

Title: Greener, healthier, and more equitable park access: advancing sustainable transportation to regional parks in Metro Vancouver

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Access to urban parks provides numerous health and social benefits. The COVID-19 pandemic heightened awareness of these benefits among urban residents across the world. Visitation to Metro Vancouver Regional Parks surged by 37% from 2019 to 2021, reaching 16.3 million visits. However, 74% of these visitors relied on private vehicles for transportation, leading to challenges such as parking demand, emissions and pollution, and equity concerns where park access depends on vehicle ownership.

This research has two primary objectives:

1. Explore the motivations and barriers affecting Metro Vancouver Regional Park visitors' sustainable transportation mode choice (e.g., public transit, biking, and walking)
2. Identify potential design, service, and programming recommendations to motivate park visitors to opt for more sustainable and healthier modes over driving

In the summer of 2023 intercept surveys were conducted in six regional parks in Metro Vancouver, BC, Canada, gathering responses from 456 visitors. Our analytical approaches include descriptive analysis, regression models, spatial analysis to understand trip patterns, and longitudinal comparisons with past survey data. A broad literature review further informed our study recommendations.

Our findings reveal that three-quarters of regional park visitors rely on cars for park access. Travel mode choices are linked with visit frequency, age, income, and duration of residency in Canada. Inconvenient transit services to parks, and deficiencies in biking infrastructures, such as safe cycling routes and storage in parks, emerge as major barriers deterring sustainable transportation mode adoption. An in-depth look at multiple travel modes identifies sustainable mode users' challenges in achieving seamless and efficient transfers.

Potential incentives for future mode shifts among park visitors were also identified. We provide actionable, interdisciplinary strategies for local and regional governments to enhance equitable and low-carbon park access, contributing to creating healthier and more sustainable cities. Our research contributes to shaping urban futures that embody equity, environmental sustainability, and resilience in the face of a changing climate, in alignment with the theme of healthy cities.

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