

SUPPLEMENTAL MATERIALS

Creating National Air Pollution Models for Population Exposure Assessment in Canada

Perry Hystad¹, Eleanor Setton², Alejandro Cervantes³, Karla Poplawski⁴, Steeve Deschenes², Michael Brauer⁴, Aaron van Donkelaar⁵, Lok Lamsal⁵, Randall Martin^{5,6}, Michael Jerrett⁷, Paul Demers^{4,8}

1. School of Population and Public Health, University of British Columbia, Vancouver, BC, Canada
2. Department of Geography, University of Victoria, Victoria, BC, Canada
3. Department of Geography, University of British Columbia, Vancouver, BC, Canada
4. School of Environmental Health, University of British Columbia, Vancouver, BC, Canada
5. Department of Physics and Atmospheric Science, Dalhousie University, Halifax, Nova Scotia, Canada
6. Harvard-Smithsonian Center for Astrophysics, Cambridge, Massachusetts, USA
7. School of Public Health, Division of Environmental Health Science, University of California, Berkeley, California, USA
8. Occupational Cancer Research Centre, Cancer Care Ontario

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Supplemental Material, Table 1. Summary statistics of monitoring data collected from previous city-specific LUR monitoring in Canada and used to evaluate national NO₂ and benzene models.

Substance ^a	Year	N	Mean +/-SD	Min	Max
NO₂(µg/m³)					
Edmonton ^b	2008	50	28.90 (5.88)	17.09	42.96
Montreal ^c	05/06	135	22.00 (5.77)	7.44	35.81
Sarnia ^d	2005	35	19.66 (6.28)	2.39	31.41
Toronto ^{d,e}	04/06	196	24.20 (8.46)	8.98	52.18
Victoria ^b	2006	40	9.49 (4.87)	0.75	19.18
Vancouver ^b	2003	114	30.08 (7.76)	14.49	52.64
Winnipeg ^b	2008	49	16.06 (5.43)	4.25	32.98
Benzene(µg/m³)					
Montreal ^c	05/06	135	1.05 (0.44)	0.39	3.35
Sarnia ^d	2005	37	0.93 (0.56)	0.28	3.36
Toronto ^d	2006	45	0.75 (0.54)	0.40	4.10
Winnipeg ^b	2008	94	0.44 (0.26)	0.08	1.12

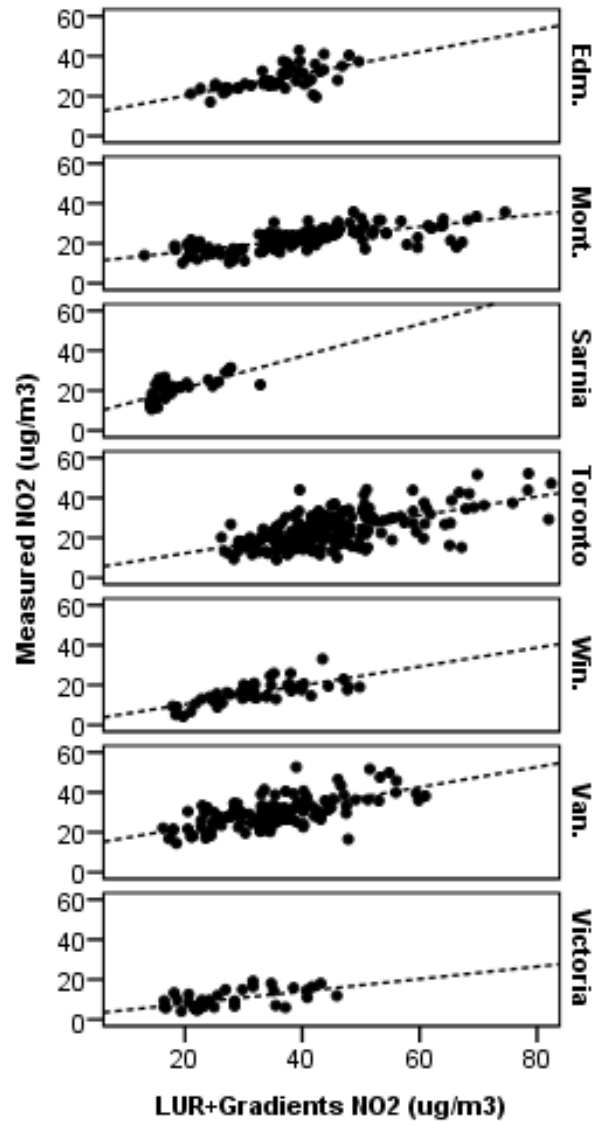
^aEach city conducted monitoring for 2 week periods.

^bFixed site monitoring was used to adjust to yearly average.

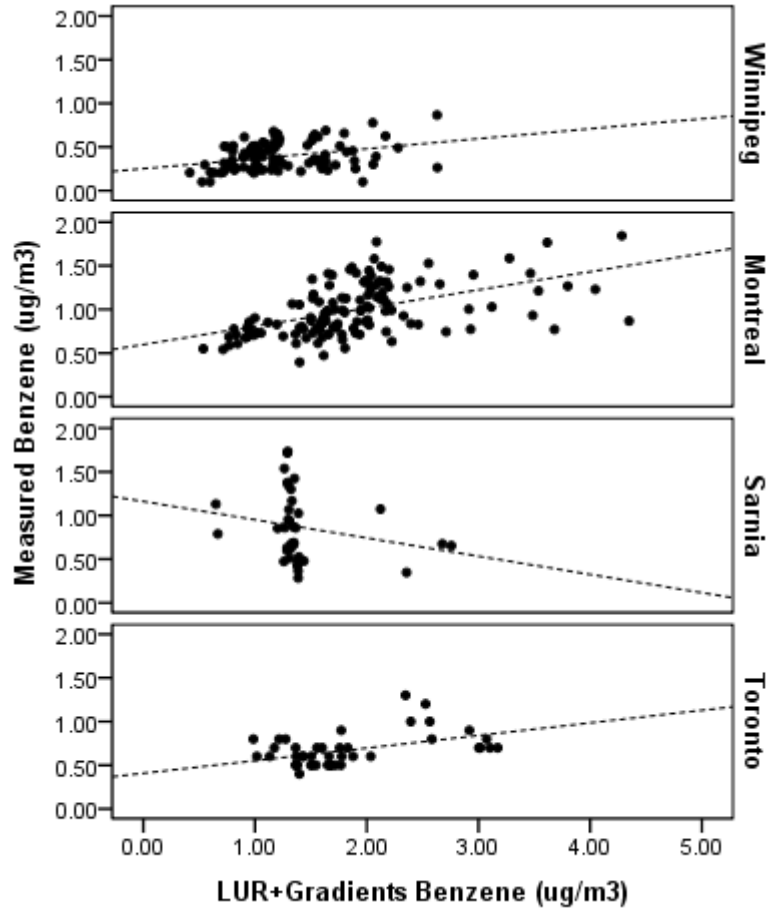
^cAverage of 3 seasons of monitoring (Dec., May., Aug.) used to capture yearly average.

^dNo yearly adjustment conducted (Sarnia data collected in October and Toronto in September).

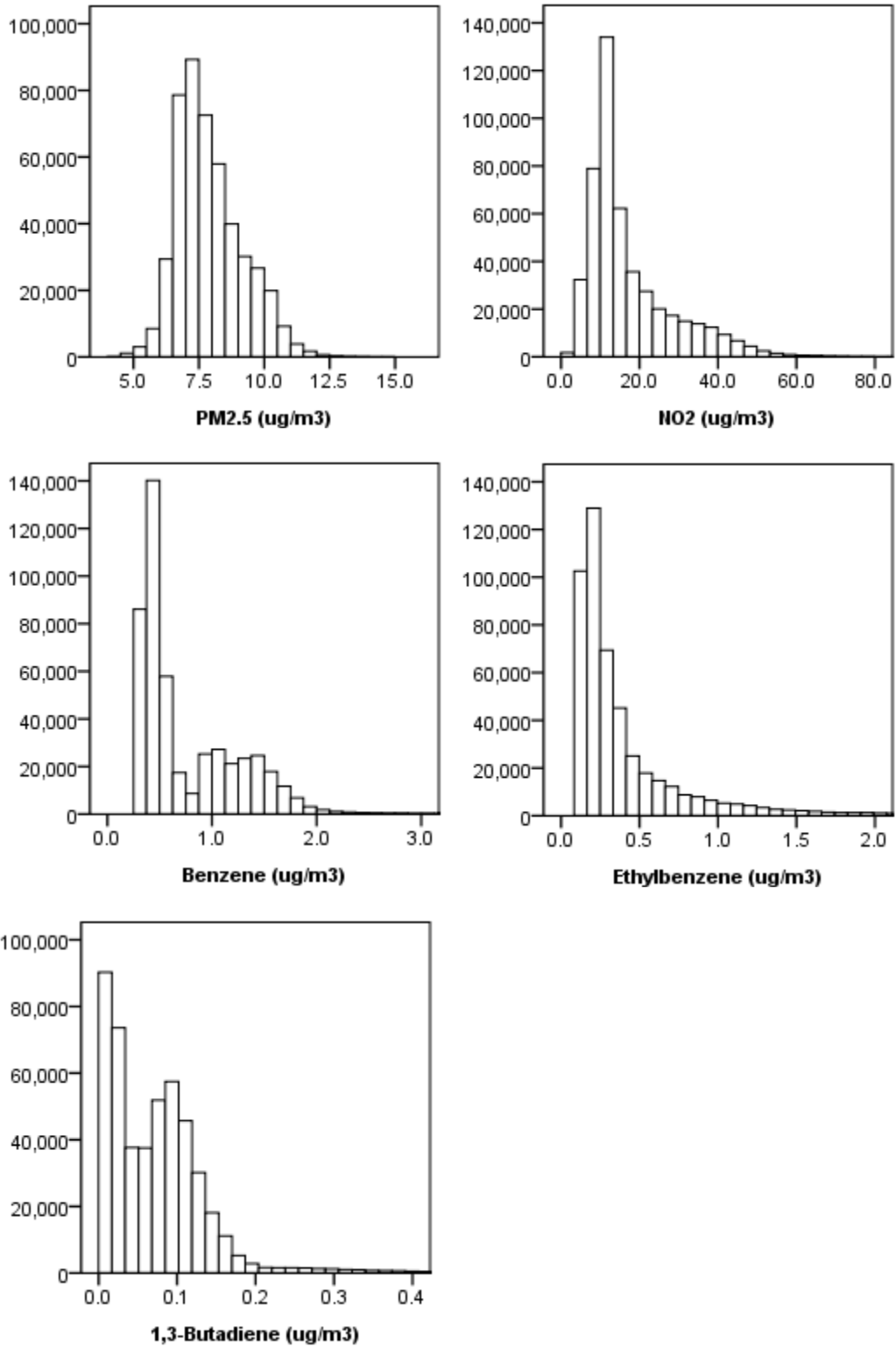
^eCombined 2004 and 2006 data for evaluation.



Supplemental Material, Figure 1. Evaluation of national NO₂ model, incorporating satellite data, geographic landuse variables and deterministic gradients, with independent within-city measurements.



Supplemental Material, Figure 2. Evaluation of national Benzene model, incorporating geographic landuse variables and deterministic gradients, with independent within-city measurements.



Supplemental Material, Figure 3. Annual 2006 Canadian population exposure estimates from national LUR plus gradient models (Frequencies represent street block points, each containing approximately 89 individuals).