



Cycling Cities |  ITDP |  FIA FOUNDATION

PRESS RELEASE — EMBARGOED UNTIL 10/24 AT 6:00AM EDT

For more information, please contact:

Verónica Ortiz Cisneros, ITDP (veronica.ortiz@itdp.org)

Kate Turner, FIA Foundation (k.turner@fiafoundation.org)

Networks of Protected Bike Lanes Are Key to Reducing Transport Emissions, New Report Finds

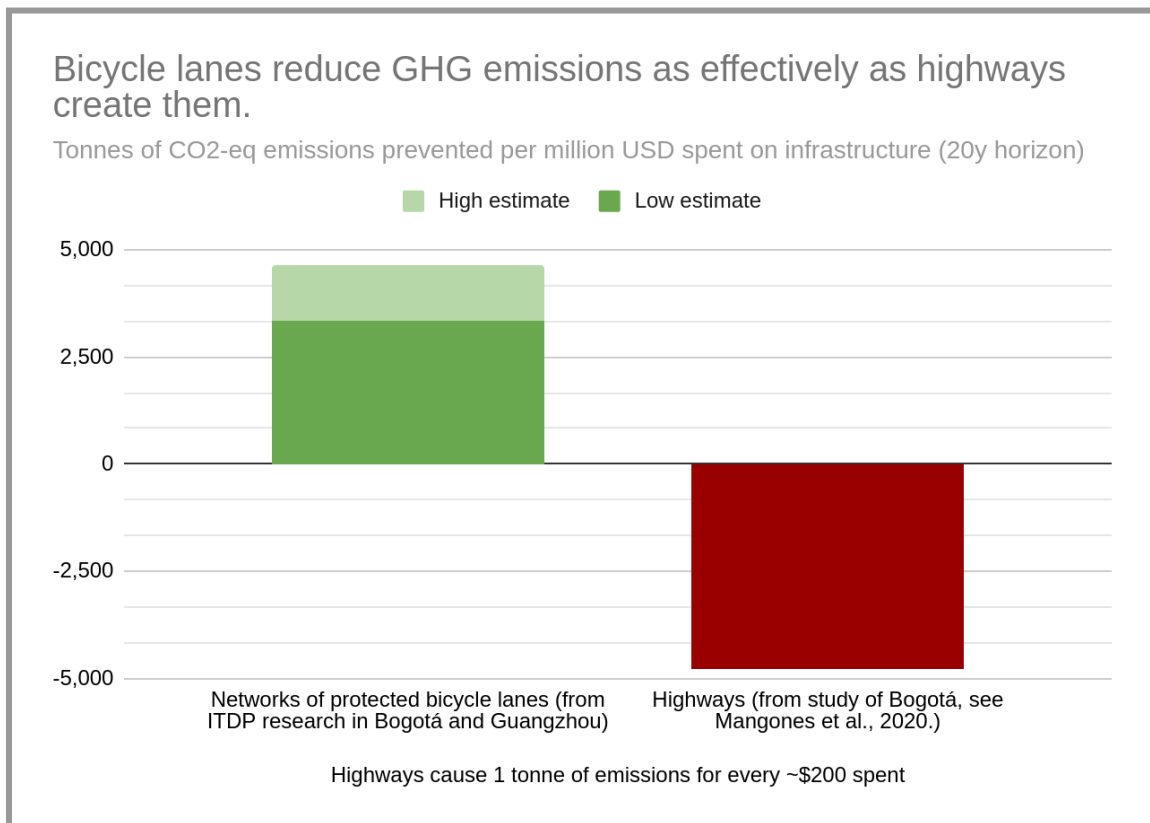
A new report from ITDP's Cycling Cities and the FIA Foundation finds that networks of protected bicycle lanes have significant potential to reduce greenhouse gas (GHG) emissions, lower transport costs, and prevent premature road fatalities. Networks of protected bicycle lanes are not only an extremely cost-effective way of reducing emissions, they also provide quantifiable economic benefits, paying for themselves in less than a year. It is time for funders and policymakers to take action and invest in infrastructure to promote cycling as an essential transport mode in our cities.

A new report entitled [*Protected Bicycle Lanes Protect the Climate*](#), developed by ITDP's global [Cycling Cities](#) campaign with support from the [FIA Foundation](#), finds that networks of protected bicycle lanes in middle-income cities can help reduce GHG emissions, lower transport costs, and prevent premature road fatalities in a highly cost-effective way.

This report is one of the first-ever empirical measures of GHG reductions from networks of protected bicycle lanes in low- and middle-income countries, specifically examining the impacts of the extensive networks that exist in the major cities of Bogotá, Colombia and Guangzhou, China. Using cyclist counts and intercept surveys, combined with lifecycle emission factors for various modes, this study estimates that these networks prevent the emission of about 22,000 tonnes of CO₂-eq per year in Bogotá and 16,000 in Guangzhou. In each city, this is equivalent to the amount of carbon that would be sequestered by planting 300,000 to 400,000 new trees every year.

Building protected bicycle lanes is inexpensive compared to other approaches to decarbonizing transportation. Networks of protected bicycle lanes pay for themselves in less than one year. These networks create more economic value annually than they cost to build, given the transportation cost savings and the public health benefits of increased exercise. For example,

building metro rail systems, while an essential part of sustainable urban transportation, also comes with high costs; in comparison, protected bicycle lane networks lead to roughly 10 times more emissions reductions per dollar spent on infrastructure. For every \$200 dollars spent on highways, the report estimates, 1 tonne of GHG emissions per year will be created while the same spend on protected bicycles lanes would *mitigate* almost exactly the same amount (see graph below).



Investing in cycle lanes provides a myriad of economic and social benefits to cities as well. According to the report, Bogotá's network cost an estimated 132 million USD to build, saves travelers 80 million USD per year, and prevents 300 deaths per year — providing an economic value of 230 million USD, for a benefit of 310 million USD per year in total. Guangzhou's network cost an estimated 69 million USD to build, saves travelers 30 million USD per year, and prevents 50 deaths — providing an economic value of 55 million USD per year, for a benefit of 105 million USD per year in total. These estimates of economic benefits do not include time savings, reduced air pollution, land value uplift, or other aspects of the [economic benefits of cycling](#).

This report is a timely response to the climate crisis and addresses how cities around the world need to take a systems-based approach to transforming urban transport in order to mitigate the dangers of growing greenhouse gas emissions. Prioritizing investments and policies that

expand cycling infrastructure is one of the keys to shifting a significant share of trips from emissions-heavy private vehicles towards cycling as an essential, low-carbon mode of transport.

Research has shown the positive impacts of increasing cycling, but there has been little research that directly links bicycling infrastructure to reductions in GHG emissions, with a particular lack of studies in low- and middle-income countries. As a result, decision-makers may understand that they need to increase bicycling without knowing how to do so. Connected networks of physically-protected bicycle lanes, rather than individual or unprotected lanes or other policy measures, are generally regarded as the most important factor in promoting cycling. However, there has also been a research gap in quantifying *how* protected bicycle lane networks shift driving trips to bicycle trips, and the related reductions in emissions. This study is an important first step towards filling this research gap.

Around the world, cities urgently need to reduce emissions to address climate change and improve quality-of-life for their people by supporting more low-carbon modes of transport. Unfortunately, bicycle lanes have often not been treated as major pieces of infrastructure in the same way as metros, bus rapid transit systems, and highways. The lessons drawn from Bogotá and Guangzhou in this report demonstrate that networks of protected bicycle lanes *should* be considered essential — they can be built much more quickly and cost-effectively than rapid transit systems and implementation takes a few years or less, rather than decades. The most crucial action a city can take to promote cycling in particular is the construction of a network of protected bicycle lanes to establish cycling as safe, affordable, and accessible.

The findings of this research empowers anyone to model the climate impacts that a bicycle lane network would have in their city. Researchers have published a free and user-friendly modeling tool to predict the impacts of any proposed network of bicycle lanes ([Microsoft Excel](#) or [Google Sheets](#)). This model provides a way for governments, development banks, and funders to understand the associated costs and the climate benefits of investing in networks of protected bicycle lanes. Climate funders and city and national decision-makers should take note — the climate benefits of protected cycle lane networks are great while the costs are low, and it is time to invest and build more of them worldwide.

Sheila Watson, Deputy Director of the FIA Foundation, said: “Urban cycling is an often overlooked element of urban transport planning, but this report shows it can unlock climate, environmental, and health benefits. It is extraordinary to see that dollar for dollar, protected cycle lanes are not just carbon neutral but fully mitigate the greenhouse gas emissions created when the same amount of spending goes on highways. The case for investment in cycling is not just good financial sense, it is essential for healthier, safer and more equitable cities.”

“Cities need to be designed for the well-being, safety, and health of people. Having robust networks of protected cycle lanes is key to ensuring more sustainable and inclusive urban mobility,” said ITDP CEO Heather Thompson. “This report presents crucial evidence that extensive networks of protected lanes lead to more cycling, which in turn helps to reduce GHG emissions by reducing cars on the road. Now is the moment for governments and financiers to

ensure that more protected cycle lane networks are built as a fast, affordable solution to climate change. The evidence is here – the time to act is now."

[Acces the full *Protected Bicycle Lanes Protect the Climate* report here.](#)

###

About ITDP

The Institute for Transportation and Development Policy (ITDP) is a global nonprofit that works with cities around the world to design and implement high-quality transport systems and policy solutions that make cities more livable, equitable and sustainable. ITDP's Cycling Cities campaign was launched in 2021 to provide governments, planners, advocates, and others the tools to make cycling a safe and affordable transportation option in cities.

www.itdp.org

Facebook.com/ITDP

Twitter: @ITDP_HQ

Linkedin: Institute for Transportation and Development Policy

About the FIA Foundation

The FIA Foundation is an independent UK-registered charity, working closely with grant partners to shape projects and advocate to secure change in policy and practice. The Foundation's objective is safe and healthy journeys for all. Through partners with global reach, they support safer vehicles and highways, clean air and electric cars and greater mobility, access & inclusivity.

www.fiafoundation.org

Facebook.com/FIAFoundation

Twitter: @FIAFdn

Linkedin: FIA Foundation