tikhonov C, Sadik T, Schwartz H, Ing A, et al. **Importance of fish for food and nutrition security among First Nations in Canada**. Can J Public Health. 2021;112(1):64-80. Available from: <https://doi.org/10.17269/s41997-021-00481-z>.
  5. Marushka L, Hu X, Batal M, Tikhonov C, Sadik T, Schwartz H, et al. The relationship between dietary exposure to persistent organic pollutants from fish consumption and type 2 diabetes among First Nations in Canada. Can J Public Health. 2021;112(1):168-82. Available from: <https://doi.org/10.17269/s41997-021-00484-w>.
  6. Parlee B, Ahkimnachie K, Cunningham H, Jordan M, Goddard E. “It’s important to know about this” - risk communication and the impacts of chronic wasting disease on indigenous food systems in Western Canada. Environ Sci Pol. 2021;123:190-201. Available from: <https://www.sciencedirect.com/science/article/pii/S1462901121001386>.
  7. Schwartz H, Marushka L, Chan HM, Batal M, Sadik T, Ing A, et al. **Metals in the drinking water of First Nations across Canada**. Can J Public Health. 2021;112(1):113-32. Available from: <https://doi.org/10.17269/s41997-021-00497-5>.
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1. Chaud M, Souto EB, Zielinska A, Severino P, Batain F, Oliveira-Junior J, et al. Nanopesticides in Agriculture: Benefits and Challenge in Agricultural Productivity, Toxicological Risks to Human Health and Environment. Toxics. 2021;9(6). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34199739>.
2. Norman PA, Dosman JA, Voaklander DC, Koehncke N, Pickett W, Saskatchewan Farm Injury Cohort Study Team. **Intergenerational transfer of occupational risks on family farms**. J Rural Health. 2021. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/jrh.12602>.

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1. Garces M, Matute J. Lessons for Upgrading Los Angeles’ Slow Streets: A Feasibility Study for Making the L.A. Slow Streets Program Permanent in a Post-COVID City. Los Angeles, CA: Prepared for Los Angeles Mayor’s Office of Transportation; 2021 Jun. Available from:

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  3. Law RCK, Lai JHK, Edwards DJ, Hou H. **COVID-19: Research Directions for Non-Clinical Aerosol-Generating Facilities in the Built Environment**. Buildings. 2021;11(7):282. Available from: <https://www.mdpi.com/2075-5309/11/7/282>.
  4. Mentis A-FA, Papadopoulos JS. **Near-Collapse Buildings and Unsafe Sidewalks as Neglected Urban Public Health Issue: A Qualitative Study**. Urban Science. 2021;5(2):47. Available from: <https://www.mdpi.com/2413-8851/5/2/47>.
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## CHEMICAL AGENTS – METALS, GENERAL

### General

1. Beeler B, Bell L. **Plastic Recycling Schemes Generate High Volumes of Hazardous Waste**. IPEN (International Pollutants Elimination Network) 2021 Jun. Available from: <https://ipen.org/news/plastic-recycling-schemes-generate-high-volumes-hazardous-waste>.
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- Li Q, Yuan M, Shangguan J, Guo M, Wu J, Zhang Y, et al. **Insights into Persistent Toxic Substances in Protective Cases of Mobile Phones: Occurrence, Health Risks, and Implications.** *Environ Sci Tech.* 2021;55(9):6076-86. Available from: <https://doi.org/10.1021/acs.est.0c07603>.

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- Gewurtz SB, Tardif G, Power M, Backus SM, Dove A, Dubé-Roberge K, et al. **Bisphenol A in the Canadian environment: A multimedia analysis.** *Sci Total Environ.* 2021;755(Pt 2):142472. Available from: <https://doi.org/10.1016/j.scitotenv.2020.142472>.
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- Schirmer E, Schuster S, Machnik P. **Bisphenols exert detrimental effects on neuronal signaling in mature vertebrate brains.** *Communications Biology.* 2021;4(1):465. Available from: <https://doi.org/10.1038/s42003-021-01966-w>.
- Wang Q, Chang Q, Sun M, Liu C, Fan J, Xie Y, et al. **The combined toxicity of ultra-small SiO<sub>2</sub> nanoparticles and bisphenol A (BPA) in the development of zebrafish.** *Comp Biochem Physiol C Toxicol Pharmacol.* 2021:109125. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34217845>.

## CHEMICAL AGENTS – PESTICIDES

- Fucic A, Duca RC, Galea KS, Maric T, Garcia K, Bloom MS, et al. **Reproductive Health Risks Associated with Occupational and Environmental Exposure to Pesticides.** *Int J Environ Res Public Health.* 2021;18(12). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34207279>.
- Zhu Z, Wang Y, Tang S, Tan H, Liu C, Cheng L. **Maternal exposure to pesticides during pregnancy and risk for attention-deficit/hyperactivity disorder in offspring: A protocol for systematic review and meta-analysis.** *Medicine (Baltimore).* 2021;100(26):e26430. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34190165>.

## CHEMICAL AGENTS – SHALE GAS

### CHILDREN'S ENVIRONMENTAL HEALTH

- Clemens KK, Le B, Ouédraogo AM, Mackenzie C, Vinegar M, Shariff SZ. **Childhood food insecurity and incident asthma: A population-based cohort study of children in Ontario, Canada.** *PLoS ONE.* 2021;16(6):e0252301. Available from: <https://doi.org/10.1371/journal.pone.0252301>.
- Coffman VR, Jensen AS, Trabjerg BB, Pedersen CB, Hansen B, Sigsgaard T, et al. **Prenatal Exposure to Nitrate from Drinking Water and Markers of Fetal Growth Restriction: A Population-Based Study of Nearly One Million Danish-Born Children.** *Environ Health Perspect.* 2021;129(2):027002. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP7331>.
- Fakunle AG, Jafta N, Naidoo RN, Smit LAM. **Association of indoor microbial aerosols with respiratory symptoms among under-five children: a systematic review and meta-analysis.** *Environ Health.* 2021;20(1):77. Available from: <https://doi.org/10.1186/s12940-021-00759-2>.
- Haarala AK, Sinikumpu S-P, Vaaramo E, Jokelainen J, Timonen M, Auvinen J, et al. **A Childhood Farm Environment Protects from Allergic Sensitization until Middle Age but Not from New-Onset**

- Sensitization in Adulthood: A 15 Year Longitudinal Study. *Int J Environ Res Public Health*. 2021;18(13):7078. Available from: <https://www.mdpi.com/1660-4601/18/13/7078>.
5. Jackson DB, Testa A. **Environmental Tobacco Smoke and Early Language Difficulties among U.S. Children**. *Int J Environ Res Public Health*. 2021;18(12):6489. Available from: <https://www.mdpi.com/1660-4601/18/12/6489>.
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  7. Lee K-S, Choi Y-J, Cho J-W, Moon S-J, Lim Y-H, Kim J-I, et al. **Children's Greenness Exposure and IQ-Associated DNA Methylation: A Prospective Cohort Study**. *Int J Environ Res Public Health*. 2021;18(14):7429. Available from: <https://www.mdpi.com/1660-4601/18/14/7429>.
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## CLIMATE CHANGE

1. Bezgrebelna M, McKenzie K, Wells S, Ravindran A, Kral M, Christensen J, et al. **Climate Change, Weather, Housing Precarity, and Homelessness: A Systematic Review of Reviews**. *Int J Environ Res Public Health*. 2021;18(11). Available from: <https://www.mdpi.com/1660-4601/18/11/5812>.
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## COMMUNICABLE AND INFECTIOUS DISEASES

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See **Covid 19 subsections** in this issue and in the [COVID-19 Additional Topics and Guidance](#) section at the end of this issue (e.g., Occupational Guidance, Transit, Transmission)

## DRINKING WATER

## EMERGENCY PREPAREDNESS

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## COVID-19 ADDITIONAL TOPICS & GUIDANCE



### CONTENTS

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