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Unlocking the value of cycling

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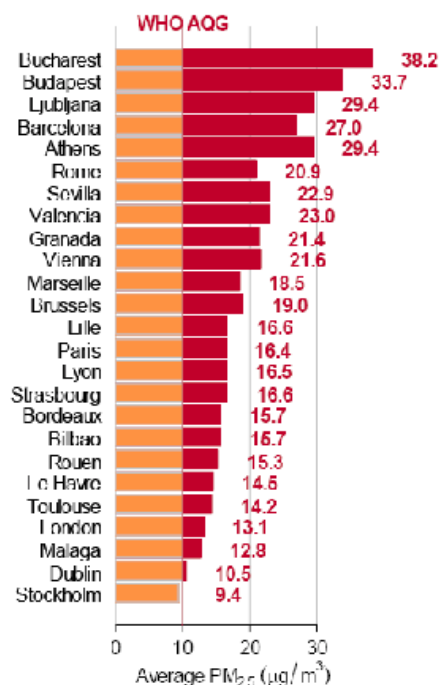


**EUROPEAN
FACTS AND
GLOBAL
STATUS
REPORT ON
ROAD SAFETY
2013**



Health potential from cleaner air in Europe

Gain in life expectancy (months) in 25 Apekom cities expected with a decrease in PM_{2.5} to WHO AQG (10 µg/m³) for ages ≥ 30 years



Source: Presentation of Apekom findings at the Policy Workshop: EU Year of Air – how can we reduce air pollution to improve health? 13 September 2012, Brussels, Belgium, http://www.apekom.org/c/document_library/get_file?uuid=e5e5777f-968c-484c-8a51-652f132030c7&groupId=10347



Source: Physical Activity Guidelines Advisory Committee. Physical Activity Guidelines Advisory Committee Report, 2008. Washington, DC: U.S. Department of Health and Human Services, 2008.

Integration of health in transport planning/appraisals

- Recognition of the importance of **economic analysis** in transport planning
- Easy-to-use tool needed to estimate the economic value of the health benefits of regular walking and cycling
- Evidence-based, transparent and adaptable
- Conservative



The question

If x people walk/cycle a distance of y kilometers on most days, what is the economic value of the health benefits that occur as a result of the reduction in mortality due to their physical activity?

The answer: Health Economic Assessment Tool (HEAT) for walking and cycling

<http://www.euro.who.int/HEAT>



The screenshot shows the HEAT website interface. On the left is a navigation menu with the HEAT logo and links to Introduction, HEAT for cycling, HEAT for walking, Current Assessment, Previous Assessments, and Acknowledgements. The main content area has a heading 'HEAT ► Introduction' followed by a welcome message and a description of the tool's purpose. A sidebar on the right titled 'More information' contains a section 'What data do I need?' with a 'more...' link.

HEAT
Health economic
assessment tool

Introduction

- HEAT for cycling
- HEAT for walking
- Current Assessment
- Previous Assessments
- Acknowledgements

HEAT ► Introduction

Welcome to the WHO/Europe Health Economic Assessment Tools (HEAT) for walking and for cycling.

This tool is designed to help you conduct an economic assessment of the health benefits of walking or cycling by estimating the value of reduced mortality that results from specified amounts of walking or cycling.

The tool can be used in a number of different situations, for example:

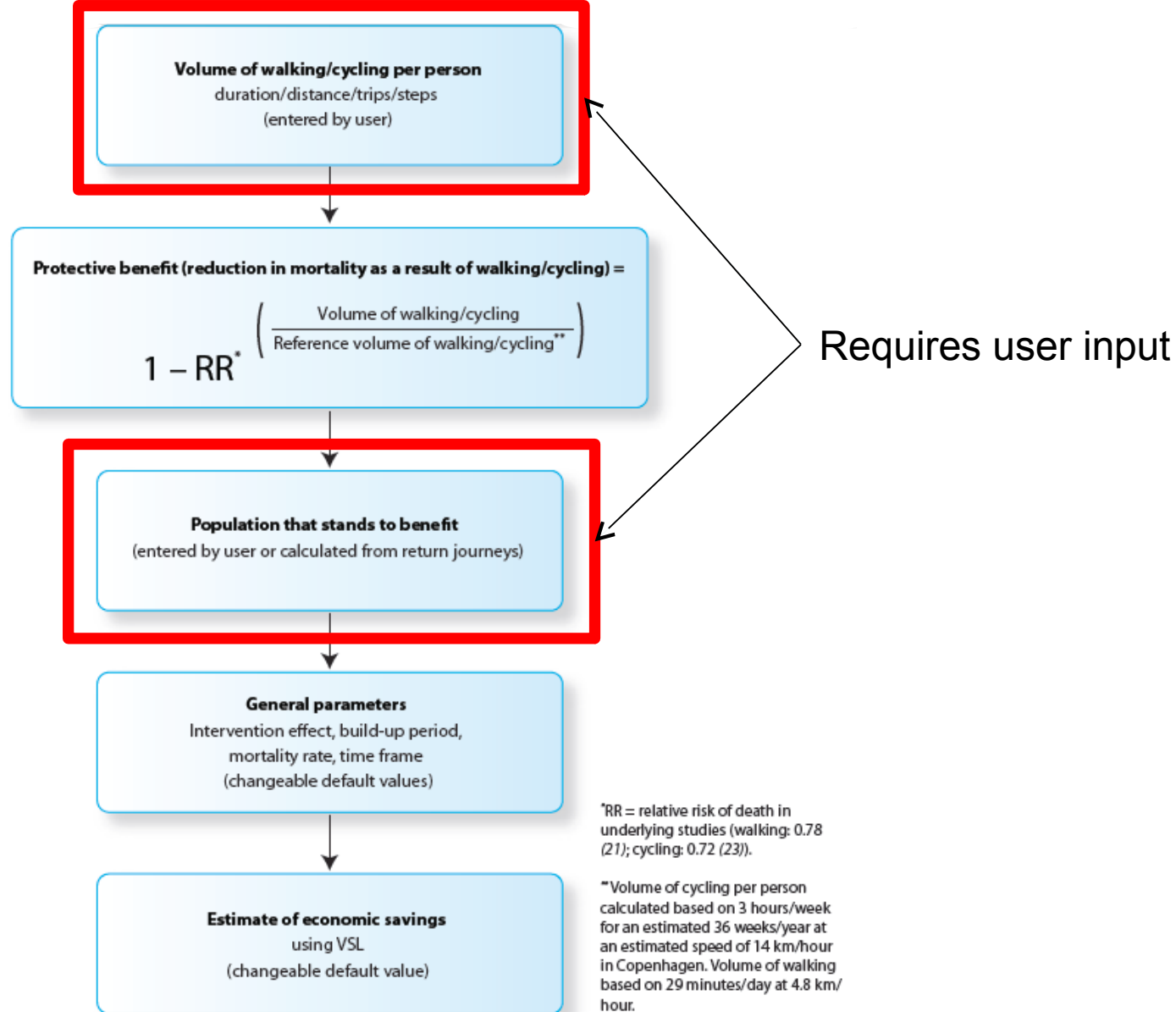
1. When planning a new piece of cycling or walking

More information

What data do I need?

To produce an assessment, you need to provide data on the number of people walking or cycling, and the amount of walking they are doing (or are projected to do).

[more...](#)



HEAT estimate

Reduced mortality as a result of changes in cycling behaviour

The cycling data you have entered corresponds to an average of **1,240** km per person per year.

This level of cycling provides **an estimated** protective benefit of: **24 %** (compared to persons not cycling regularly)

From the data you have entered, the number of individuals who benefit from this level of cycling is: **2000**

Out of this many individuals, the number who would be expected to die if they were not cycling regularly would be: **9.13**

The number of deaths per year that are prevented by this level of cycling is: 2.16

Financial savings as a result of cycling

Currency: EUR, rounded to 1000

The value of statistical life applied is: **1,574,000 EUR**

The annual benefit of this level of cycling, per year, is:

3,396,000 EUR

The total benefits accumulated over **10** years are:

33,956,000 EUR

When future benefits are discounted by **5 %** per year:

the current value of the average annual benefit, averaged across 10 years is:

2,622,000 EUR

the current value of the total benefits accumulated over 10 years is:

26,220,000 EUR

A collaborative project



THE PEP *Transport, Health and Environment*
Pan-European Programme
United Nations Economic Commission for Europe (UNECE)
World Health Organization Regional Office for Europe (WHO / Europe)



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra



Sonja Kahlmeier, Nick Cavill, Hywell Dinsdale, Harry Rutter, Thomas Götschi, Charlie Foster, Paul Kelly, Dushy Clarke, Pekka Oja, Richard Fordham, Dave Stone, Christian Schweizer, Francesca Racioppi, Lars Bo Andersen, Andy Cope, Mark Fenton, Mark Hamer, Max Herry, I-Min Lee, Brian Martin, Markus Maybach / Christoph Schreyer, Marie Murphy, Gabe Rousseau, Candace Rutt / Tom Schmid, Elin Sandberg/ Mulugeta Yilma, Daniel Sauter, Peter Schantz, Peter Schnohr, Heini Sommer, Jan Sørensen, Gregor Starc, Wanda Wendel Vos, Paul Wilkinson

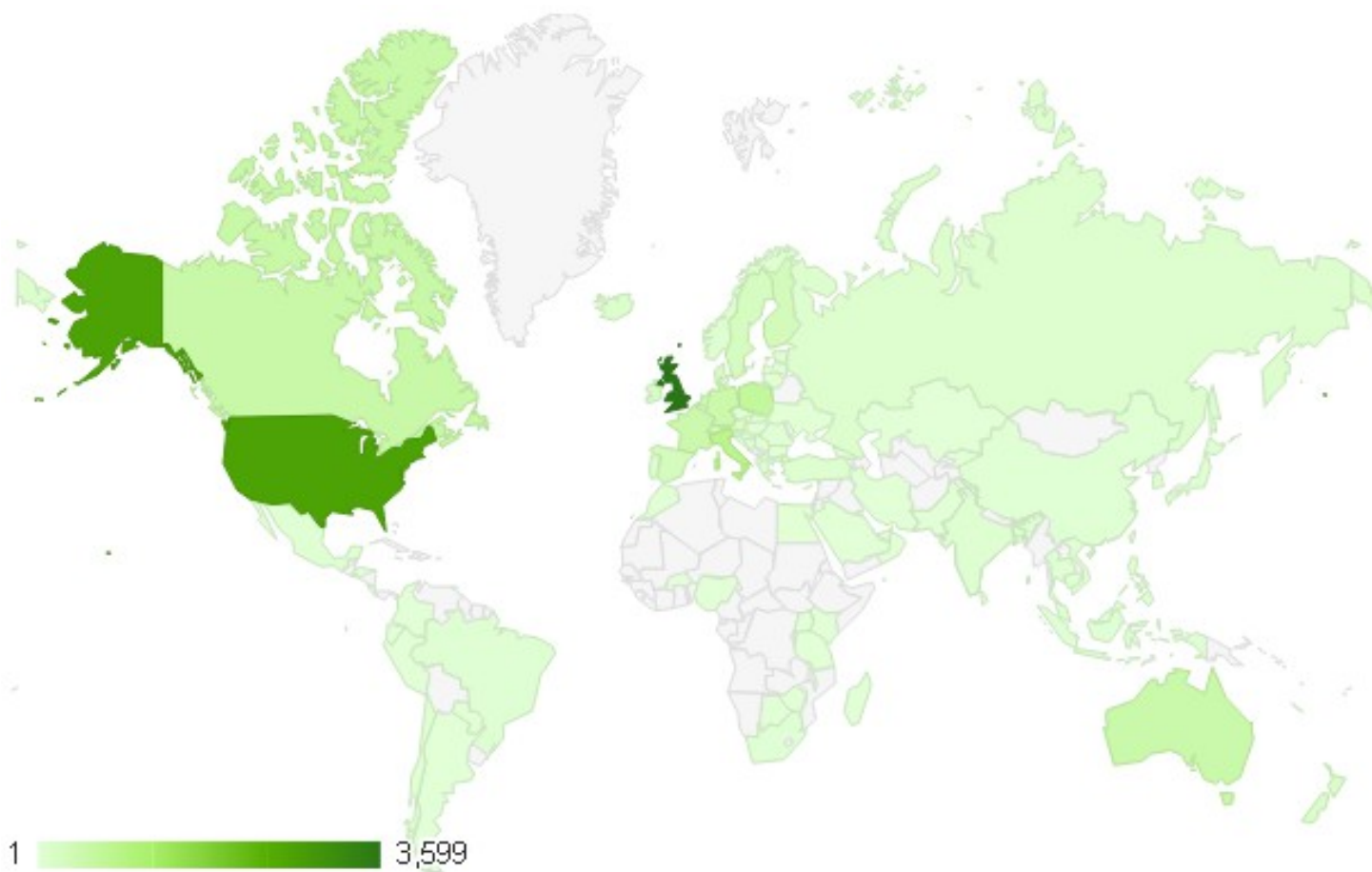
THE PEP

Transport, Health
and Environment
Pan-European Programme



- **What is it?**
 - Unique tri-partite policy framework for integration of:
 - transport, health, environment on equal footing
 - a wider Europe
- **Who is it?**
 - National governments (3 sectors), IGOs, academia, civil society, networks of relevant stakeholders (e.g. Polis, ECF)
- **What do they do?**
 - Work towards sustainable mobility
 - Integration of E&H aspects in transport policies
 - Focus on urban transport and transition countries and sensitive areas

Use of HEAT worldwide



Examples of applications

Health economic assessment tools
(HEAT) for walking and for cycling

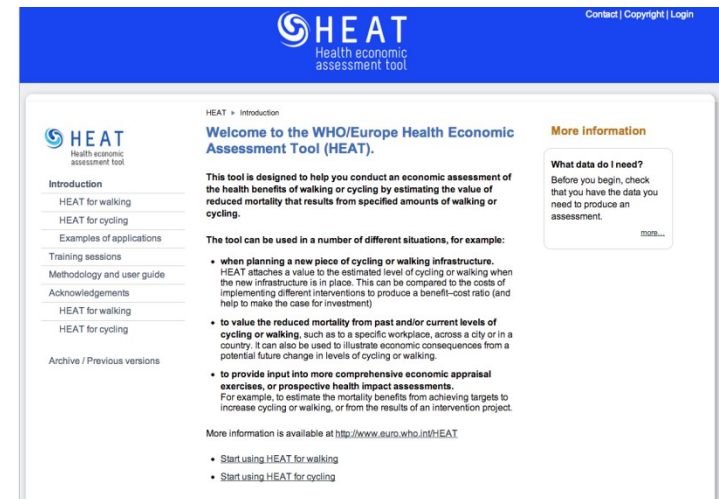
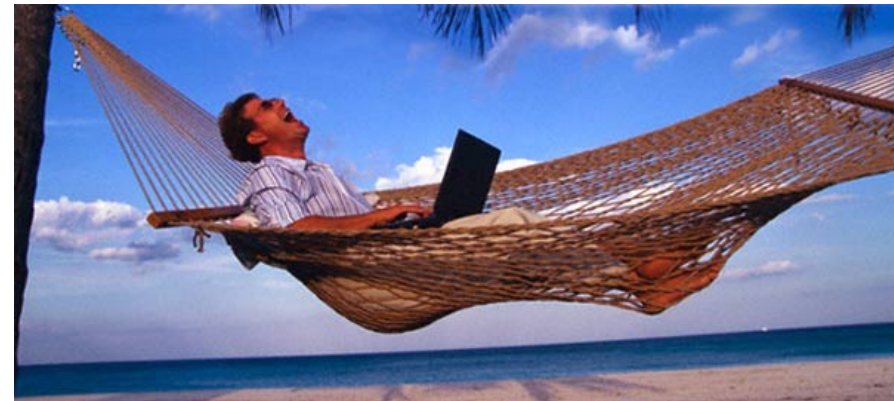


Applications

- Project website visited over 18,000 times;
- 206,000 page views; 65% new
- Modelling; interventions; 'steady state'
- Used by policymakers; academics; advocates
- Method adopted by UK and Austrian governments

Training

- Monthly; online; one hour
- Basic intro to HEAT
- Worked examples
- Questions and discussion
- Register via WHO Europe website
- 367 people registered for training to date



Parnu, Estonia



- Valuation of use of new cycle routes
- Assumed 230 cyclists per day, 50% of whom were new to the route
- Average annual benefit of €112,000
- Results used to secure funding to build a new 4km pathway to create a complete circular route
- Results also supporting the development of a master plan, and a strategic environmental assessment

Glasgow, UK

- Centre for Population Health
- Valued existing levels of cycling in Glasgow
- Strong data-led approach
 - Travel to work from 2001 census
 - Annual cordon counts
- Mean annual benefit €3.5-€4.6m pa
- Extensive media coverage and political interest



Boston, USA

- Boston Metropolitan Area Planning Council used HEAT to support a HIA of proposals to increase fares and cut services on public transport
- Valued decreases in regular walking due to the proposals
- 9-14 additional deaths per year; €57m-€89m per year
- Important addition to policy analysis



Modena, Italy

- Valued future increases in cycling on new path
- Part of PHAN project
- Anticipated increase in cyclists of 1,091
- Annual benefit €414,000.
- Results of HEAT were used to help secure agreement for the new cycling path



Palma, Spain

- The Ministry of Health valued potential increases in regular walking
 - Mobility survey
 - Annual benefits: €32.1 million
-
- HEAT calculations were used to inform policy makers and technicians about the health and economic benefits of walking and to promote the project.



Kuopio, Finland

- Valued cycling among city employees
- Data from online survey
- Average annual benefit €396,000- €7.6m
- Results used to help secure agreement for the promotion of commuter cycling, especially during winter



Table 2. Benefits and Costs of Cycling Demonstration Towns

Impact	Estimate of benefits and costs over 10 year period (£m, 2007 prices and values)
Reduced mortality	Benefit of £45 million
Decongestion	Benefit of £7 million
Reduced absenteeism	Benefit of £1-3 million
Amenity	Benefit of £9 million
Accidents	Disbenefit of £0-£15 million
TOTAL BENEFITS	£47-64 million
Costs	£18 million
Benefit-Cost Ratio	2.6 – 3.5

Physical activity accounted for >70% of benefits

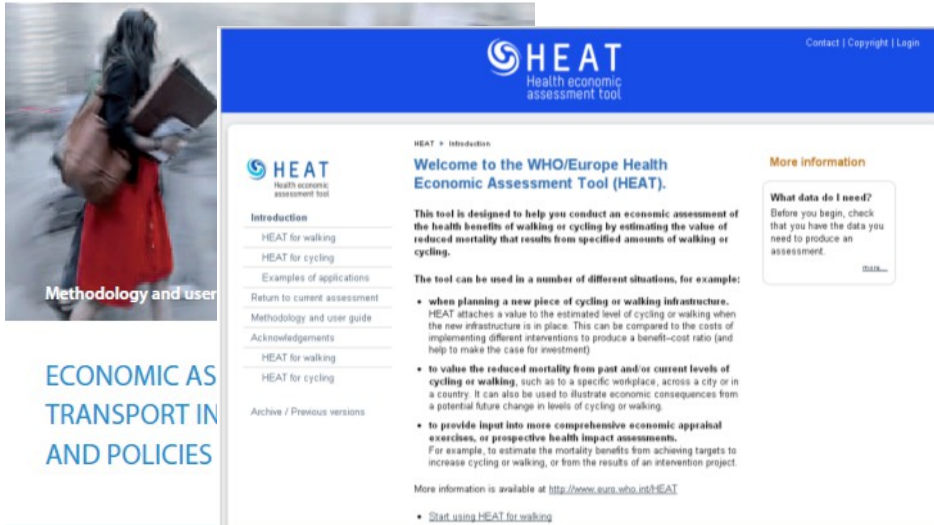
Conclusions

- Multiple applications
- Extremely positive feedback
- Much use for advocacy; some evidence of policy input
- Challenges:
 - Finding data
 - Interpreting findings
 - Persuading policymakers
- More applications needed!

Plans for HEAT for 2013/14



Health economic assessment tools
(HEAT) for walking and for cycling



- Disseminate: translation and training

Review RRs, integrate air pollution, new VSL and CO2

Next: injuries and morbidity



“I thought of that while riding my bicycle.”

Albert Einstein,
on the theory of relativity