



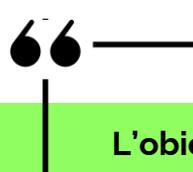
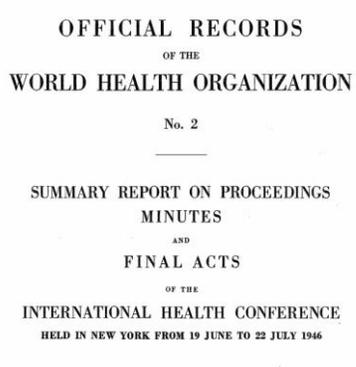
# Tra cura ed ecosostenibilità

## L'impatto della salute sull'ambiente

**Nicole Ticchi**  
Comunicatrice scientifica

*Riccione, 6 maggio 2024*  
42° Congresso Nazionale SIAN

**CLUST-ER HEALTH**  
SALUTE E BENESSERE



**CLUST-ER HEALTH**  
SALUTE E BENESSERE

**OFFICIAL RECORDS**  
OF THE  
**WORLD HEALTH ORGANIZATION**  
No. 2  
SUMMARY REPORT ON PROCEEDINGS  
MINUTES  
AND  
FINAL ACTS  
OF THE  
INTERNATIONAL HEALTH CONFERENCE  
HELD IN NEW YORK FROM 19 JUNE TO 22 JULY 1946

**L'obiettivo dell'Organizzazione Mondiale della Sanità deve essere il raggiungimento da parte di tutti i popoli del più alto livello di salute possibile**

United Nations  
WORLD HEALTH ORGANIZATION  
Interim Commission  
250 Fifth Avenue, New York      Palais des Nations, Geneva  
JUNE 1946

## QUALITA' DELLA VITA

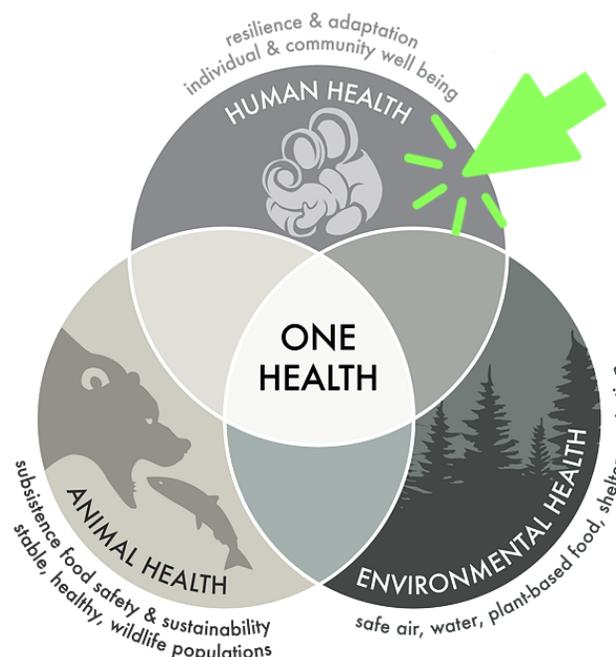
Non è un optional,  
è un endpoint



HEALTH-RELATED QUALITY OF LIFE

La HRQoL valuta l'impatto delle condizioni di salute croniche e acute sulla vita quotidiana degli individui, oltre a misurare l'efficacia degli interventi sanitari.

## SALUTE PER CHI?



La World Health Organization (WHO) stima che il 23% delle morti globali sono associate a fattori ambientali

*Nature Reviews Nephrology volume 17, pages7-8 (2021)*



## First, Do No Harm

>>>>> Pazienti

>>>>> Ecosistema

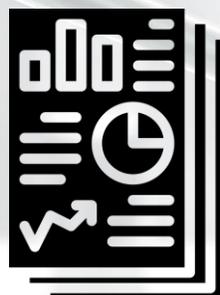
CLUST-ER  
HEALTH  
SALUTE E BENESSERE



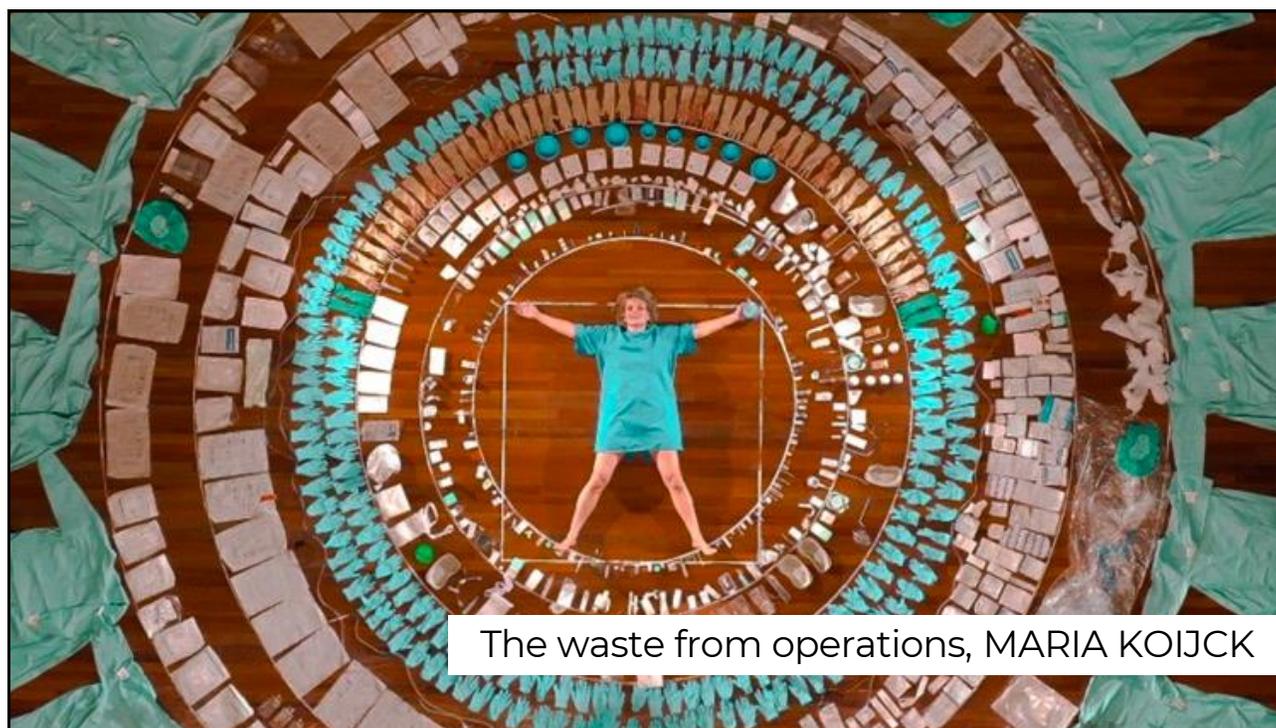
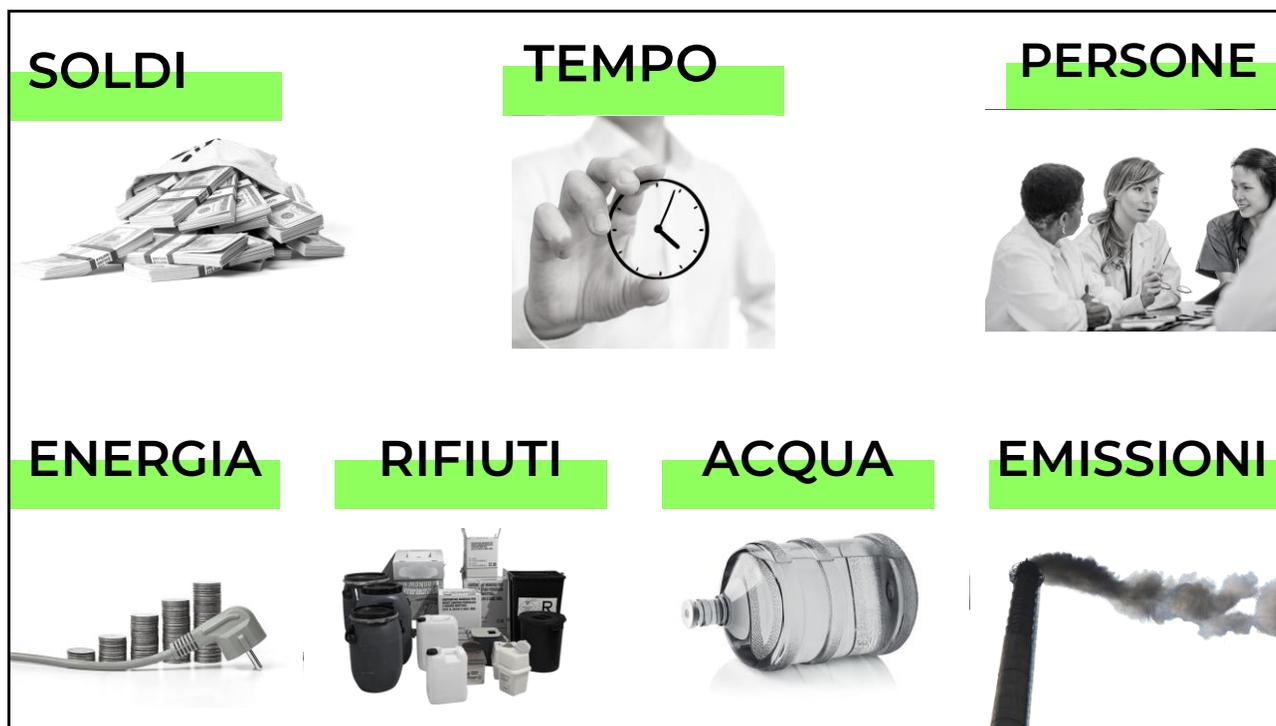
*First do no harm. Why healthcare needs to change* (World Economic Forum, 2019)

## QUANTO COSTA LA SALUTE?

A quali indicatori  
stai pensando?



**UNA LUNGA STRADA**





**5.9 mln** 

la quantità di rifiuti legati all'ambito della sanità stimata a livello globale nel 2021

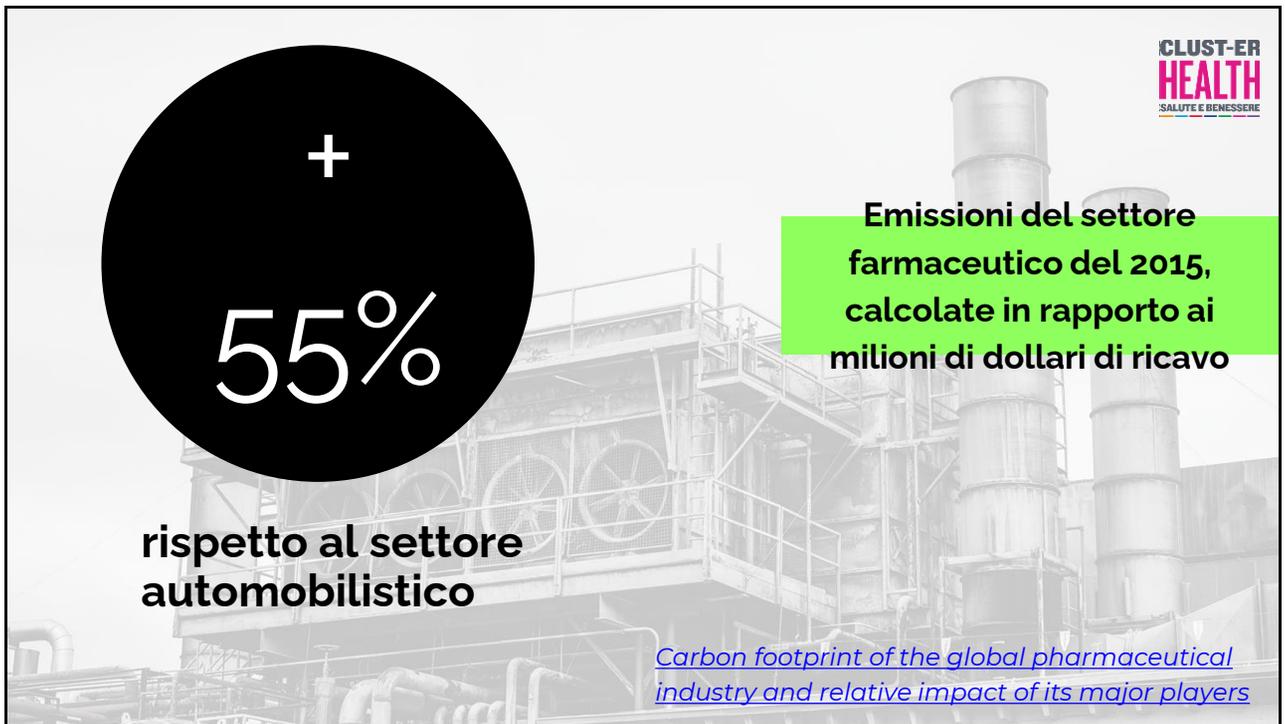
**CLUST-ER HEALTH**  
SALUTE E BENESSERE



“

Se il settore sanitario globale fosse uno Stato, a giudicare dalla sua impronta climatica sarebbe il **quinto più grande emettitore di gas serra** del pianeta

**CLUST-ER HEALTH**  
SALUTE E BENESSERE



**+**  
**55%**

**rispetto al settore automobilistico**

**Emissioni del settore farmaceutico del 2015, calcolate in rapporto ai milioni di dollari di ricavo**

*Carbon footprint of the global pharmaceutical industry and relative impact of its major players*

**CLUST-ER HEALTH**  
SALUTE E BENESSERE



**“**

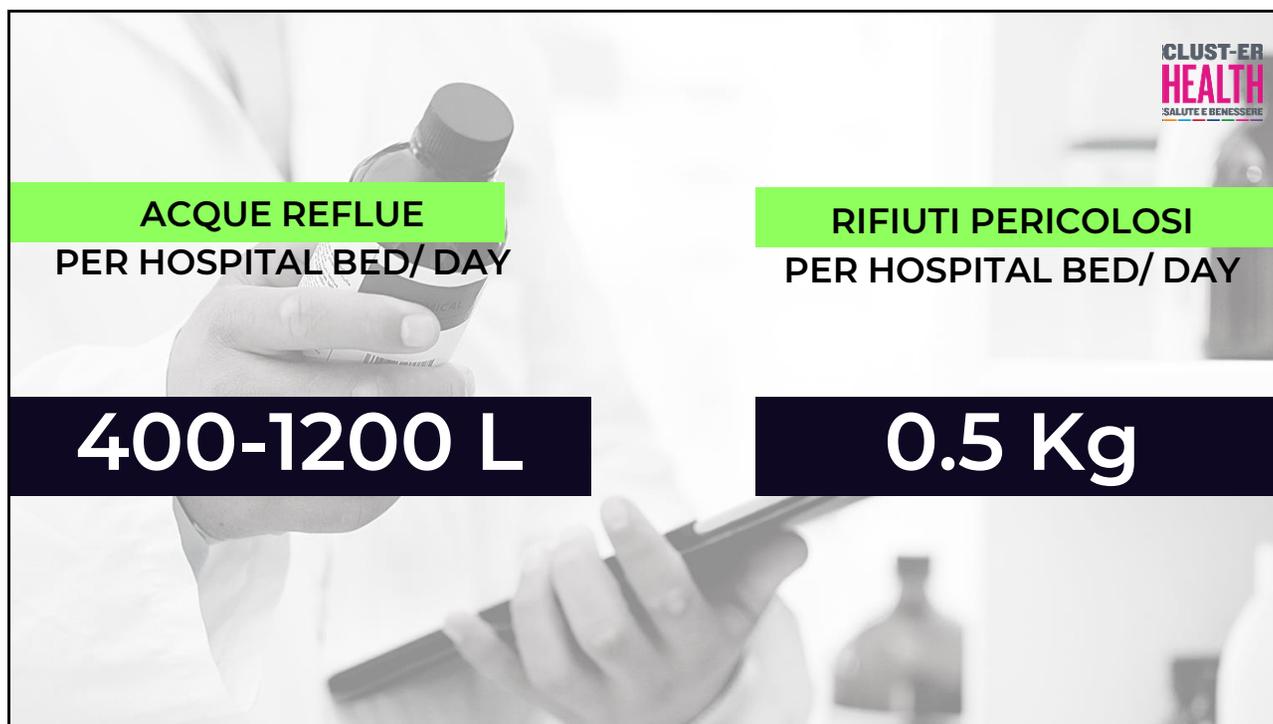
**A chi importa dell'impronta del carbonio quando stai facendo così tanto per l'umanità?**

**Lotfi Belkhir**  
McMaster University

*Global warning: pharma's role in the climate crisis*

**CLUST-ER HEALTH**  
SALUTE E BENESSERE





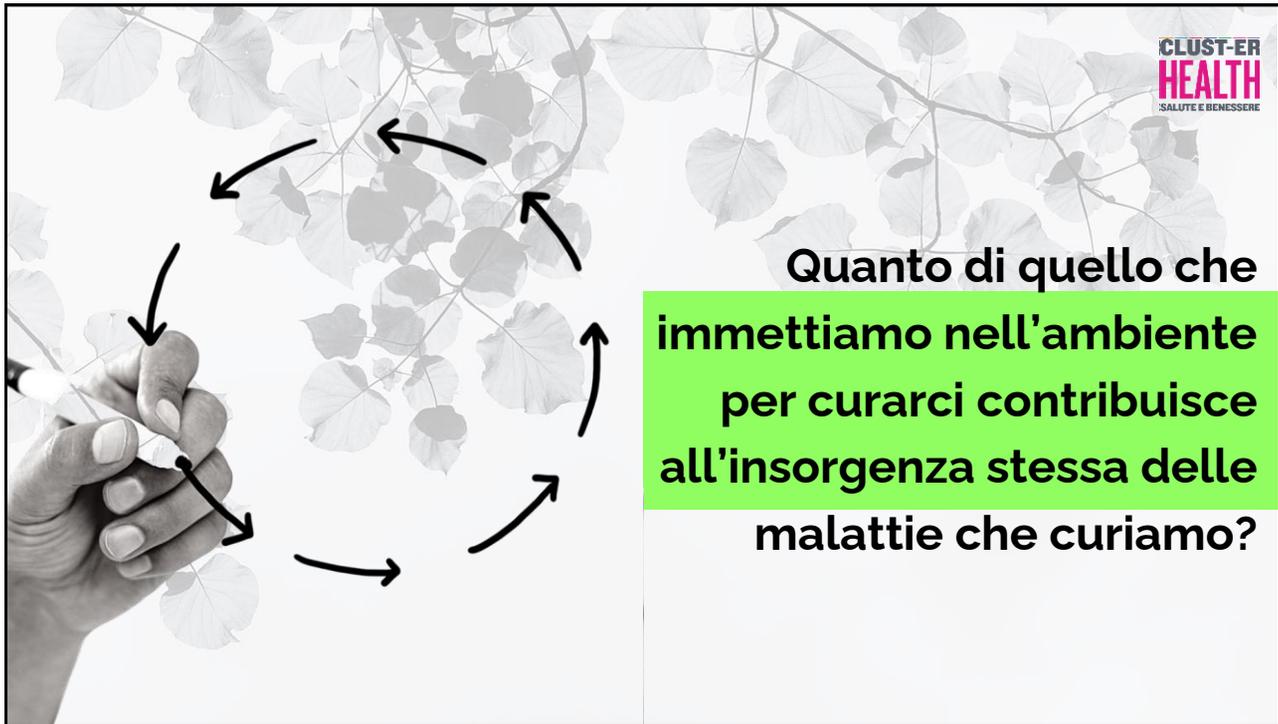


“ —

*Le strutture del settore sanitario sono il cuore operativo dell'erogazione dei servizi, della protezione della salute, del trattamento dei pazienti e del salvataggio di vite umane, eppure sono anche una fonte di emissioni di carbonio e contribuiscono al cambiamento climatico, mediante l'utilizzo di risorse e apparecchiature energivore.*

*Come professionisti medici il nostro impegno è in primo luogo quello di non nuocere. I luoghi di guarigione dovrebbero essere all'avanguardia, non contribuire al fardello della malattia.*

**Tedros Adhanom Ghebreyesus**  
Direttore generale dell'Organizzazione Mondiale della Sanità



**Quanto di quello che  
immettiamo nell'ambiente  
per curarci contribuisce  
all'insorgenza stessa delle  
malattie che curiamo?**

# #Awareness



Scelta indicatori



Raccolta dei dati



Elaborazione strategie



## Saving Carbon, Improving Health

### NHS Carbon Reduction Strategy for England

United Kingdom Climate Change Act, 2008

[\*Delivering a net zero NHS\*](#)

**Health Care Climate Challenge**

Conferenza sul clima di Parigi, 2015

CLUSTER HEALTH  
SALUTE E BENESSERE

Health Care Without Harm

Comment | Published: 09 June 2022

## Do no harm: addressing the environmental impact of health care

Frances Mortimer & David Pencheon

*Nature Reviews Disease Primers* 8, Article number: 38 (2022) | [Cite this article](#)

762 Accesses | 4 Citations | 20 Altmetric | [Metrics](#)

**Planetary and human health are inseparably connected; yet, health-care systems produce considerable amounts of greenhouse gas emissions, waste and pollution. A growing movement to measure and mitigate the health sector's own climate damage is underway, supported by national policies and clinical innovation.**

**Identifying Environmental Impact Factors for Sustainable Healthcare: A Scoping Review**

Martine Sijm-Ekkes <sup>1,2,\*</sup>, Monique Jaapen <sup>1,2</sup> and Linda Peute <sup>1,3</sup>

<sup>1</sup> Department of Medical Informatics, Amsterdam Public Health Research Institute, Amsterdam UMC, Location University of Amsterdam, Meibergdreef 3 1105 AZ Amsterdam, The Netherlands  
<sup>2</sup> Center for Sustainable Healthcare, Amsterdam UMC, Meibergdreef 3 1105 AZ Amsterdam, The Netherlands  
<sup>3</sup> Center for Patient Facing Engineering of Health Information Technology, Amsterdam UMC, Meibergdreef 3, 1105 AZ Amsterdam, The Netherlands  
<sup>\*</sup> Correspondence: [m.sijm@amc.uva.nl](mailto:m.sijm@amc.uva.nl)

**Abstract:** The healthcare industry has a substantial impact on the environment through its use of resources, waste generation and pollution. To manage and reduce its impact, it is essential to measure the processes of healthcare activities on the environment. However, research on factors that can support these measurement activities is unrefined and scattered. In order to address this issue, a scoping review was conducted with the aims of (i) identifying and organizing factors that have been used to measure environmental impact to healthcare practice and (ii) analyzing the coverage of impact factors in order to identify research gaps. The review identified 46 eligible articles publishing 360 impact factors from original research in PubMed and EMBASE databases. These factors related to a variety of healthcare settings, including mental healthcare, retail services, primary healthcare, hospitals and national healthcare. Environmental impacts of healthcare were characterized by a variety of factors based on three key dimensions: the healthcare setting involved, the measurement component or scope, and the type of environmental pressure. The Healthcare Environmental Impact Factor (HEIF) scheme resulting from this study can be used as a tool for selecting measurable indicators to be applied in quality management and as a starting point for further research. Future studies could focus on standardizing impact factors to allow for cross-organization comparisons and on expanding the HEIF scheme by addressing gaps.

**Keywords:** environmental processes; measurement; quality management; climate; emissions; planetary health

# #Awareness

Contents lists available at ScienceDirect

Resources, Conservation & Recycling

journal homepage: [www.elsevier.com/locate/resconrec](http://www.elsevier.com/locate/resconrec)

Full length article

**Incorporating environmental impacts into the economic evaluation of health care systems: Perspectives from ecological economics**

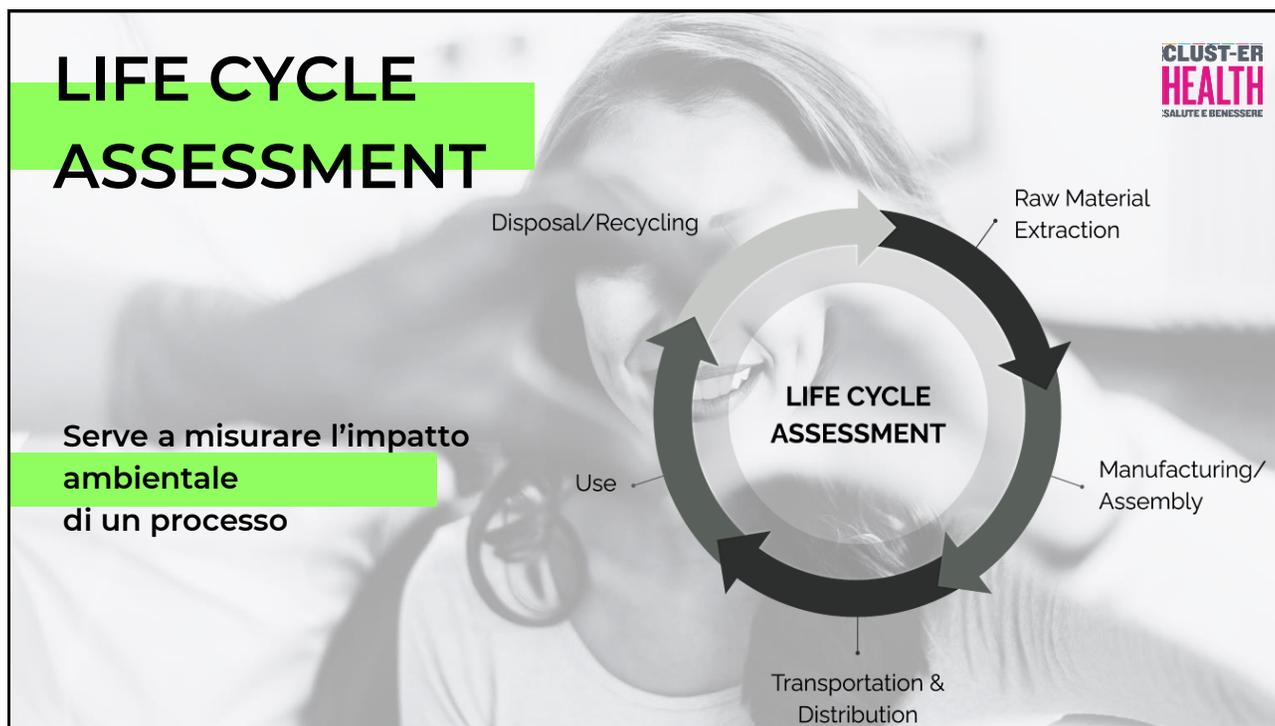
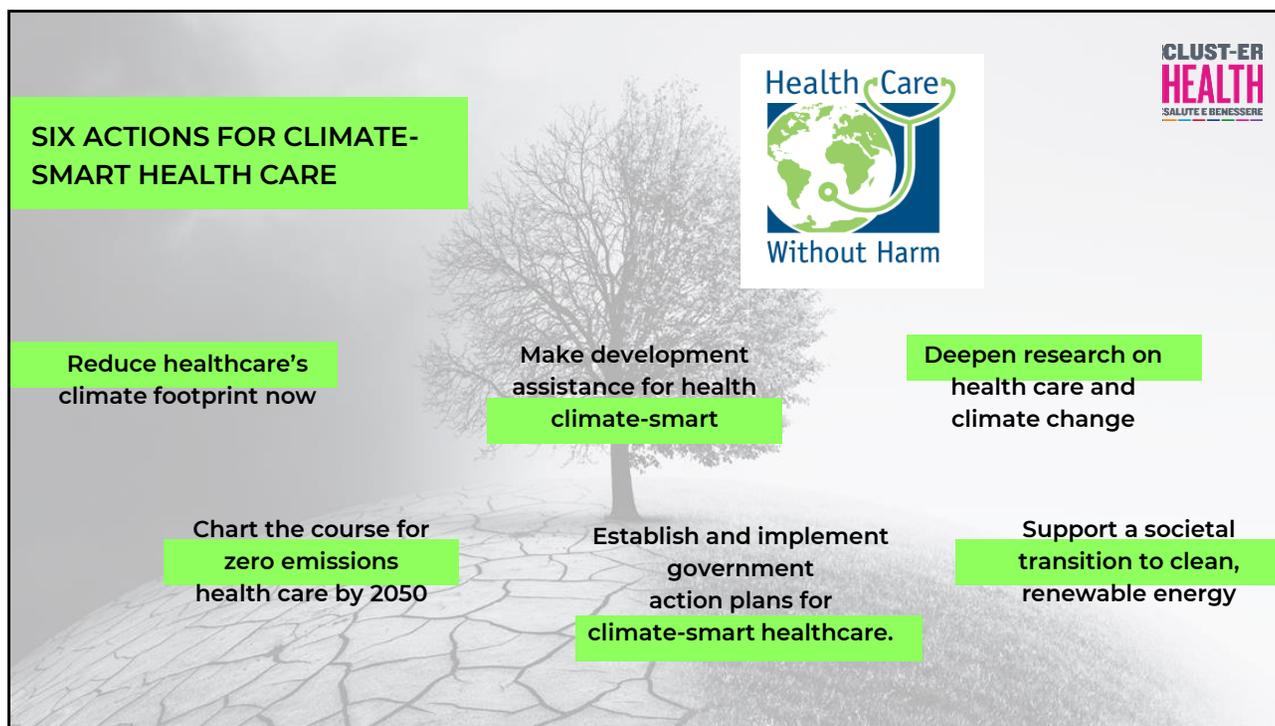
Martin Hensher <sup>1,2,\*</sup>

<sup>1</sup> Associate Professor of Health Systems, Financing and Organisation, Deakin Health Economics, Deakin University, Building PC3, 221, Burwood Highway, Burwood, VIC, 3120, Australia  
<sup>2</sup> Adjunct Associate Professor, School of Medicine, University of Tasmania, Level 1, Medical Science 1, 17 Liverpool Street, Hobart TAS 7000 Australia

**ARTICLE INFO**      **ABSTRACT**

**Keywords:** Health care; Environmental impacts; Externalities; Economic evaluation; Health economics; Ecological economics

Health care is responsible for a range of negative environmental impacts, including greenhouse gas emissions, air pollution, plastics waste, and pharmaceutical pollution of ecosystems through recreation and inappropriate disposal. Evidence on the scale of these impacts has been growing in high-income countries. To date, there has been only limited discussion of how environmental impacts might be incorporated into economic evaluations of health care programs, including health technology assessment. This paper considers why and how this aim might be achieved, using perspectives from both mainstream and ecological economics. There are strong arguments for using economic evaluation to internalize the negative environmental externalities currently being generated by health care, as well as precautionary arguments for health systems to better understand their exposure to their environmental impacts. The paper tests the feasibility of incorporating the costs of greenhouse gas emissions within costing for economic evaluation, and concludes that the use of shadow prices to achieve this aim is feasible. It suggests that this cost-based approach is preferable to more convoluted attempts to incorporate environmental impacts in the outcome component of health economic evaluations. The interaction between coverage, antimicrobial resistance and environmental harms of health care is identified as an area that would benefit from investigation using innovative economic methods.





## Greener Practice

The UK's primary care sustainability network

<http://> [Reducing waste in health care](#)

<http://> [Healthcare waste minimization](#)



# NETWORKS



DOCTORS FOR GREENER HEALTHCARE

<http://> [PHYSICIAN NETWORK RESOURCE LIBRARY](#)

<http://> [PHYSICIAN NETWORK RESOURCE LIBRARY](#)



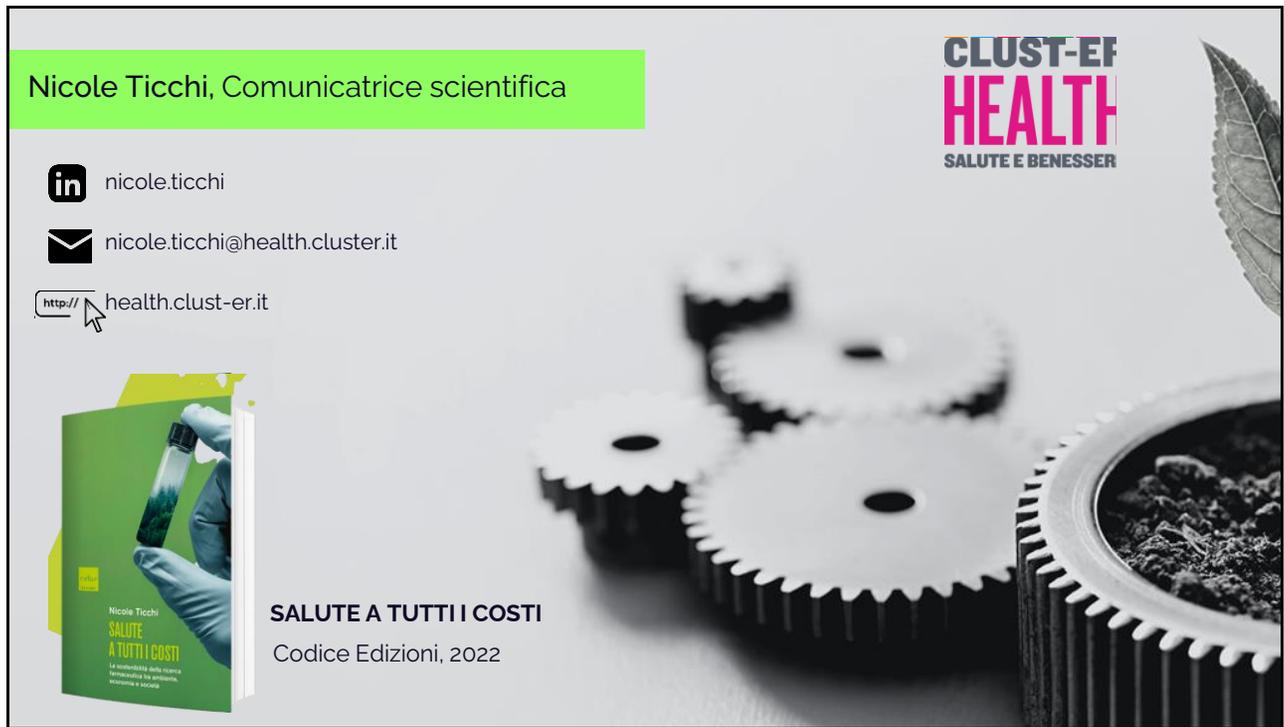
# ONE HEALTH



SINCE 2004



Un approccio olistico che riconosce che la salute umana, la salute animale e la salute dell'ecosistema sono legate indissolubilmente



Nicole Ticchi, Comunicatrice scientifica

 nicole.ticchi

 nicole.ticchi@health.cluster.it

 <http://health.clust-er.it>

**SALUTE A TUTTI I COSTI**  
Codice Edizioni, 2022