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Greenbelt Foundation Backgrounder

New Case Studies show nature's economic benefits

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Overview

The Greenbelt Foundation and EcoHealth Ontario have released two new case studies and one survey design that show the value of natural infrastructure to human health and the economy. Over the last three years, EcoHealth Ontario has been working on a first-of-its-kind framework to create the business case for natural areas.

The valuation framework created by EcoHealth in partnership with Green Analytics makes links between greenspace investments, health outcomes, and economic benefits that will inform policy, program design and land-use planning for healthy resilient communities. The case studies demonstrate how it is possible to estimate health outcomes and the long-term health care cost-savings of investing in urban green infrastructure.

Background

EcoHealth Ontario used its valuation framework to develop case studies that determine the economic and health benefits of greenspace. The three case studies are: Increasing tree canopy in Brampton, Ontario, a new urban park in Peterborough, Ontario, and a mental health program with Credit Valley Conservation and Punjabi Community Health Services. Due to COVID 19 restrictions the survey has not yet been completed.

Downtown Urban Park, Peterborough, Ontario

The downtown urban park is currently under development and located at 215 Charlotte Street, Peterborough. The site was previously a municipal parking lot. It is now being reinvigorated as greenspace, giving residents better access to outdoor spaces in Peterborough's downtown core.

The economic analysis has found the development of the Downtown Urban Park will save \$133,088 annually from avoided health care costs in the local community. This results from reduced physical inactivity, mental health problems, and from improved air quality. Once improved life satisfaction is accounted for, the total annual health return-on-investment is \$4.24 million. The development of the Downtown Urban Park was estimated to cost \$6.5 million, according to the city of Peterborough's 2020-2029 Capital Budget. This study estimates that the total health return-on-investment (HROI) will pay back the initial development cost for the city of Peterborough in 1.5 years.

"We know the research shows that nature is good for-us, and the case studies confirm this by



quantifying the value of the health and well-being benefits using local health data and peer reviewed research,” says Dr. Jeffrey Wilson, Assistant Professor, School of Environment, Enterprise and Development, University of Waterloo. “Communicating the health return on natural infrastructure investments provides evidence that investing in nature pays double dividends in terms of improved human health and increased climate resiliency.”

To read this case study in full, click [HERE](#).

Increasing Tree Canopy, Brampton, Ontario

Increasing tree cover can lower temperatures, improve air and water quality, provide habitat, and increase biodiversity. For this case study, the Greenbelt Foundation also partnered with the BeTop Lab at Ryerson University to explore the economic value of planting more trees in urban areas to reduce temperatures and improve air pollution.

This study shows how two scenarios for urban tree canopy expansion are linked to improvements in health and well-being. These improvements result in health system savings through reduced exposure to extreme heat days, improved air quality and increased physical activity. The annual benefits are estimated to be between \$2.5 million and \$3.2 million. The analysis shows that lowered temperatures, improved air quality, and additional greenspace would decrease hospitalization rates, emergency visits, and ambulance calls from 11 per cent to 55 per cent.

"For this study we developed an innovative modelling platform that provides predictive capabilities to evaluate strategies for natural infrastructure that can mitigate extreme heat," says Professor Umberto Berardi, Canada Research Chair in Building Science, BeTOP Director, Ryerson University. "Our work shows that increasing tree canopy cover can result in significant cooling in the study neighbourhood."

To read this case study in full, click [HERE](#).

Survey Design, Credit Valley Conservation

The goal of this case study was to estimate a value of natural areas for seniors in increasing life satisfaction and improving mental and physical health benefits. Due to pandemic conditions, the project was not able to bring seniors out to the conservation areas, instead the EcoHealth team developed in-depth surveys for seniors to collect the data required to make economic valuations.

The surveys were developed to capture the data necessary to populate the economic valuation framework and used to determine any improvements in participants' life satisfaction, mental health, and physical well-being.

To read this case study in full, click [HERE](#).