# Professor Simon Kingham Pūtaiao | Faculty of Science



## **Sustainable Transport**

Simon's research covers a broad range of topics, but at its core the aim is to understand and improve the impact of urban environments on our health and well-being. In the context of climate change, urban environments are vital for climate mitigation and adaptation given the majority of the world's population lives in urban settings, with more and more people moving to cities each year.

Additionally, our cities consume most of the world's energy. Understanding how urban settings can

### **About Simon**

- Bachelor (Honours),
   PhD in Geography
- Started as Visiting Lecturer at UC in 2000
- Chief Science
   Advisor, Ministry of
   Transport | Te
   Manatū Waka



better facilitate sustainable behaviour is a critical component of a sustainable future.

Simon's research begins by engaging with communities to identify key issues. In particular, he has close links to government, with a top priority being to ensure governments adopt evidence-based policies to improve the lives of all New Zealanders. Through his research, teaching and service, he prioritises ongoing relationships with councils and government, residents' associations, and community members. Through long-term relationships and ongoing communication, new opportunities are created to do work that is academically interesting, informs scientific progress, and is relevant to society by building healthier and more sustainable cities.

"Researchers can do work in a lab, or they can go out and do it with communities and councils and government and actually create change and impact. There's a whole range of sciences where you can change behaviour, you can influence policy, you can advise people. We have an obligation to the taxpayers and governments who fund research to be sure our research adds value to society."

Since 2018, Simon has served as the as the inaugural Chief Science Advisor to the Ministry of Transport (MoT) |Te Manatū Waka. He is seconded half-time to work with policymakers so that global best practice and research guides transportation policies to make our transportation system safer and more sustainable.

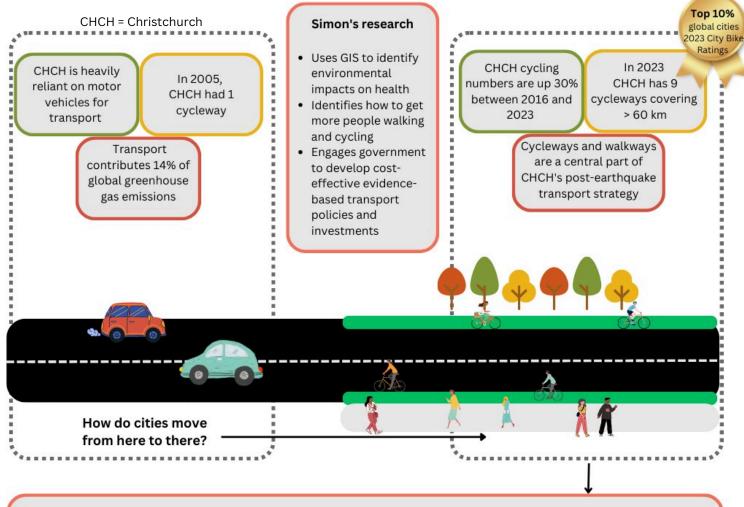
Since 2009, he has served as Director of the GeoHealth Laboratory | Te Taiwhenua o te Hauora, which was launched in 2005 as a joint venture between UC and the Ministry of Health. Through the GeoHealth Lab student projects address community-identified issues and provide valuable resources to inform city planning and services for more sustainable and healthier living.

## **Research Impact**

**The issue**: Ōtautahi Christchurch is a city heavily reliant on its roadways and private cars for the bulk of its transportation. According to the Council's 2022 transportation survey, 96% of the 4700 people surveyed primarily use their car for transportation. This matters because transport is a major contributor to global annual greenhouse gas emissions. Many cities are carefully rethinking the extent of car traffic within urban centres as part of their plans to becoming carbon neutral.

The research: Simon's research has engaged potential cyclists to determine barriers and enablers to getting more people out walking and cycling. In that research it was clear that separation from traffic was key. People reported needing to feel safe before they are able and willing to cycle around the city. From there, they shared examples of bicycle paths from around the globe with community members to see what could work in the local context. This research, combined with global research on the effects of infrastructure changes, guide Simon's advice to Council and government on evidence-based policies to guide ANZ transport policies.

The impact: Simon's strong relationships with government and his international profile are evident in his research being cited in policy documents in 20 countries and by 10 different Intergovernmental Organisations (IGOs) as of October 2023. This extensive reach highlights his global influence on policymaking discussion. Further, we see infrastructure changes in Ōtautahi Christchurch in the time Simon has been conducting research on cycleways. In 2005, the city had only 1 cycleway. Now, less than 20 years later, there are more than 60 kilometres of cycleways and policies put in place to ensure that active transport options are included in any new infrastructure. In turn, more and more people are cycling. Cycling numbers are up 30% between 2016 and 2023, leading to Ōtautahi Christchurch top 10% ranking in the global 2023 City Bike Ratings by People for Bikes. There is strong international data on cycleways demonstrating the return on investment is substantial, meaning our communities are healthier, our transport system cheaper and safer, and the path to carbon neutral is filled with active transport trails.



#### Impact of safer and expanded active transport infrastructure

- Cycling provides a pathway to net-zero cities--10 times more important than electric cars (Brand et al 2021)
- Walking and cycling infrastructure is a "best buy" (Christchurch Transport Strategic Plan 2012-2042) for:
  - o Individual health by promoting physical activity and reducing mortality,
  - o Reduces physical inactivity, which is a key contributor to the health budget,
  - And, providing significant benefits to the transport system, including reduced pollution, traffic congestion, and greater cost-efficiencies; with an average benefit to cost ratio of 5 to 1.