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# Selected Recent Publications



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## Journal of Transport Geography

journal homepage: [www.elsevier.com/locate/jtrangeo](https://www.elsevier.com/locate/jtrangeo)

### Exploring the geographical equity-efficiency tradeoff in cycling infrastructure planning

Madeleine Bonsma-Fisher<sup>a,b,\*</sup>, Bo Lin<sup>a</sup>, Timothy C.Y. Chan<sup>a</sup>, Shoshanna Saxe<sup>b</sup>

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#### ENVIRONMENTAL RESEARCH INFRASTRUCTURE AND SUSTAINABILITY

##### TOPICAL REVIEW

### The concept of value in sustainable infrastructure systems: a literature review

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**Keywords:** infrastructure, value, sustainability, triple bottom line, decision-making

#### Abstract

Infrastructure choices and decisions widely employ the language of value, whether to articulate what is worthwhile or to debate which principles or approaches are most appropriate to specific contexts. As the world strives to achieve long-term sustainability goals, incorporating sustainable values into infrastructure decision-making becomes progressively more important. Yet, the term 'value' has been used under different meanings and implications throughout the infrastructure sustainability literature, obstructing the debate on which values are important and what is valuable in infrastructure decision-making processes. This paper reviews how the concept of value has

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Article

## Personal Mobility Choices and Disparities in Carbon Emissions

An Wang, Scott Weichenthal, Marshall Lloyd, Kris Hong, Shoshanna Saxe, and Marianne Hatzopoulou\*



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Article

## A Future Growth Model for Building More Housing and Infrastructure with Less Embodied Greenhouse Gas

Keagan H. Rankin\* and Shoshanna Saxe

#### ENVIRONMENTAL RESEARCH INFRASTRUCTURE AND SUSTAINABILITY

##### PAPER

### Mapping construction sector greenhouse gas emissions: a crucial step in sustainably meeting increasing housing demands

Hatzav Yoffe<sup>1,\*</sup>, Keagan H Rankin<sup>1</sup>, Chris Bachmann<sup>2</sup>, I Daniel Posen<sup>1</sup> and Shoshanna Saxe<sup>1</sup>

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# Emissions from construction in Canada by sector (consumption)

## GHG EMISSIONS BREAKDOWN BY CONSTRUCTION SECTOR

Distribution across gross fixed capital formation (GFCF) construction sub sectors (2018, MTCO<sub>2</sub>e, consumption)

**39%**

INFRASTRUCTURE 15%, COMMERCIAL BUILDINGS (7%), INDUSTRIAL MANUFACTURING (3%) AND MINERAL EXTRACTION (14%)

**90**

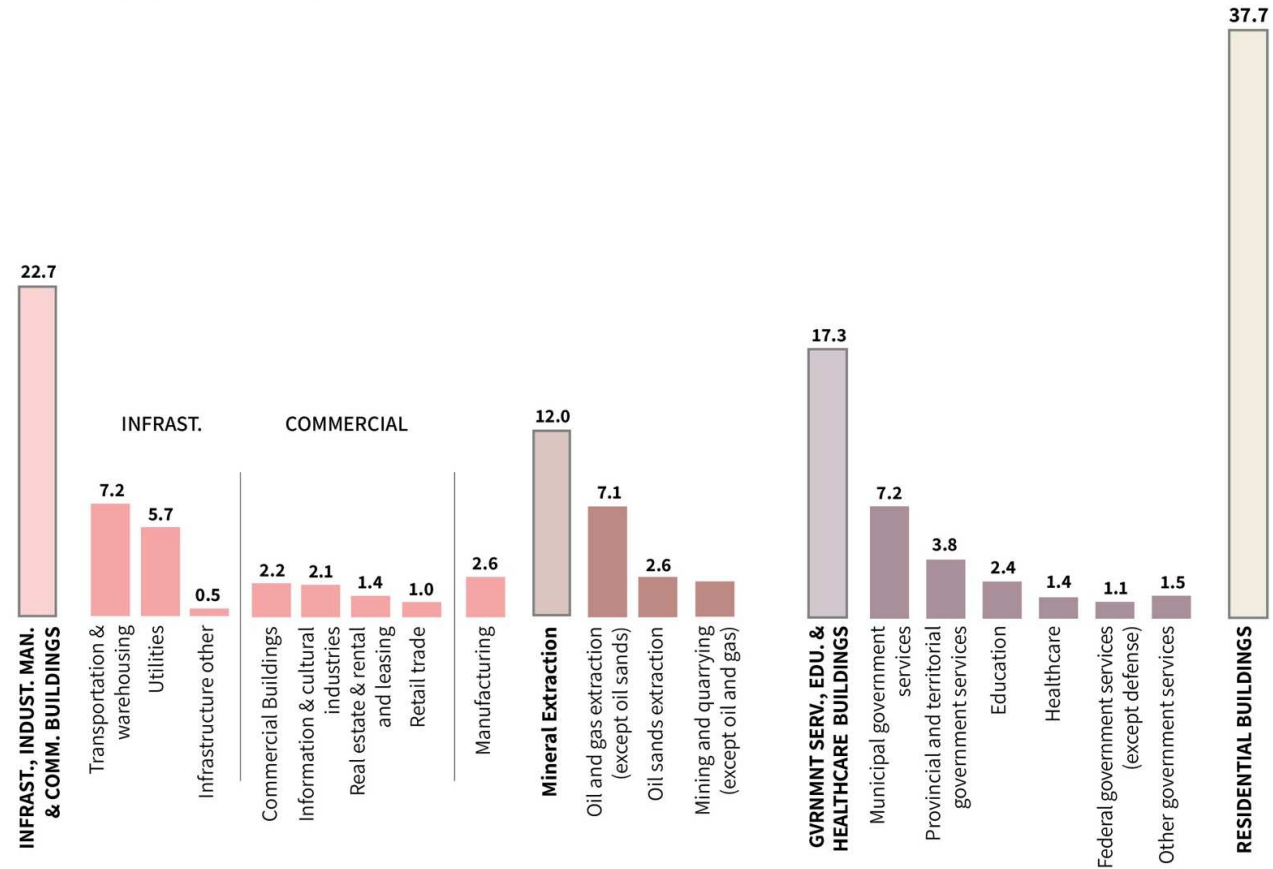
MTCO<sub>2</sub>e/YR (CONSUMPTION)

**42%**

RESIDENTIAL BUILDINGS

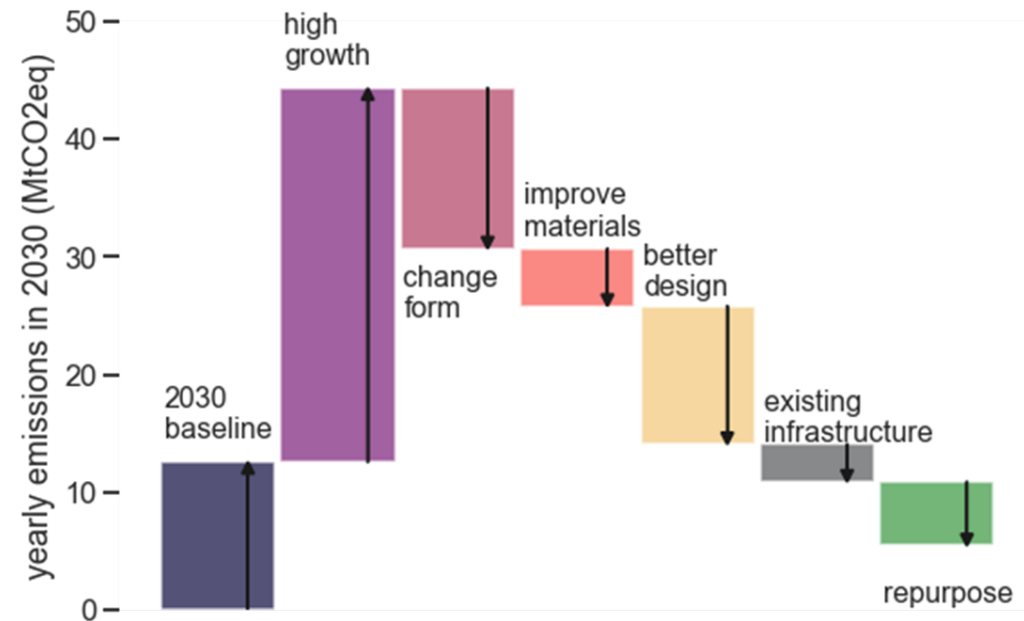
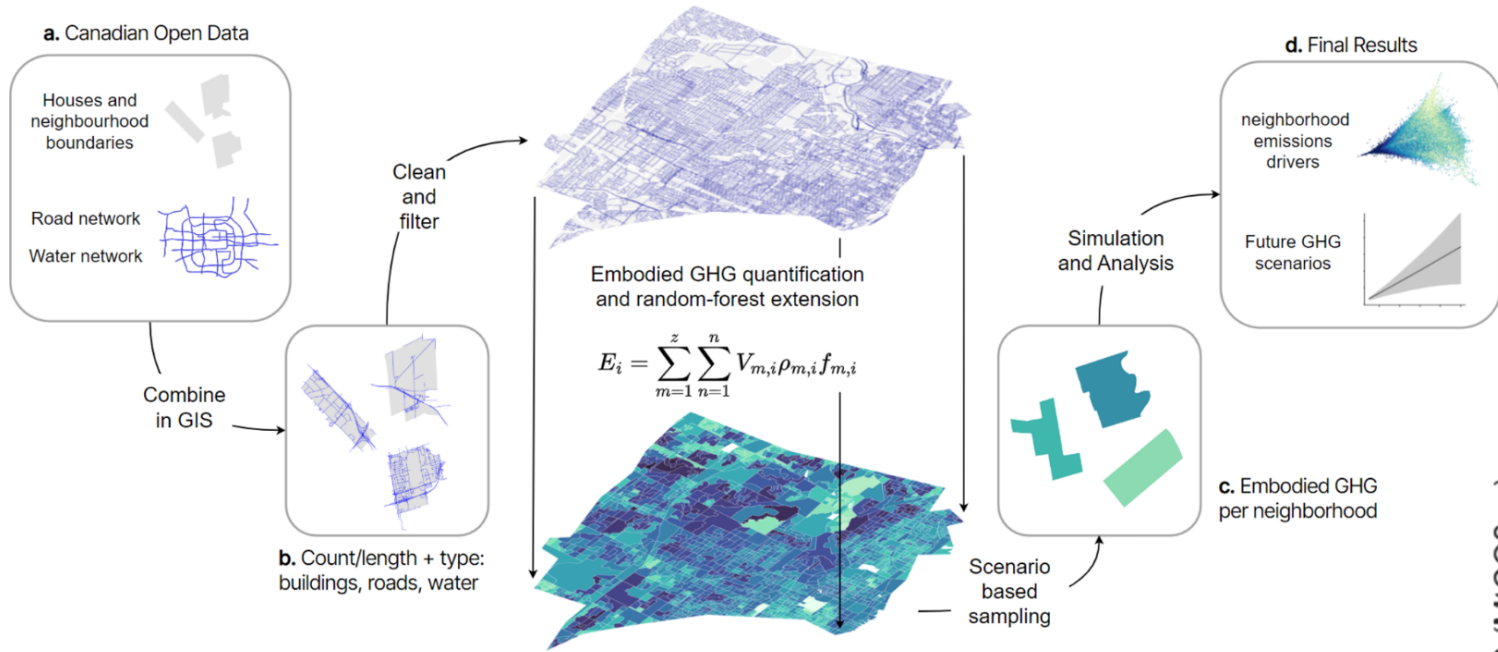
**19%**

GOVERNMENT SERVICES (15%), EDUCATION (3%) AND HEALTHCARE (2%)



Yoffe, H. *et al.* (2024) 'Mapping construction sector greenhouse gas emissions: a crucial step in sustainably meeting increasing housing demands', *Environmental Research: Infrastructure and Sustainability*. doi: <https://doi.org/10.1088/2634-4505/ad546a>.

# Future Infrastructure Growth Model



Rankin, K. H. and Saxe, S. (2024) 'A Future Growth Model for Building More Housing and Infrastructure with Less Embodied Greenhouse Gas', *Environmental Science & Technology*. doi: 10.1021/acs.est.4c02070.