

1. Background

Half the world's population currently lives in cities, and this figure is projected to increase to 70% in the next 20 years. Urban areas contribute significantly to the climate crisis, generating over 70% of global greenhouse gas emissions. Climate policies targeting urban transportation have been implemented in various cities. In addition to this, these areas remain hotspots of CO2 emissions, air pollution (such as particulate matter and NO2), noise, heat, and so on. As these policies take effect, careful attention is needed to assess the potential health impacts of these policies, both in terms of mitigating adverse effects and maximizing co-benefits for urban populations.

Working alongside this project, my research ask:

What are the differential health impacts associated with various types of local transportation climate policies across urban geographical contexts?



Bus Priority



Bike Sharing Programs



Fuel Tax



Electric Vehicle (EV) Incentives



Green Space



Congestion Charges

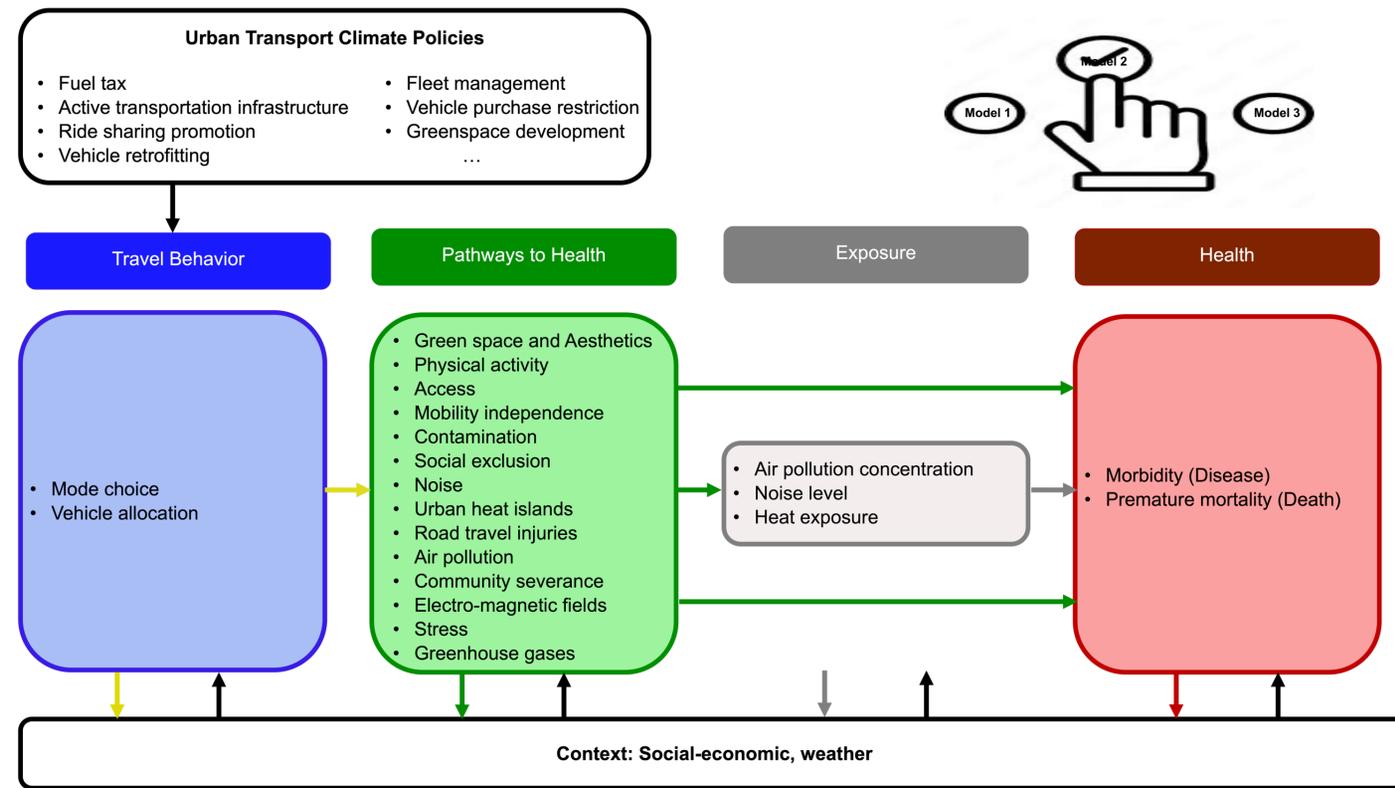


Figure 1 Conceptual framework of the integrated model

2. Research gaps & Aim

Research gaps:

- Deficiency in Exhaustive Assessment of the Diverse Types of Local Transportation Climate Policies, Particularly in their Global Applicability.
- Neglect of the Wide Range of Health Implications in Predicting Integrated Assessment Outcomes and Maximizing Health Co-Benefits.
- Lack of Detailed Investigation into the Specific Impact of Different Climate Policies on Public Health Across Urban Contexts.

Research aim:

The primary aim of this research is to deliver an evidence-based analysis that will guide policymakers in selecting and implementing local transportation climate policies that optimize long-term health outcomes from 2020-2050, focusing on representative selection of global cities across various geographical areas.

3. Method



Systematic review

Selecting models assessing health impacts of road transportation policies



Policy classification and model integration

Identifying and categorizing local transportation policies and then developing an integrated model for scenario analysis



Data Collection and model execution

Choosing cities based on data availability, compiling data, and applying the model to evaluate health impacts under different scenarios



Analysis and recommendations

Interpreting results to formulate evidence-based policy recommendations



4. Project implications

Innovation in policy evaluation:

- Introducing a policy categorization beneficial for decision-makers
- Constructing scenarios reflecting the spectrum of transportation climate policies

Robust Model Integration:

Employing varied data for comprehensive urban health impact assessment using an integrated model

Strategic policy insights:

Delivering targeted, data-driven recommendations for enhancing global urban local transport policies