



TO: Colter Kelly, Senior Advisor, Impact Assessment Agency of Canada
FROM: Impact Assessment Team, Health Canada
DATE: September 29, 2022

SUBJECT: Proposed Western Energy Corridor Regional Assessment: Health Canada Input

Thank you for your email dated August 30th, 2022, requesting Federal Authority input on the proposed Western Energy Corridor Regional Assessment (RA) along the northern corridor of Alberta, Saskatchewan, and Manitoba. Health Canada participates in the RA process as a federal authority under the *Impact Assessment Act* (IAA). Health Canada makes available specialist or expert information or knowledge in its possession, and coordinates input from the Public Health Agency of Canada (PHAC), as required, at the request of the Impact Assessment Agency of Canada.

Health Canada and PHAC have considered the proposed goal of the assessment cited in the materials attached to your request and provided input, where appropriate, below. Should a RA be pursued and include human health-related considerations, Health Canada and PHAC can provide expertise on issues within their mandates and federal jurisdiction.

Health Canada's knowledge of the area in the proposed Western Energy Corridor is in large part based on information provided by participants during various federal environmental or impact assessment (EA or IA) processes. Health Canada is aware that certain sections of the proposed corridor are heavily impacted by existing developments, while large sections are more remote and valued for traditional and recreational purposes. In addition, marine shipping through Hudson Bay already impacts the valued ecosystem components (e.g., country foods) that underpin human health and community well-being, and recent IAs have concluded that these may not be resilient to additional impacts¹. There are many Indigenous communities with traditional territory along the proposed corridor and in the Hudson Bay area. When assessing human health, Indigenous peoples in Canada can be particularly vulnerable to changes in environmental conditions and to the impacts of climate change², particularly in remote regions.

Potential human health effects of energy and transportation corridor projects vary depending on the specific development activity but typically include effects related to emissions of air pollutants and dust; accidental releases of pollutants to surface waters, soil and ambient air; changes in the quality, availability, access and use of country foods; and noise effects. Other determinants of health may be affected by changes to social and economic environments. Additionally, the cumulative effects of multiple development activities are difficult to predict or attribute to any given source.

Health Canada's initial scan of internal subject matter expert groups identified few instances of Health Canada or PHAC research, reports or data sets specific to the Western Energy Corridor. Due to the absence of a shipping route in the request for a RA, this scan did not include the Hudson Bay area. The following information may offer information relevant to identifying health-sensitive components or populations in the study areas:

- The 2021, *Health Impacts of Air Pollution in Canada* report includes maps showing the distribution of air pollutants across the country and health impacts broken down by province. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/2021-health-effects-indoor-air-pollution.html>

¹ Fisheries and Oceans Canada, 2019. Science Review of the Phase 2 Addendum to the Final Environmental Impact Statement for the Baffinland Mary River Project. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/40783844.pdf>

² Health Canada, 2022. Health of Canadians in a Changing Climate. Chapter 2: Climate Change and Indigenous Peoples' Health in Canada. Available at: <https://changingclimate.ca/health-in-a-changing-climate/>



- A 2015 research paper on *Estimated public health impacts of changes in concentrations of fine particle air pollution in Canada, 2000 to 2011*³ includes maps showing PM_{2.5} concentrations across the country. This paper suggests that some of the greatest increases in PM_{2.5}-associated mortality were observed in the census divisions around Edmonton and Lloydminster, Alberta, and Prince Albert, Saskatchewan.
- A research project under Health Canada's Impact Assessment Research Fund is currently underway to develop a database of mercury and methylmercury levels, and a list of validated, and proposed methylmercury-to-mercury ratios in commonly consumed country food items contributing to mercury exposure among Indigenous communities across Canada.
- Some federal contaminated sites that have received or are receiving assessment or remediation funding under the Federal Contaminated Sites Action Plan are located within the potential RA area⁴. Any information relating to these sites is the property of the federal custodian, who would need to be contacted directly for access to any information.
- The *Health of Canadians in a Changing Climate Report*⁵ highlights the specific risks to health due to climate change (e.g., from flooding, drought, wildfires, extreme heat), which may intersect with development-related health effects within the potential study areas. Specific chapters are focused on the mental health effects of climate change, as well as impacts of climate change on Indigenous communities. There are no climate change vulnerability assessment or adaptation projects being funded under Health Canada's HealthAdapt⁶ program in Alberta, Saskatchewan or Manitoba.
- PHAC funds community projects related to mental health and social determinants of health. Should a RA be carried out, current or future PHAC funded projects specific to the study areas could be reviewed for relevance.

We hope this information is useful in informing the Minister's decision regarding whether or not a RA should be undertaken for the proposed Western Energy Corridor under the IAA. If Health Canada can be of further assistance, please contact the IA team.

³ Stieb, D.M., Judek, S., van Donkelaar, A. et al. Estimated public health impacts of changes in concentrations of fine particle air pollution in Canada, 2000 to 2011. *Can J Public Health* 106, e362–e368 (2015). Available at: <https://doi.org/10.17269/CJPH.106.4983>

⁴ The Federal Contaminated Sites Inventory is available online at: <https://map-carte.tbs-sct.gc.ca/map-carte/fcsi-rscf/map-carte.aspx?Language=EN&backto=www.tbs-sct.gc.ca/fcsi-rscf/home-accueil-eng.aspx>

⁵ Available at: <https://changingclimate.ca/health-in-a-changing-climate/>

⁶ Map of projects available at: <https://www.canada.ca/en/health-canada/programs/health-adapt.html>