

# Health Economic Assessment Tool (HEAT) for walking and cycling



20 years of the Pan-European Programme on  
Transport, Health and Environment  
13-14 January 2022

Nino Sharashidze  
**THE PEP Secretariat**

**THE PEP**

Transport, Health  
and Environment  
Pan-European Programme



# WHY walking and cycling is important?

## BENEFITS OF WALKING AND CYCLING



**THE PEP**

Transport, Health  
and Environment  
Pan-European Programme



# Cities: a dynamic context, constantly reshaped by multiple drivers



- By 2030, more than 80 % of Europeans will live in urban areas
- Circa 90 % Europeans live in cities smaller than 5 million inhabitants and 65 % in urban areas smaller than 500 000

# Health Economic Assessment Tool (HEAT) for walking and cycling

## What is HEAT

- Online tool for economic assessment of health impacts of walking or cycling

[www.heatwalkingcycling.org](http://www.heatwalkingcycling.org)

- Originally designed for transportation planners, but suitable for a wide audience of non-health experts

A simple tool to allow consideration of health in planning decisions that affect walking or cycling

## HEAT “core principles”

- Scientific robustness
- Usability
  - Minimal skills requirements (no health background needed)
  - Minimal data input requirements
  - Availability of default values
  - Design and flow of the tool
- Transparency
  - Approach and assumptions
- Conservative
- Adaptable
- Modular and policy relevant

## *HEAT answers the questions:*

- If **X** people walk or bike an amount **Y** on most days:
  - What are the **health impacts** on **mortality** and their **economic value** as a result of:
    - ✓ **physical activity?**
    - ✓ exposure to **air pollution** (while walking or biking)?
    - ✓ risk of **traffic crashes?**
  - what are the impacts of **carbon emissions** as a result of shifts from motorized modes to active travel?



# Worldwide use of the HEAT- from Europe to Global

- Project website visited about 1'000'000 times by over 66,000 visitors since 2011
- Multiple applications
- Extremely positive feedback

*Journal of Physical Activity and Health, 2013, 10(suppl 1), 623-630  
© 2013 Human Kinetics, Inc.*

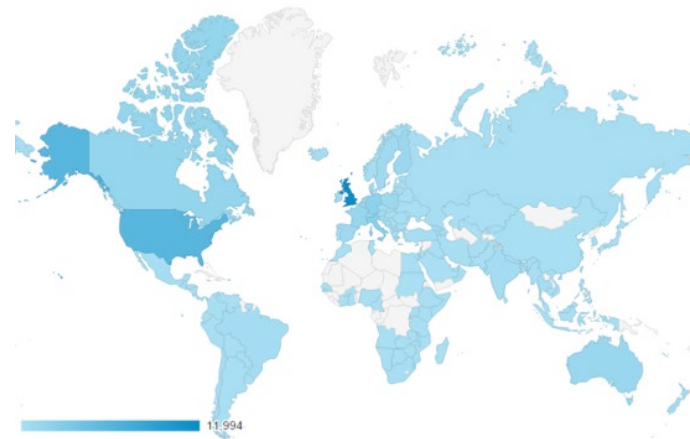
**"Health in All Policies" in Practice: Guidance and Tools to Quantifying the Health Effects of Cycling and Walking**

Sonja Kahlemaier, Francesca Racioppi, Nick Covill, Harry Rutter, and Pekka Oja

*Background:* There is growing interest in "Health in All Policies" approaches, aiming at promoting health through policies which are under the control of nonhealth sectors. While economic appraisal is an established practice in transport planning, health effects are rarely taken into account. An international project was carried out to develop guidance and tools for practitioners for quantifying the health effects of cycling and walking, supporting their full appraisal. *Development process:* A systematic review of existing approaches was carried out. Then, the products were developed with an international expert panel through an extensive consensus-finding process. *Products and applications:* Methodological guidance was developed which addresses the main challenges practitioners encounter in the quantification of health effects from cycling and walking. A "Health Economic Assessment Tool (HEAT) for cycling" was developed which is being used in several countries. *Conclusions:* There is a need for a more consistent approach to the quantification of health benefits from cycling and walking. This project is providing guidance and an illustrative tool for cycling for practical application. Results show that substantial savings can be expected. Such tools illustrate the importance of considering health in transport policy and infrastructure planning, putting "Health in All Policies" into practice.

*Keywords:* economic assessment, transport, physical activity, Europe

**Now HEAT globally applicable!**



- Australia
- Austria
- Belgium
- Brazil
- Canada
- China
- Estonia
- Finland
- France
- Germany
- Greece
- Italy
- Latvia
- Netherlands
- North Macedonia
- Portugal
- Romania
- Russian Federation
- Spain
- Sweden
- Switzerland
- United Kingdom
- United States

### Challenges:

- Finding data
- Interpreting findings
- Persuading policymakers

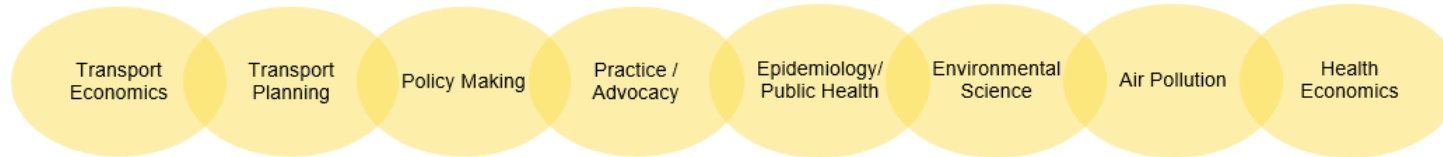


**Project coordinating team:** Thiago Herick de Sa, WHO Headquarters, Francesca Racioppi, WHO Regional Office for Europe, Sonja Kahlmeier, Swiss Distance University of Applied Science (FFHS), Switzerland, Thomas Götschi, University of Oregon, USA

**Project advisory and expert group:** Karim Abu-Omar, Heba Adel Moh'd Safi, Yousaf Ali, Lars Bo Andersen, Hugh Ross Anderson, Nelzair Araujo Vianna, Olivier Bode, Tegan Boehmer, Nils-Axel Braathen, Christian Brand, Hana Bruhova-Foltynova, Fiona Bull, Daniel Buss, Juan Castillo, Nick Cavill, Dushy Clarke, Andy Cope, Baas de Geus, Audrey de Nazelle, Ardine de Wit, Hywell Dinsdale, Damien Dussaux, Rune Elvik, Santiago Enriquez, Mark Fenton, Jonas Finger, Francesco Forastiere, Richard Fordham, Charlie Foster, Virginia Fuse, Eszter Füzeki, Rogerio Gama, Frank George, George Georgiadis, Regine Gerike, Eva Gleissenberger, Rahul Goel, Shifalika Goenka, Anna Goodman, Thomas Götschi, Maria Hagströmer, Mark Hamer, Yahaya Hassan Said, Holger Haubold, Eva Heinen, Thiago Herick de Sa, Marie-Eve Heroux, Max Herry, Gerard Hoek, Stefanie Holzwarth, Luc Int Panis, Nicole Iroz-Elardo, Luis Jorge Hernandez, Sonja Kahlmeier, Paul Kelly, Melekidhesi Khayesi, Caryl Koinange, Michal Krzyzanowski, I-Min Lee, Christoph Lieb, Jose Lobo, Mazen Malkawi, Brian Martin, Marco Martuzzi, Markus Maybach, Adriannah Mbandi, Guy Mbayo, Gabriel Michel, Irina Mincheva Kovacheva, Hanns Mooshammer, Pierpaolo Mudu, Carlos Muñoz Piña, Marie Murphy, Nanette Mutrie, Bhash Naidoo, Keiko Nakamura, Daisy Narayanan, Maria Neira, Amanda Ngabirano, Mark Nieuwenhuijsen, Åse Nossum, Pekka Oja, Edith Patouillard, Uttam Paudel, Genandrialine Peralta, Laura Perez, Julie Powel, Francesca Racioppi, Hussain Rasheed, Lisa Robinson, David Rojas Rueda, Gabe Rousseau, Candace Rutt, Harry Rutter, Randy Rzewnicki, Kjartan Saelensminde, Elin Sandberg, Alexander Santacreu, Andreia Santos, Parth Sarathi Mahapatra, Lucinda Saunders, Daniel Sauter, Shari Schaftlein, Peter Schantz, Tom Schmid, Peter Schnohr, Christoph Schreyer, Christian Schweizer, Nino Sharashidze, Heini Sommer, Jan Sørensen, Joe Spadaro, Gregor Starc, Dave Stone, Marko Tainio, Robert Thaler, Vo Thi Hue Man, Meelan Thondoo, Miles Tight, Sylvia Titze, Lan Wang, Miriam Weber, Wanda Wendel Vos, Paul Wilkinson, James Woodcock, Tian Xiangyang, Hou Xiaohui, Mulugeta Yilma, Masud Yunesian.

**Development team:** Tomasz Szreniawski, Thomas Götschi, Alberto Castro Fernandez, Vicki Copley, Ali Abbas, Duy Dao, Hywell Dinsdale

### Expertises involved



# THANKS!

[www.heatwalkingcycling.org](http://www.heatwalkingcycling.org)