

# 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> (<a href="#">children</a>, <a href="#">Indigenous Peoples</a>, <a href="#">older adults</a>, <a href="#">other</a>)</p>		

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

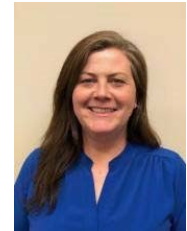
NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with [NCCEH's vision](#) to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. This research scan is not peer reviewed; it does not cover all research, 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

Wildfires and drinking water safety: understanding the risks and building resilience [blog].

Juliette O’Keeffe, Senior Scientist, NCCEH

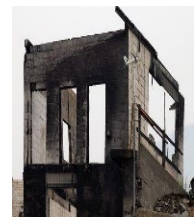
*This blog outlines some of the challenges communities across Canada have faced with respect to wildfire impacts on drinking water and identifies guidance on preparation, response, and recovery.*



Practical guidance for post wildfire cleanup [subject guide].

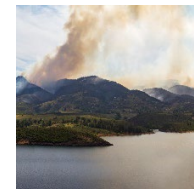
National Collaborating Centre for Environmental Health

*The resources listed here are intended to assist environmental public health professionals in advising on post-wildfire re-entry and cleanup. These resources identify the types of hazards that may be encountered on returning to a community, guidance on how to clean up safely for different settings, and additional resources.*



Co-occurrence of wildfire smoke and extreme heat events in British Columbia, 2010-2022: spatiotemporal patterns in population-level exposure [journal article]. Cleland S, Paul N, Coker E, Henderson S.

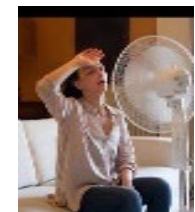
*“Our findings indicate the need for public health guidance on concurrent exposure to heat and smoke and can be used to inform climate change adaptation and mitigation efforts in BC and elsewhere.”*



Media-based post-event impact analysis of the 2021 heat dome in Canada [journal article].

Tetzlaff EJ, Goulet N, Gorman M, Richardson GR, Enright PM, Henderson SB, Kenny, GP

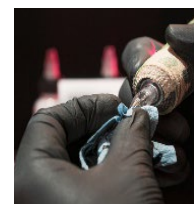
*“Overall, we show that media analysis can complement traditional post-event analysis methods and provide additional perspectives to governments and public health and safety officials.”*



Rotary tattoo pens in personal service establishments: what are the risks? [blog].

National Collaborating Centre for Environmental Health

*“The aim of this blog is to identify the main concerns and risk around the use of tattoo pens and highlight the need for a revision of provincial guidelines on tattooing. To do so, we drew on the practical experience and observations of public health inspectors from British Columbia and Ontario.”*



## Managing cyanobacterial blooms in recreational waters: decision support tools for public health responses [journal article]

Juliette O’Keeffe, Senior Scientist, NCCEH

*“With the prospect of more frequent and pervasive blooms in the future, there will be a need to allocate scarce resources efficiently, which may require regular review and....”*



## Fermented foods safety guidance: a new resource for public health practitioners – updated – Fermented vegetables [blog].

*“This blog outlines the new chapter completed – fermented vegetables.”*



## Healthy built environment. [subject guide].

National Collaborating Centre for Environmental Health

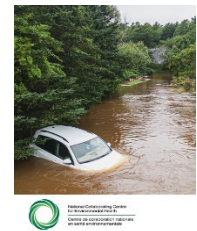
*“This collection of resources introduces environmental health and public health practitioners to the field of healthy built environment and five core features...” more*



## Lessons from Northern Ontario: rural-proofing emergency management in Canada. [webinar].

National Collaborating Centre for Environmental Health

*“This webinar will highlight findings from a two-year research project, funded by a 2021 CIHR Catalyst Grant, that explored the experiences of rural communities in Northern Ontario during COVID-19.”*



## Citizen perspectives on built, policy, and social environment changes aimed at healthy eating and active living [healthy built environment webinar].

National Collaborating Centre for Environmental Health

*“...Findings show that a majority of respondents completely agree or somewhat agree with many changes to the food and active living environments...” more*



## NCCEH eNews (Aug 2024): Food security and climate change impacts in remote communities in British Columbia; Healthy built environment; Fermented vegetables. National Collaborating Centre for Environmental Health

*This monthly eNews highlights recent environmental health publications, research scans, webinars and other events and resources.*



## August research scan [research scan].

National Collaborating Centre for Environmental Health



## ENVIRONMENTAL HEALTH RESEARCH SCAN

### SELECTED RESOURCES

1. Cleland S, Paul N, Coker E, Henderson S. **Co-occurrence of wildfire smoke and extreme heat events in British Columbia, 2010-2022: Spatiotemporal patterns in population-level exposure.** ISEE Conference Abstracts. 2024;2024. Available from: <http://dx.doi.org/10.1289/isee.2024.0868>.
2. Gauvin L, Muhajarine N. **Citizen perspectives on built, policy, and social environment changes aimed at healthy eating and active living [Healthy Built Environment webinar].** Vancouver, BC: National Collaborating Centre for Environmental Health; 2024 Sep 18. Available from: <https://ncceh.ca/events/upcoming-webinars>.
3. James K. **Fermented foods safety guidance: a new resource for public health practitioners - updated - Fermented vegetables [blog].** Vancouver, BC: National Collaborating Centre for Environmental Health; 2024 08 14 Aug 14. Available from: <https://ncceh.ca/resources/blog/fermented-foods-safety-guidance-new-resource-public-health-practitioners>.
4. Mongeon A, Howard V. **Lessons from Northern Ontario: rural-proofing emergency management in Canada [webinar].** Vancouver, BC: National Collaborating Centre for Environmental Health; 2024 Sep 26. Available from: <https://ncceh.ca/events/upcoming-webinars/lessons-northern-ontario-rural-proofing-emergency-management-canada>.
5. National Collaborating Centre for Environmental Health. **NCCEH eNews (Aug 2024): Food security and climate change impacts in remote and Indigenous communities in British Columbia; Healthy built environment; Fermented vegetables: BCCDC Fermented Foods Safety Guidance; more...** Vancouver, BC: NCCEH; 2024 07 25 Aug. Available from: [https://app.cyberimpact.com/newsletter-view-online?ct=k5bCvKHlua7SqRXg2qkFxFxHY-o2FjgEmnlvrGu0HwCAm7VxIKJtsc4pFAD6BR7LbUIIQpupYewVIPOGT\\_Uzylg~](https://app.cyberimpact.com/newsletter-view-online?ct=k5bCvKHlua7SqRXg2qkFxFxHY-o2FjgEmnlvrGu0HwCAm7VxIKJtsc4pFAD6BR7LbUIIQpupYewVIPOGT_Uzylg~).
6. National Collaborating Centre for Environmental Health. **Practical guidance for post wildfire cleanup [subject guide].** Vancouver, BC: NCCEH; 2024 08 10 Sep. Available from: <https://ncceh.ca/resources/subject-guides/practical-guidance-post-wildfire-cleanup>.
7. National Collaborating Centre for Environmental Health. **Healthy built environment [subject guide].** Vancouver, BC: NCCEH; 2024 08 14 Aug. Available from: <https://ncceh.ca/resources/subject-guides/healthy-built-environment>.
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9. National Collaborating Centre for Environmental Health. **Rotary tattoo pens in personal services establishments: what are the risks? [blog].** Vancouver, BC: NCCEH; 2024 09 12 Sep 12. Available from: <https://ncceh.ca/resources/blog/rotary-tattoo-pens-personal-services-establishments-what-are-risks>.
10. O’Keeffe J. **Wildfires and drinking water safety: Understanding the risks and building resilience [blog].** Vancouver, BC: Centre de collaboration nationale en santé environnementale; 2024 Sep.

Available from: <https://ccnse.ca/resources/blog/wildfires-and-drinking-water-safety-understanding-risks-and-building-resilience>.

11. O’Keeffe J. **Managing cyanobacterial blooms in recreational waters: decision support tools for public health responses**. Environ Health Rev. 2024;67(3):59-68. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2024-016>.
12. Tetzlaff EJ, Goulet N, Gorman M, Richardson GR, Enright PM, Henderson SB, et al. **Media-based post-event impact analysis of the 2021 heat dome in Canada**. Environmental Health Insights. 2024;18:11786302241276669. Available from: <https://journals.sagepub.com/doi/abs/10.1177/11786302241276669>.

## 1. AIR QUALITY

### INDOOR AIR

1. Gatto MR, Mansour A, Li A, Bentley R. **A State-of-the-Science Review of the Effect of Damp- and Mold-Affected Housing on Mental Health**. Environ Health Perspect. 2024;132(8):086001. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP14341>.
2. Kim P-G, Choi Y-H, Lee A, Shin J, Song E, Sochichiu S, et al. **Determination of personal exposure to volatile organic compounds and their health risks after the use of mosquito repellents in residential environments using passive sampling**. Sci Total Environ. 2024;949:175158. Available from: <https://www.sciencedirect.com/science/article/pii/S0048969724053087>.
3. Liu W, Chang J, Zhang N, Lai W, Li W, Shi W, et al. **Family cleaning behaviors and air treatment equipment significantly affect associations of indoor damp indicators with childhood pneumonia among preschoolers**. Int J Environ Health Res. 2024:1-15. Available from: <https://doi.org/10.1080/09603123.2024.2398092>.
4. Mendell MJ, Chen W, Ranasinghe DR, Castorina R, Kumagai K. **Carbon dioxide guidelines for indoor air quality: a review**. J Expo Sci Environ Epidemiol. 2024;34(4):555-69. Available from: <https://doi.org/10.1038/s41370-024-00694-7>.

### OUTDOOR AIR

1. Allaouat S, Yli-Tuomi T, Tiittanen P, Kukkonen J, Kangas L, Mikkonen S, et al. **Long-term exposures to low concentrations of source-specific air pollution, road-traffic noise, and systemic inflammation and cardiovascular disease biomarkers**. Environ Res. 2024;262:119846. Available from: <https://www.sciencedirect.com/science/article/pii/S0013935124017511>.
2. Mohammadzadeh M, Khoshakhlagh AH, Grafman J. **Air pollution: a latent key driving force of dementia**. BMC Public Health. 2024;24(1):2370. Available from: <https://doi.org/10.1186/s12889-024-19918-4>.

## RADON, OTHER

1. Perko T, Hevey D. **Communicating radon risks: the impact of different risk formulations on risk perception and protection intention.** *J Risk Res.* 2024;1-19. Available from: <https://doi.org/10.1080/13669877.2024.2387346>.

## 2. FOOD

### FOOD SAFETY

1. Geueke B, Parkinson LV, Groh KJ, Kassotis CD, Maffini MV, Martin OV, et al. **Evidence for widespread human exposure to food contact chemicals.** *J Expo Sci Environ Epidemiol.* 2024. Available from: <https://doi.org/10.1038/s41370-024-00718-2>.
2. Government of South Australia. **Listeria in RTE Seafood: Current Control and Risk Management.** Australia: Government of South Australia; 2024 Mar. Available from: <https://fbia.org.au/wp-content/uploads/2024/04/Desktop-review-SSL-RTE-Listeria.pdf>.
3. Grigore-Gurgu L, Bucur FI, Mihalache OA, Nicolau AI. **Comprehensive Review on the Biocontrol of Listeria monocytogenes in Food Products.** *Foods.* 2024;13(5):734. Available from: <https://www.mdpi.com/2304-8158/13/5/734>.
4. Liu X, Xia X, Liu Y, Li Z, Shi T, Zhang H, et al. **Recent advances on the formation, detection, resistance mechanism, and control technology of Listeria monocytogenes biofilm in food industry.** *Food Res Int.* 2024;180:114067. Available from: <https://www.sciencedirect.com/science/article/pii/S0963996924001376>.
5. Manchal N, Young MK, Castellanos ME, Leggat P, Adegboye O. **A systematic review and meta-analysis of ambient temperature and precipitation with infections from five food-borne bacterial pathogens.** *Epidemiol Infect.* 2024;152:e98. Available from: <https://www.cambridge.org/core/product/799DAC75997747218943F45111772F19>.
6. Panebianco F, Lovisolo S, Rubiola S, Civera T, Di Ciccio P. **Will Listeria monocytogenes biofilm in the food industry withstand the eco-friendly technologies? Recent findings on electrolyzed water, plasma-activated water, ozone, and enzymes.** *Current Opinion in Food Science.* 2024;56:101126. Available from: <https://www.sciencedirect.com/science/article/pii/S2214799324000043>.
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### FOOD SECURITY

1. Basharat Z, Ahmed D, Tariq MR, Ali SW, Pervaiz MU. **Development of Edible Food Wrappers: An Eco-Friendly Approach Towards Sustainability.** In: Mehta S, Islam F, Imran A, editors.

Innovations in Engineering and Food Science. Hershey, PA, USA: IGI Global; 2024. p. 229-62.  
Available from: <https://services.igi-global.com/resolvedoi/resolve.aspx?doi=10.4018/979-8-3693-0819-6.ch009>.

2. Hwang S, Johnson CM, Charles J, Biediger-Friedman L. **Food Delivery Apps and Their Potential to Address Food Insecurity in Older Adults: A Review**. Int J Environ Res Public Health. 2024;21(9):1197. Available from: <https://www.mdpi.com/1660-4601/21/9/1197>.

GROWING FOOD, OTHER

### 3. WATER

DRINKING WATER

1. Crook B, Young C, Rideout C, Smith D. **The Contribution of Legionella anisa to Legionella Contamination of Water in the Built Environment**. Int J Environ Res Public Health. 2024;21(8):1101. Available from: <https://www.mdpi.com/1660-4601/21/8/1101>.
2. International Institute for Sustainable Development. **Planning for the Future. Guidance and tools for enhancing the climate resilience of Manitoba's integrated watershed management plans**. IISD; 2024 Aug. Available from: <https://www.iisd.org/publications/guide/enhancing-manitoba-integrated-watershed-management-plans>.
3. Taylor A, Garretson A, Bieluch KH, Buckman KL, Lust H, Bailey C, et al. **A Mixed Methods Approach to Understanding the Public Health Impact of a School-Based Citizen Science Program to Reduce Arsenic in Private Well Water**. Environ Health Perspect. 2024;132(8):087006. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP13421>.
4. US Department of Health and Human Services. **NTP Monograph on the State of the Science Concerning Fluoride Exposure and Neurodevelopment and Cognition: A Systematic Review**. Triangle Park, NC: US DHHS, National Toxicology Program; 2024 Aug. Available from: [https://ntp.niehs.nih.gov/sites/default/files/2024-08/fluoride\\_final\\_508.pdf](https://ntp.niehs.nih.gov/sites/default/files/2024-08/fluoride_final_508.pdf).

RECREATIONAL WATER

1. Luskow F, Pakhomov EA. **Spatiotemporal distribution of the non-indigenous peach blossom jellyfish Craspedacusta sowerbii in British Columbia, Canada**. Can J Zool. 2024;102(9):735-45. Available from: <https://cdnsiencepub.com/doi/abs/10.1139/cjz-2024-0007>.
2. O'Keeffe J. **Managing cyanobacterial blooms in recreational waters: decision support tools for public health responses**. Environ Health Rev. 2024;67(3):59-68. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2024-016>.

## SMALL WATER SYSTEMS

### WASTEWATER, OTHER

1. Southern D, Ghosh M, Harmon M, Kuzma D, Kormendi A, Moffett K, et al. **Wastewater-Based Surveillance of Substances of Potential Abuse**. International Journal of Population Data Science. 2024;9(5). Available from: <https://ijpds.org/article/view/2584>.
2. Southern D, Hubert C, Parkins M, Williamson T. **Wastewater-based surveillance for SARS-CoV-2 in Alberta**. International Journal of Population Data Science. 2024;9(5). Available from: <https://ijpds.org/article/view/2616>.

## 4. CLIMATE CHANGE

### EXTREME WEATHER

1. Badipatla VS. **The urgency of addressing health threats from climate change**. Tata Consultancy Services; 2024. Available from: <https://www.tcs.com/what-we-do/industries/public-services/white-paper/addressing-climate-change-health-threats>.
2. Boudreault J, Lavigne É, Campagna C, Chebana F. **Estimating the heat-related mortality and morbidity burden in the province of Quebec, Canada**. Environ Res. 2024;257:119347. Available from: <https://www.sciencedirect.com/science/article/pii/S0013935124012520>.
3. Cleland S, Paul N, Coker E, Henderson S. **Co-occurrence of wildfire smoke and extreme heat events in British Columbia, 2010-2022: Spatiotemporal patterns in population-level exposure**. ISEE Conference Abstracts. 2024;2024. Available from: <http://dx.doi.org/10.1289/isee.2024.0868>.
4. Côté J-N, Germain M, Levac E, Lavigne E. **Vulnerability assessment of heat waves within a risk framework using artificial intelligence**. Sci Total Environ. 2024;912:169355. Available from: <https://www.sciencedirect.com/science/article/pii/S0048969723079858>.
5. Cronley C, Fackler A, First JM, Lee S, Tsouris I. **Persons Experiencing Homelessness during Extreme Temperatures: Lessons for Promoting Socially Inclusive Adaptive Capacity**. Int J Environ Res Public Health. 2024;21(8):984. Available from: <https://www.mdpi.com/1660-4601/21/8/984>.
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- million patients: An individual-level case-crossover study.** *Sci Total Environ.* 2024;949:175208. Available from: <https://www.sciencedirect.com/science/article/pii/S0048969724053580>.
9. Yoon L, Tetzlaff EJ, Wong C, Chiu T, Hiscox L, Mew S, et al. **Responding to the Heat and Planning for the Future: An Interview-Based Inquiry of People with Schizophrenia Who Experienced the 2021 Heat Dome in Canada.** *Int J Environ Res Public Health.* 2024;21(8):1108. Available from: <https://www.mdpi.com/1660-4601/21/8/1108>.
  10. Zavala MD, Cejas C, Rubinstein A, Lopez A. **Gender Inequities in the Impact of Climate Change on Health: A Scoping Review.** *Int J Environ Res Public Health.* 2024;21(8):1093. Available from: <https://www.mdpi.com/1660-4601/21/8/1093>.

#### FLOODING

#### SEA LEVEL RISE

#### WILDFIRES, OTHER

1. Casey J, Morello-Frosch R. **How researchers measure wildfire smoke exposure doesn't capture long-term health effects – and hides racial disparities.** *The Conversation.* 2024. Available from: <https://theconversation.com/how-researchers-measure-wildfire-smoke-exposure-doesnt-capture-long-term-health-effects-and-hides-racial-disparities-234264>.
2. Han C, Jang M, Yoon J, Lee B, Kim J, Jang H, et al. **Estimating the Acute Health Effects of Smoke Exposure from an Urban Factory Fire Accident: A Case Study of a Tire Factory Fire in Korea.** *Environ Health Perspect.* 2024;132(8):087008. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP14115>.
3. Human Rights Watch & Nurturely. **Reproductive Rights in the US Wildfire Crisis: Insights From Health Workers in Oregon State.** Human Rights Watch; 2024 Aug 21. Available from: [https://medsocietiesforclimatehealth.org/reports/reproductive-rights-in-the-us-wildfire-crisis-insights-from-health-workers-in-oregon-state/#:~:text=and%20Health%20\(MSCCH\)-,Reproductive%20Rights%20in%20the%20US%20Wildfire%20Crisis%3A%20Insights%20from%20Health,or%20historical%20injustices%20and%20disparities](https://medsocietiesforclimatehealth.org/reports/reproductive-rights-in-the-us-wildfire-crisis-insights-from-health-workers-in-oregon-state/#:~:text=and%20Health%20(MSCCH)-,Reproductive%20Rights%20in%20the%20US%20Wildfire%20Crisis%3A%20Insights%20from%20Health,or%20historical%20injustices%20and%20disparities).
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Health Perspect. 2024;132(8):081302. Available from:  
<https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP15463>.

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8. National Collaborating Centre for Environmental Health. **Practical guidance for post wildfire cleanup [subject guide]**. Vancouver, BC: NCCEH; 2024 08 10 Sep. Available from: <https://ncceh.ca/resources/subject-guides/practical-guidance-post-wildfire-cleanup>.
9. O’Keeffe J. **Wildfires and drinking water safety: Understanding the risks and building resilience [blog]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2024 09 12 Sep 12. Available from: <https://ncceh.ca/resources/blog/wildfires-and-drinking-water-safety-understanding-risks-and-building-resilience>.

## 5. BUILT ENVIRONMENT

### GREEN & BLUE SPACES

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