



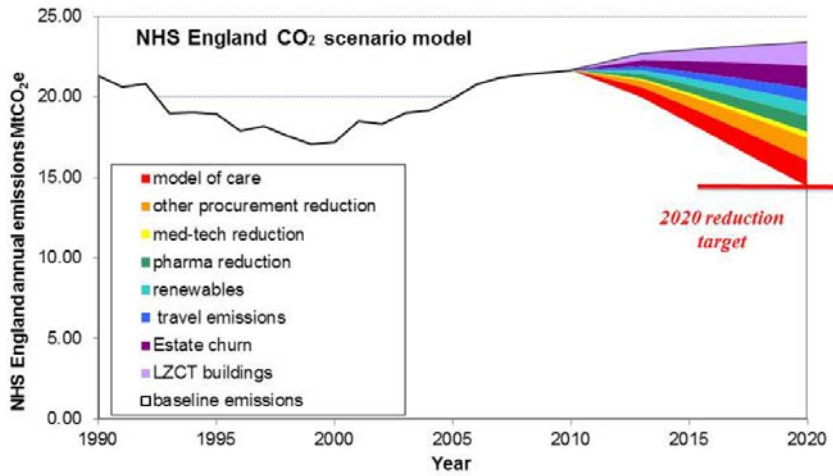
# ARUP

# CLIMATE SMART HEALTH CARE

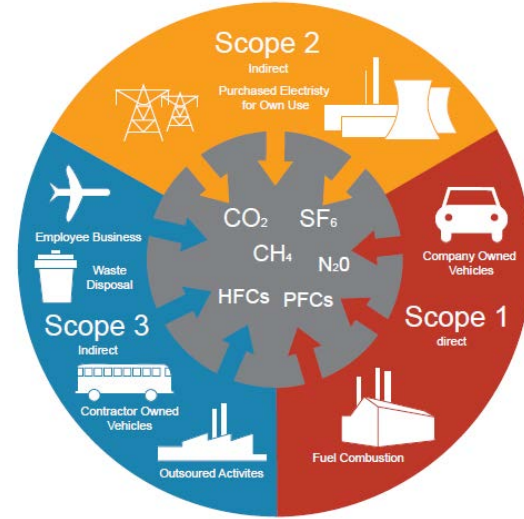
Aligning global health  
and climate goals

**Dr. Kristian Steele**  
Arup  
Climate Change Advisory





Health systems: NHS low carbon routemap



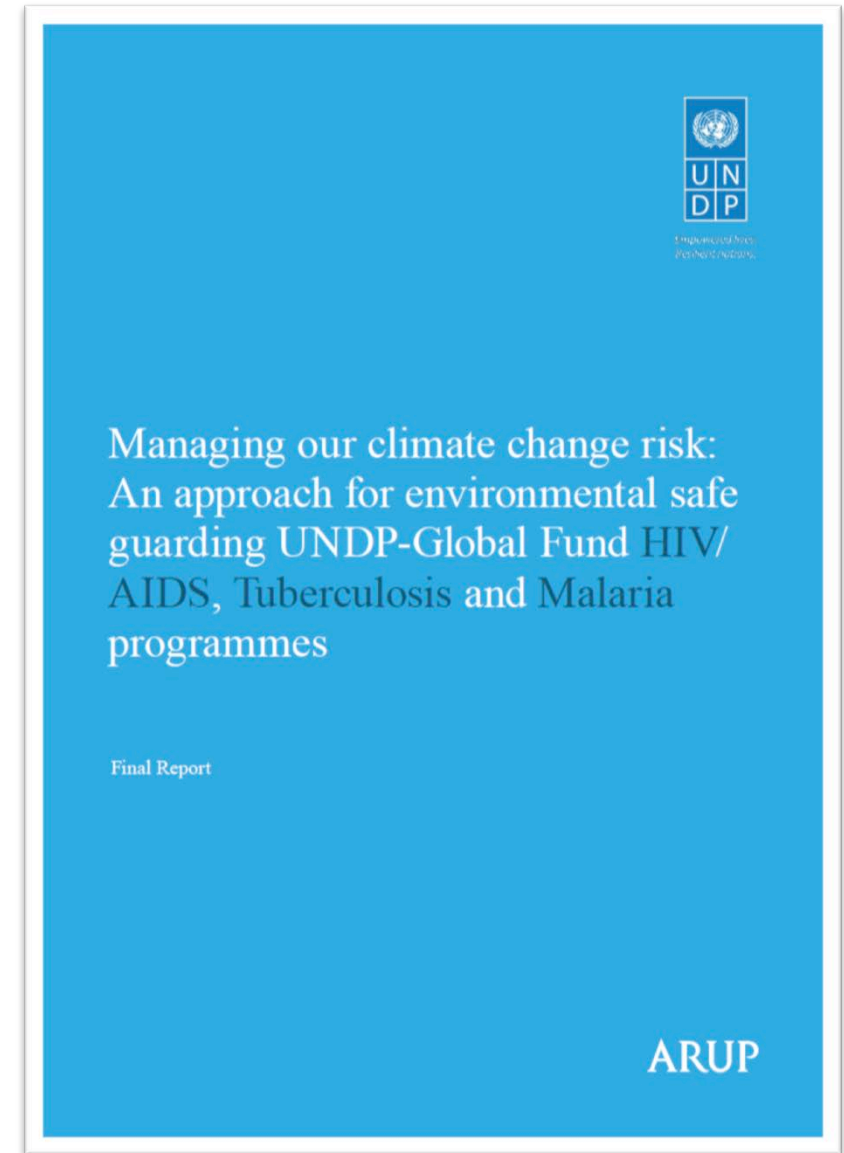
Pfizer, La Jolla, R&D Campus



Hospital: Barts & the London NHS Trust



Product value chain assessment



UNDP Global Fund programmes

# HEALTH CARE'S CLIMATE FOOTPRINT

HOW THE HEALTH SECTOR CONTRIBUTES TO THE GLOBAL CLIMATE CRISIS AND OPPORTUNITIES FOR ACTION



ARUP

Health Care Without Harm  
Climate-smart health care series  
Green Paper Number One

Produced in collaboration with Arup  
September 2019

Health, as with every sector of society, has the responsibility to align its actions and development trajectory with the Paris Agreement in order to stave off the worst impacts of climate change.

Given its mission to protect and promote health, the sector also has a special responsibility to implement the Hippocratic Oath to 'first, do no harm' as it relates to its own climate footprint, while influencing other sectors to do the same.





# HEALTH CARE'S CLIMATE FOOTPRINT

HOW THE HEALTH SECTOR CONTRIBUTES TO THE GLOBAL CLIMATE CRISIS AND OPPORTUNITIES FOR ACTION

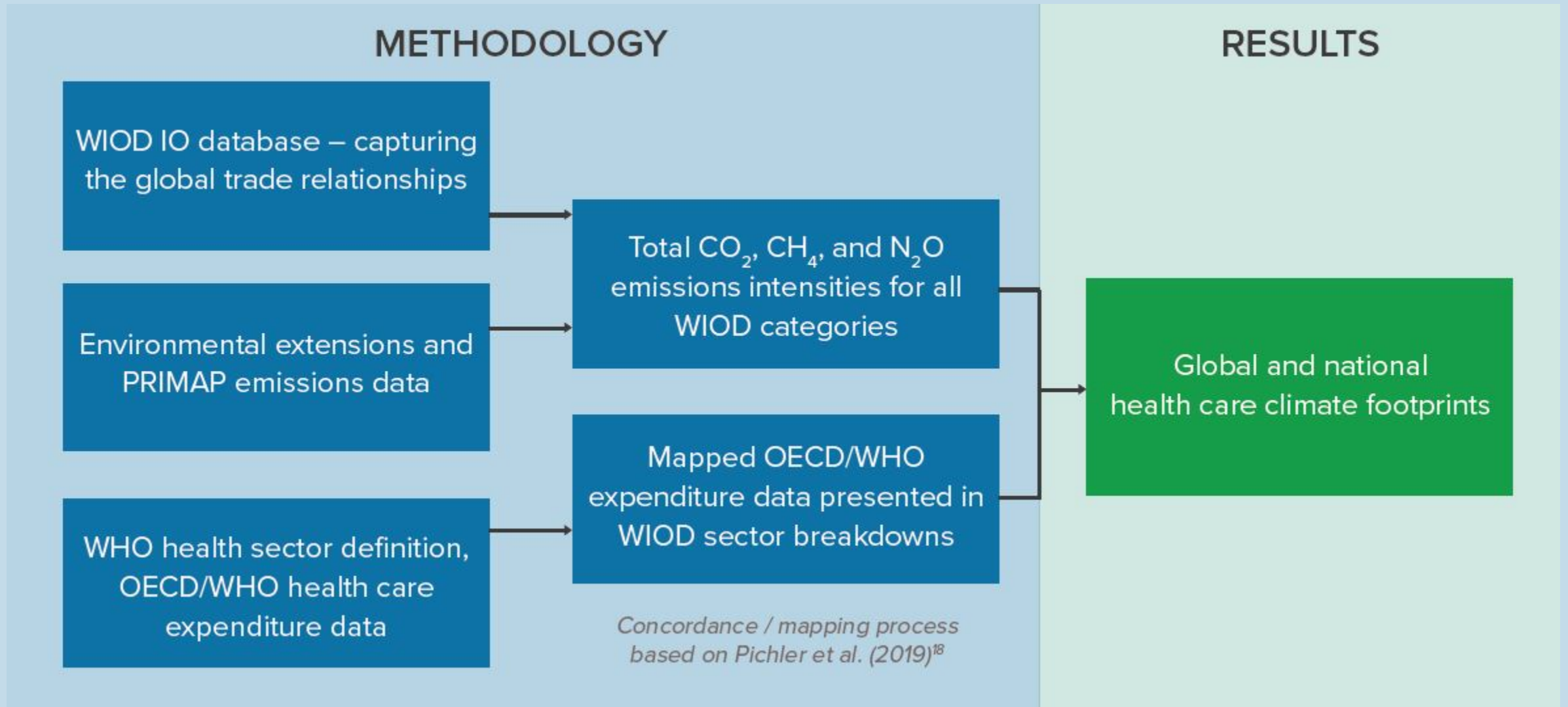
## This paper

- First-ever global estimate of health care's climate footprint
- Identifies key sources of health care emissions
- Comparison between nations and regions
- Recommendations to align global health goals with global climate goals

**THE HEALTH CARE CLIMATE  
FOOTPRINT IS EQUIVALENT  
TO 4.4% OF GLOBAL EMISSIONS**



# STUDY METHODOLOGY



## **Environmentally Extended Multi-Regional Input Output**

Based on national supply and demand (trade) accounts between countries

Boundary free;

Full global economy representation

## **World Input Output Database (WIOD)**

43 countries and Rest of World (RoW)

56 economic sectors; health care identified as dedicated entity

## **WHO health care definition**

Framework for disaggregating health care spending

## **PRIMAP & GHG**

A method that includes Methane and N<sub>2</sub>O

98% of global GHG





## Granularity

Lack of reported results for  
Africa and Middle East  
Limited data on many low  
income and middle income  
countries

## Alignment of data sources

WIOD and GHGP scopes

## Undocumented footprint

Anaesthetic gases  
Metered dose inhalers  
Patient transport



## SHA Health Care Providers



Hospitals



Long-term care



Ambulatory care



Ancillary services



Retailers



Preventative care



Admin + finance

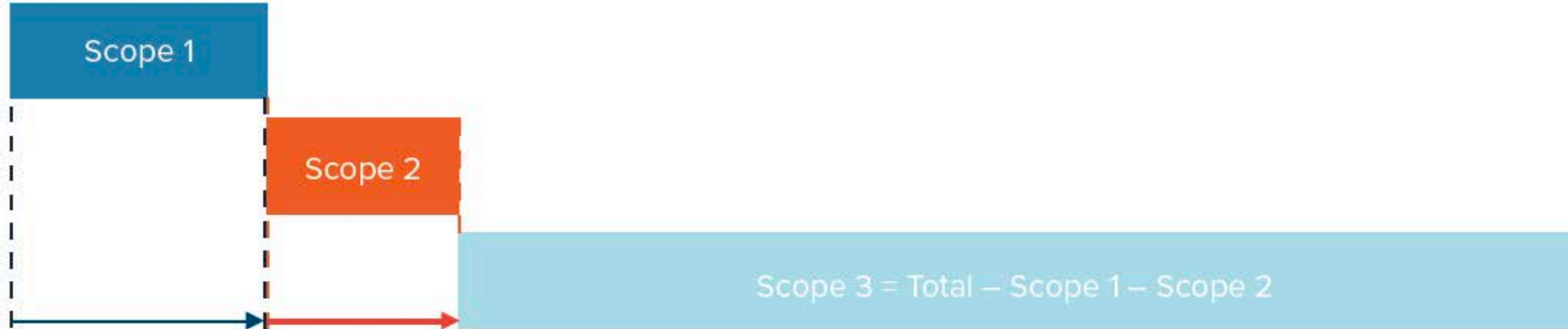


Care given at home



Providing care to non-residents

Total Emissions from Sector – segmented by WIOD production categories

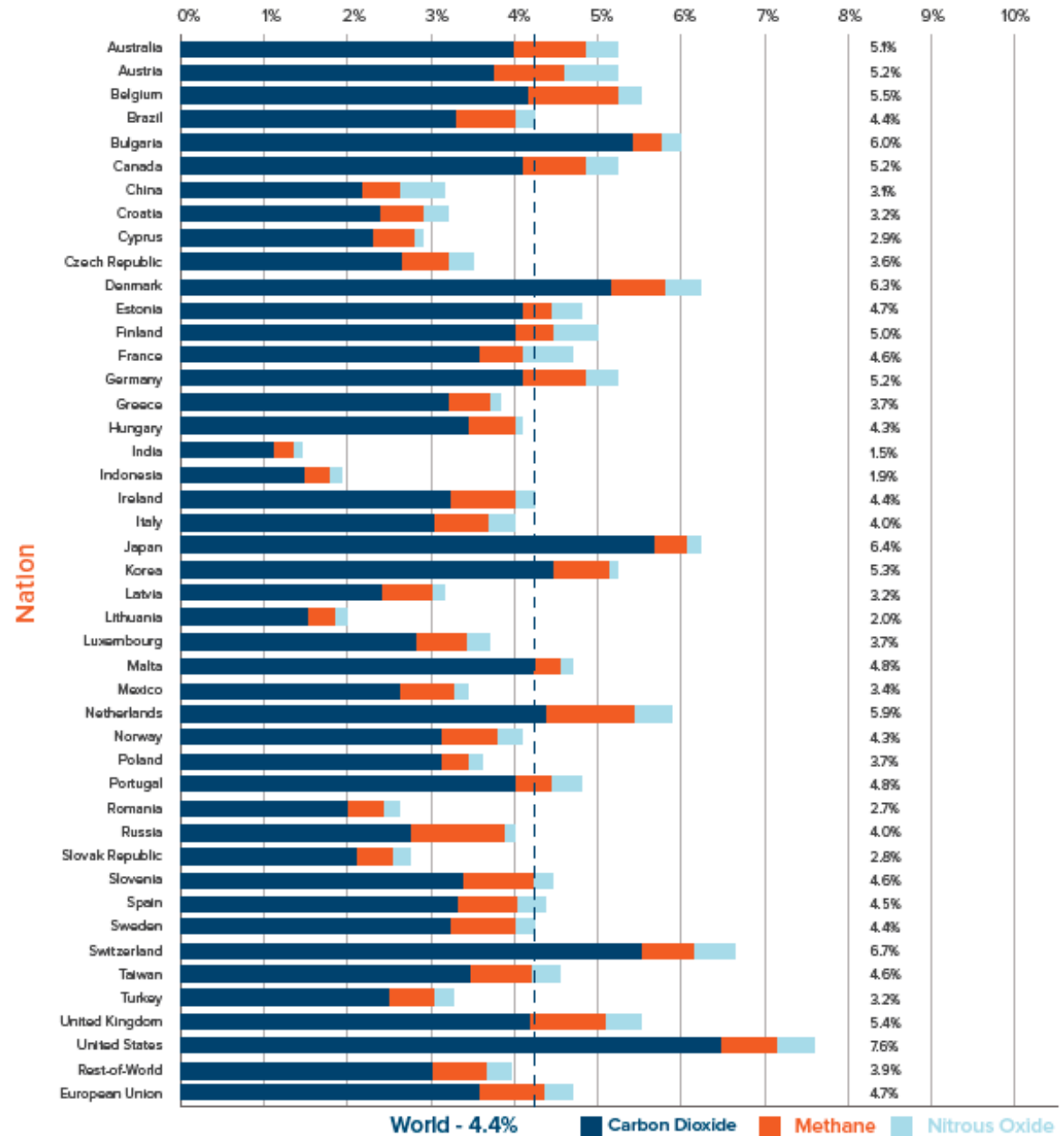


Health care is a major contributor to the climate crisis

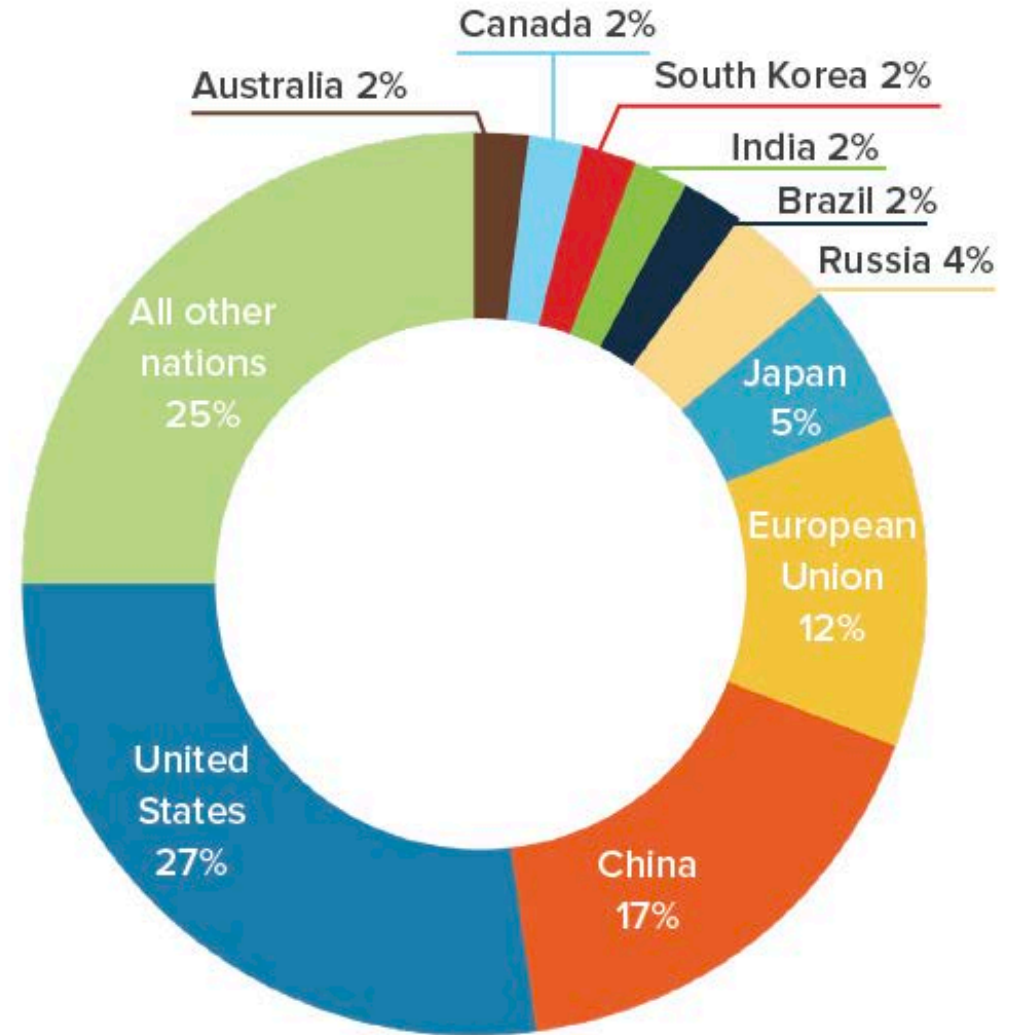
THE HEALTH CARE CLIMATE FOOTPRINT IS EQUIVALENT TO 4.4% OF GLOBAL EMISSIONS

Gross emissions sit somewhere between Russia and Japan  
514 coal fired power plants

Health care footprint as % of national footprint



- It is clear who are most responsible
- Lead by way of example
- Significant growth in services will happen
- We must not be complacent
- Capacitate and avoid past climate failures
  
- Action by all will be needed to meet climate goals



# HEALTH CARE SPENDING AND THE SECTOR'S GROWTH IS AN IMPORTANT FACTOR IN EMISSIONS

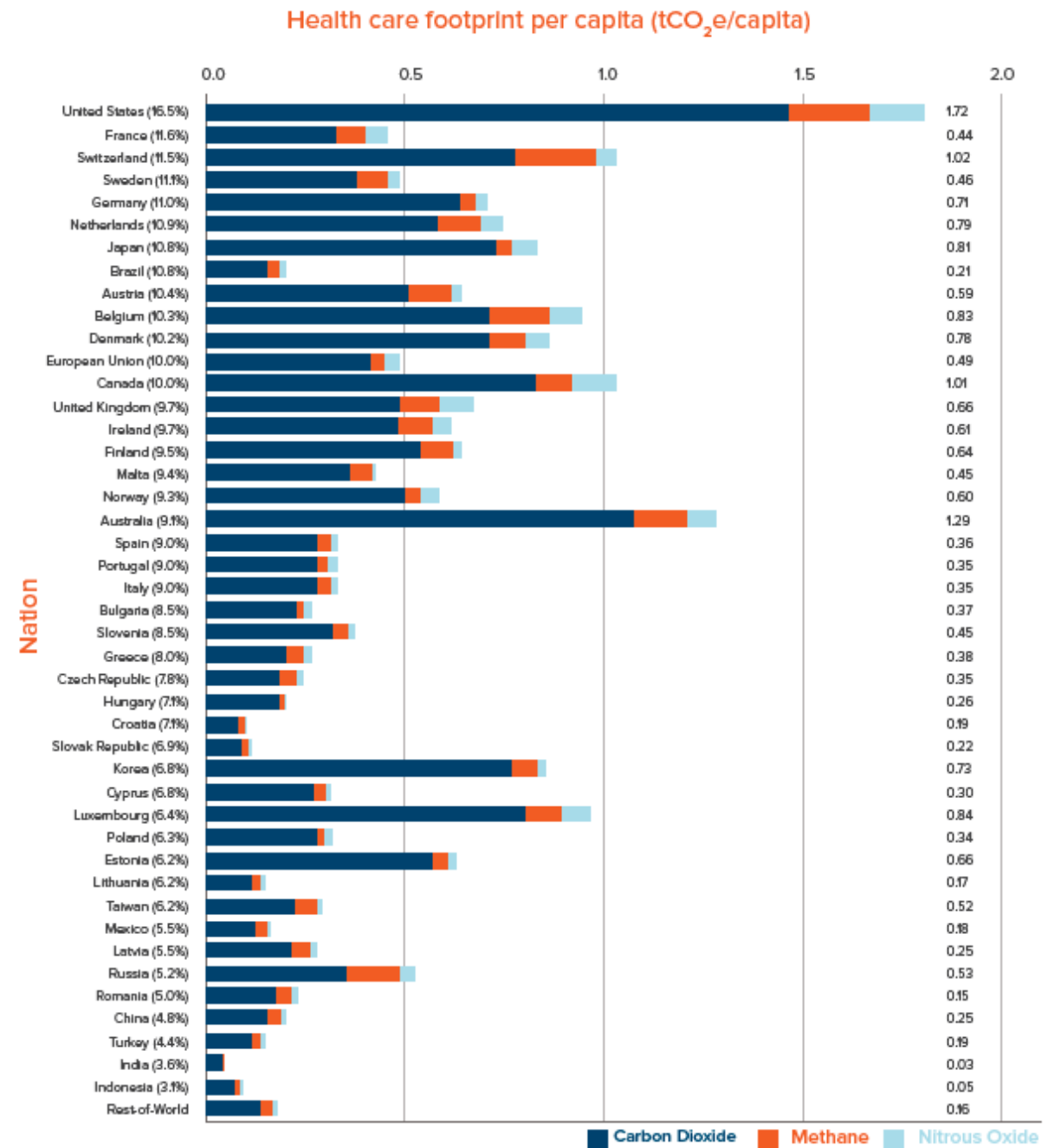
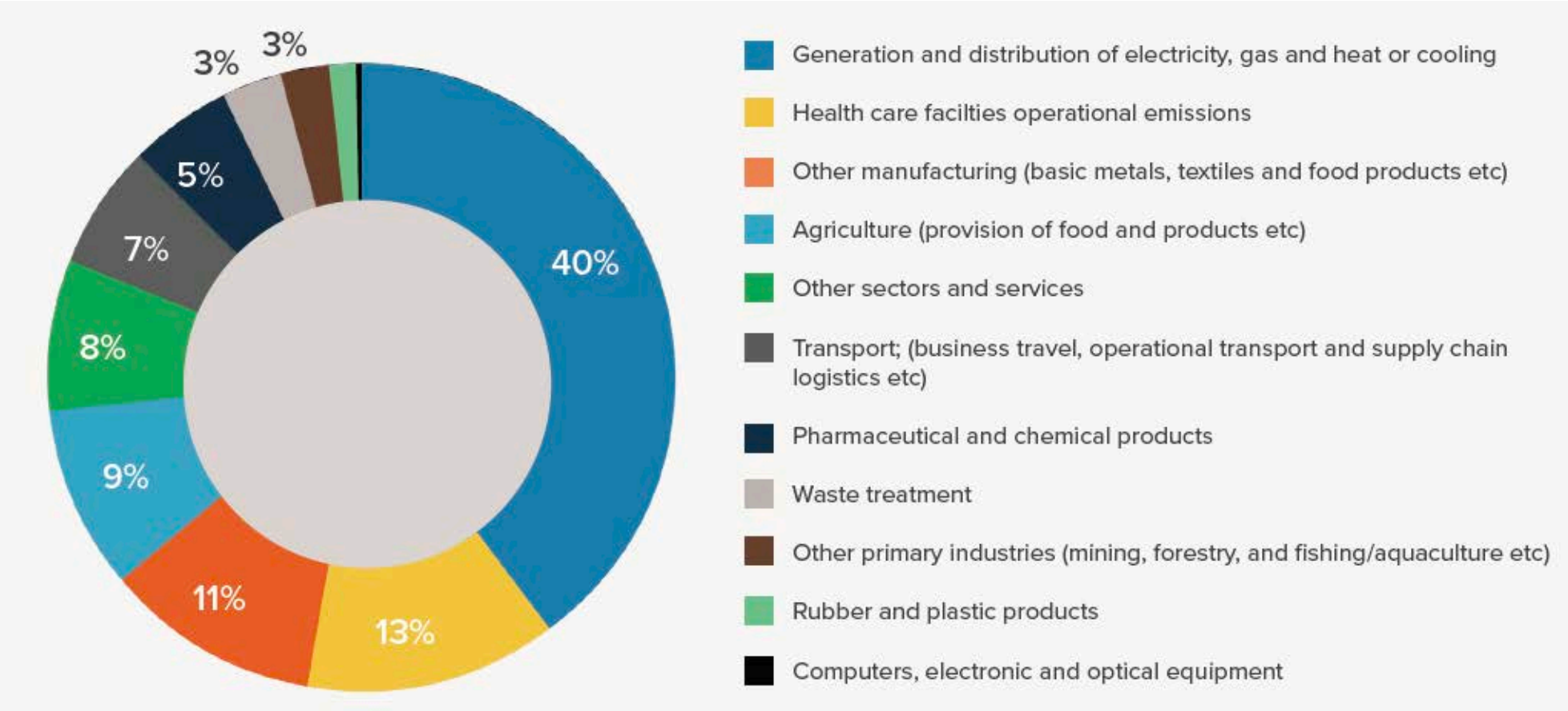


Figure 10: Health Care footprint per capita ordered by percentage of GDP spent on health care

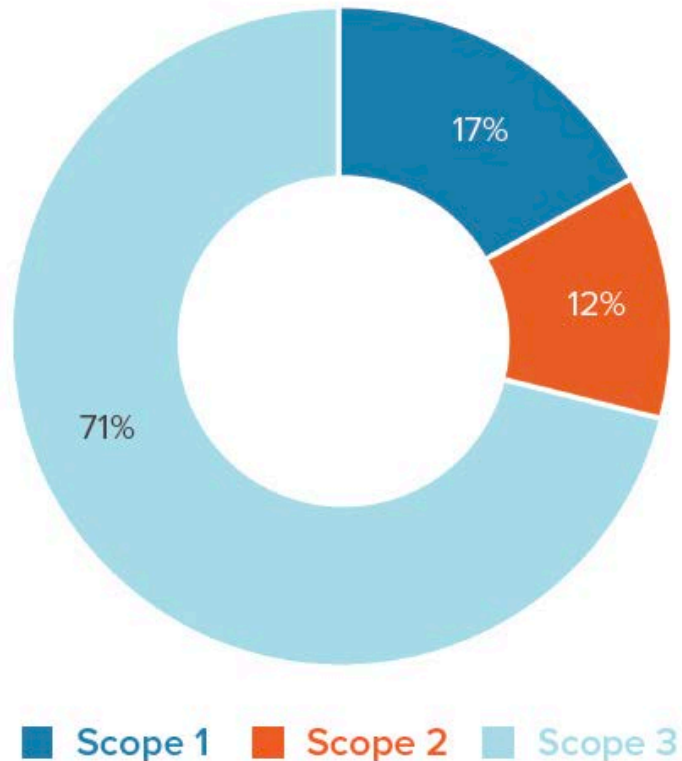
# MORE THAN HALF OF HEALTH CARE'S FOOTPRINT COMES FROM ENERGY USE



SOCIETY-WIDE TRANSITION TO  
CLEAN ENERGY IS ESSENTIAL  
TO REDUCING HEALTH CARE  
EMISSIONS



## DECARBONISING HEALTH CARE'S SUPPLY CHAIN IS CRITICAL



Relationship of GHGP categories to WIOD emissions sources

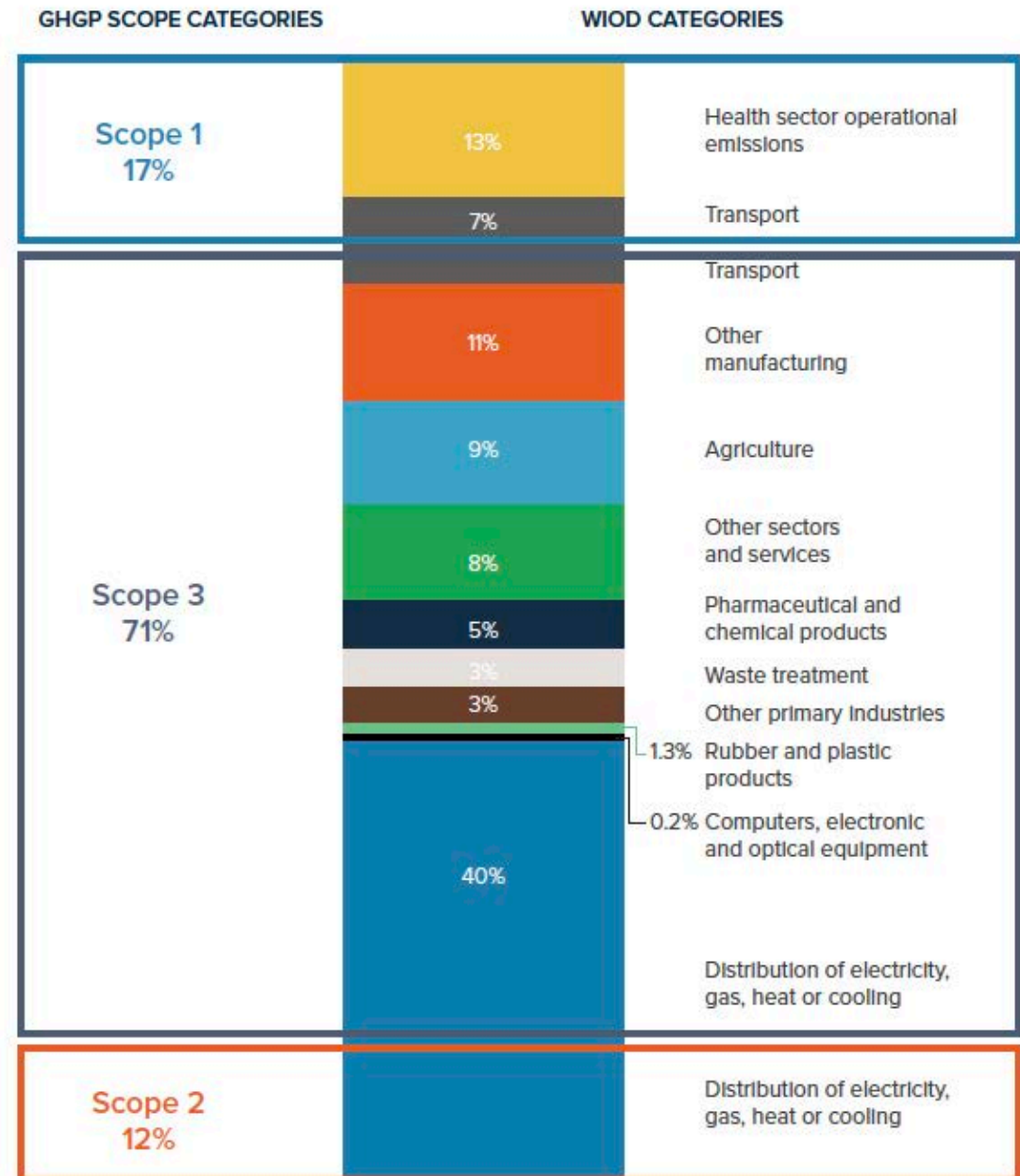


Figure 6a shows the proportion of WIOD emissions sources attributable to GHGP Scopes 1, 2 and 3.



1. Reduce health care's footprint now
2. Support a societal transition to clean renewable energy
3. Chart the course for zero emissions health care by 2050



4. Make development assistance for health climate-smart
5. Establish and implement government action plans for climate-smart health care
6. Deepen research on health care and climate change



Foro internacional  
**CAMBIO CLIMÁTICO**  
y desafíos en salud

9 y 10 de septiembre de 2019  
Medellín - Colombia



Imaginamos un mundo informado y resiliente frente al cambio climático

Entrada libre con previa inscripción  
<https://saludsindanio.org/foromedellin2019>  
Auditorio Facultad de Salud Pública de la Universidad de Antioquia



**Greening the Healthcare Sector Forum 2019**

23-24 September, 2019



**CLIMATE ACTION SUMMIT 2019**



**A RACE WE CAN WIN**

**EUROPEAN HEALTHCARE CLIMATE SUMMIT**

*Towards a roadmap for Climate-smart Healthcare in Europe*



Wednesday 11 September 2019 | 08:30 - 17:30

Parliament Panorama, St Thomas' Hospital  
Westminster Bridge Rd, Lambeth, London SE1 7EH, UK

October 8 - 10, 2019

Khoo Teck Puat Hospital  
Singapore

**5th**



**GREEN HOSPITALS ASIAN CONFERENCE**

*"Towards a sustainable, climate-resilient Asian healthcare"*

With a Pre-conference Workshop on Plastics in Healthcare, Air Pollution and Sustainable Procurement in healthcare on October 8, 2019!

