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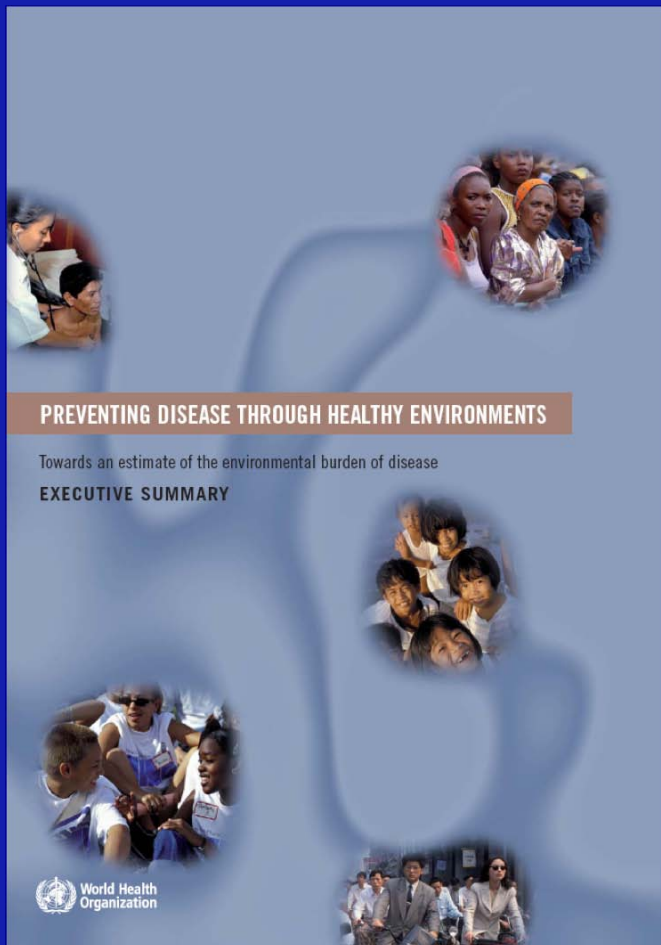


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INTERVENCIONES PARA AMBIENTES SALUDABLES

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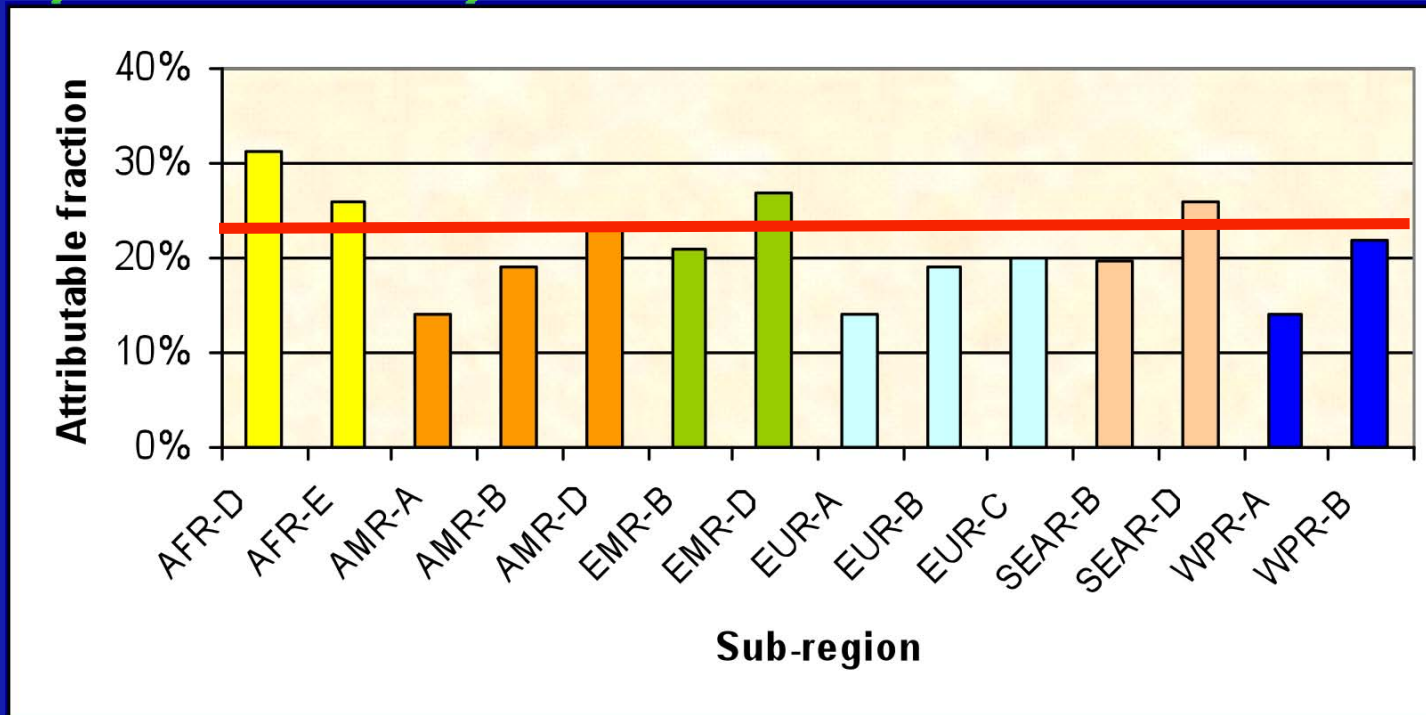
HEALTH AND ENVIRONMENT : the evidence



How much disease could be
prevented by modifying the
environment ?

Environmental contribution by WHO region

24% of the global burden of disease could be prevented by healthier environments

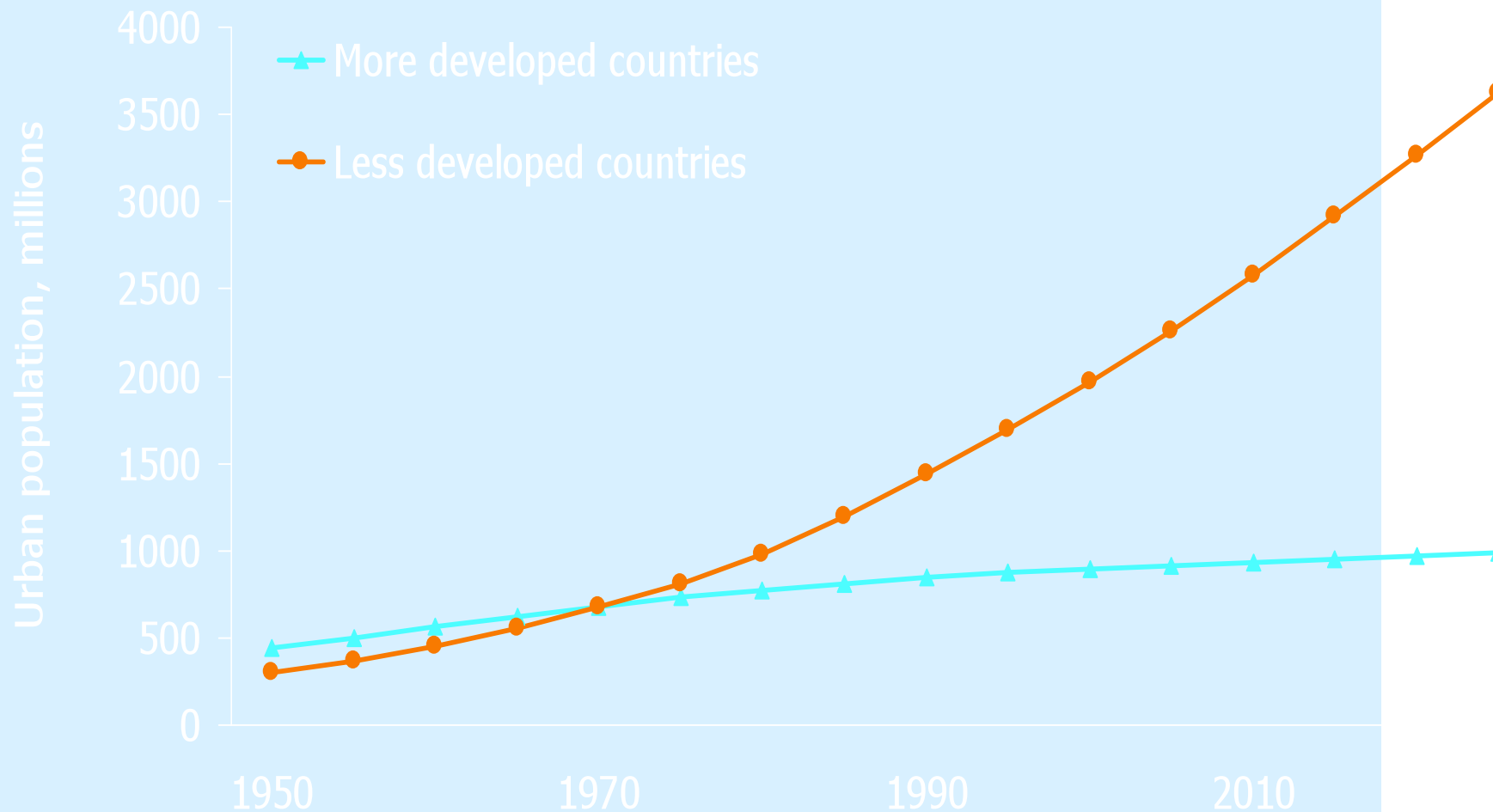


34% of the burden in children under age 14

Que determina nuestra salud

- Determinantes sociales ambientales de la Salud
- Muchos dependen de las acciones de otros sectores.
- Grandes avances en SP en el siglo IXX. –agua potable, saneamiento, etc.
- En el siglo XXI – transporte, planificacion urbana, vivienda y politicas de empleo.

Urbanization trends and projections



Source: *World Urbanization Prospects: the 2001 Revision*. New York, United Nations, 2002.

Linkages between urban environment and health



Examples:

- Transport
- Housing
- Urban planning
- Climate change

Many health impacts from
transport: but dealt with
separately



Co-Benefits: Sustainable Urban Transport can lead to Major Health Gain and Reduce CCGs

- Physical inactivity → 1.9 million deaths
- Traffic injuries → 1.2 million deaths
- Ambient air pollution → 800,000 estimated deaths in cities



e.g. Air Pollution leads to heart and lung disease and premature deaths



- And to increases in hospital admissions, and asthma attacks
- To loss of millions of working days
- No safe level of AP (Particulates)
- Every $10 \mu\text{g}/\text{m}^3$ decrease in $\text{PM}_{2.5}$ leads to 3,4% decrease in mortality
- Health impacts are larger in lower socioeconomic groups (cumulative exposures)

30 minutes a day of Physical Activity

is enough to reduce:

- By 50 % the risk of developing coronary heart disease,
- By 50% the risk of developing non-insulin-dependent diabetes and obesity.



- **By 30 % the risk of developing hypertension.**
- **The risk of colon /breast cancer (e.g. Shanghai 50% reduction in colon cancer).**
- **Helping to maintain bone mass and protecting against osteoporosis.**
- **Improving balance, co-ordination, mobility, strength and endurance.**
- **Increasing self-esteem, reducing levels of mild to moderate hypertension and promoting overall psychological well-being.**



Unhealthy urban designs
sedentary lifestyles
obesity

Tackling transport and health: solutions are available

Policy	Reducing crash es	Reducing air pollutio n	Reducing noise	Mitigating climate change	Promoting physic al activit y	Promotin g socia l cohe sio
Speed management	+	+	+	+	+	+
Traffic calming and speed reduction in residential areas	+	+	+	+	+	+
Reducing transport demand (such as by telecommunication)	+	+	+	+	+	+
Road pricing	+	+	+	+	+	+
Cleaner fuels and more efficient vehicles	/	+	/	+	/	/
Promotion of safe cycling, walking and public transport	+	+	+	+	+	+
Safer cars (including fronts protecting pedestrians)	+	/	/	/	/	/
Implementing noise reduction barriers	/	/	+	/	/	+
Investment in safe infrastructure for cyclists and pedestrians	+	+	+	+	+	+
Urban parking management	+	+	+	+	+	+

Adapted from Racioppi, et al, 2004

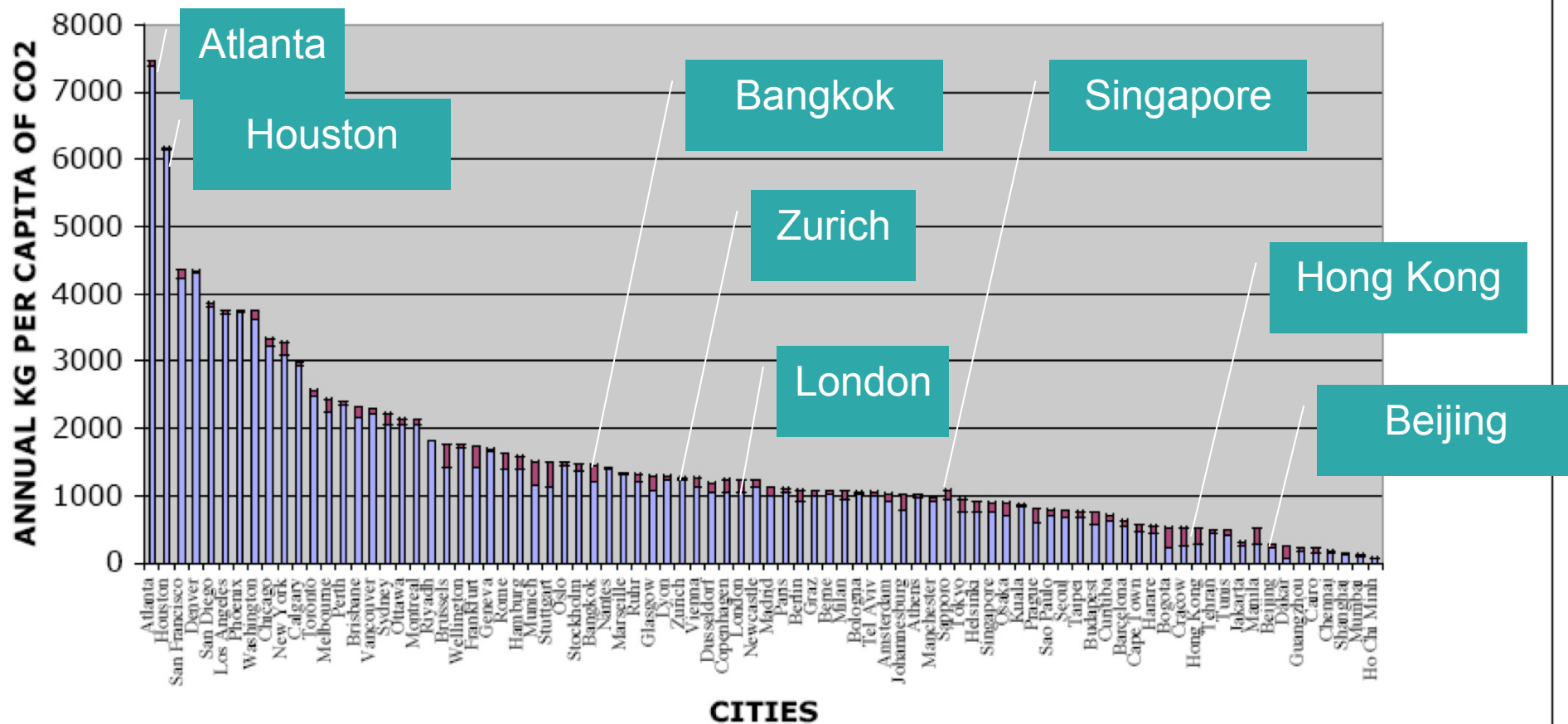
'Business as usual' health trends

- Vast increase in car ownership and larger cars in emerging economies vs. better regulation, more efficient engines.
- Road traffic accident deaths to double from 1990-2020.
- Global Epidemic of Obesity.

(WHO, 1996; WHO, 2004)

Different routes are possible

PER CAPITA EMISSIONS OF CO₂ FROM PASSENGER TRANSPORT IN 84 CITIES (PRIVATE AND PUBLIC TRANSPORT)



Great potential for improvement in physically active transport

Percentage of people walking or cycling to work:

Copenhagen	32 %
Santiago	30 %
Tokyo	22 %
Brasilia	2 %
Atlanta	0.3 %

Percentage of urban trips by motorised private transport:

USA	89 %
Western Europe	50 %
High Income Asia	42 %
China	16 %

Traffic policies can have many benefits to health and environment

London congestion charge

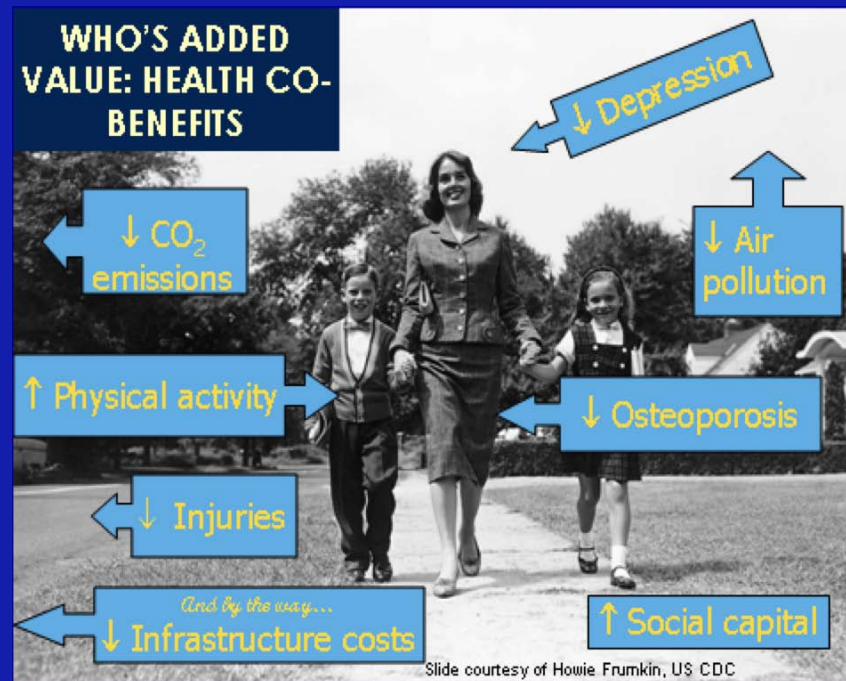


Source: Congestion Charging: Update on scheme impacts and operations, February 2004
www.tfl.gov.uk/tfl/downloads/pdf/congestion-charging/cc-12monthson.pdf

The congestion charge is a £5 daily charge for driving or parking a vehicle on public roads within the congestion charging zone between 07:00 and 18:30, Monday to Friday, excluding weekends and public holidays.

- Traffic delays inside the charging zone average 30% lower than before
- **Pedal cycle movements have increased by about 20 %**
- Bus and coach movements have increased by over 20%
- Van and lorry movements have reduced by about 10 %
- Powered two-wheeler movements have increased by 10-15%
- **8% reduction in personal injury accidents in the charging zone during**

Health Co-benefits from urban planning



Bogota: urban space to public transport and pedestrians – reduction in traffic injuries and air pollution + political success



There is a need for integrated policies that address all health impacts, environment and development:



Green Buildings (estimates for the U. S.)



Estimated Savings

Respiratory disease: \$6 to \$14 billion

Allergies and asthma: \$1 to \$4 billion

Sick building syndrome: \$10 to \$30 billion

Worker performance: \$20 to \$160 billion

Studies

Schools with natural light

20% faster on math tests

26% faster on reading tests



Stores with natural light: 40% more sales

Hospitals with better lighting & ventilation:
improved patient outcomes



Lawrence Berkeley National Lab

Advocating for Health as a Central Issue in Climate Change



But the polar bear might not be the only threatened species

“How it threatens your health”



HEALTH EFFECTS OF CLIMATE CHANGE

CLIMATE CHANGE

*Temperature Rise*¹

*Sea level Rise*²

Hydrologic Extremes

¹ 3°C by yr. 2100

² 40 cm " "

IPCC estimates

Patz, 1998

Urban Heat Island Effect

Heat Stress
Cardiorespiratory failure

Air Pollution & Aeroallergens

Respiratory diseases, e.g.,
COPD & Asthma

Vector-borne Diseases

Malaria
Dengue
Encephalitis
Hantavirus
West Nile virus

Water-borne Diseases

Cholera
Cyclospora
Cryptosporidiosis
Campylobacter
Leptospirosis

Water resources & food supply

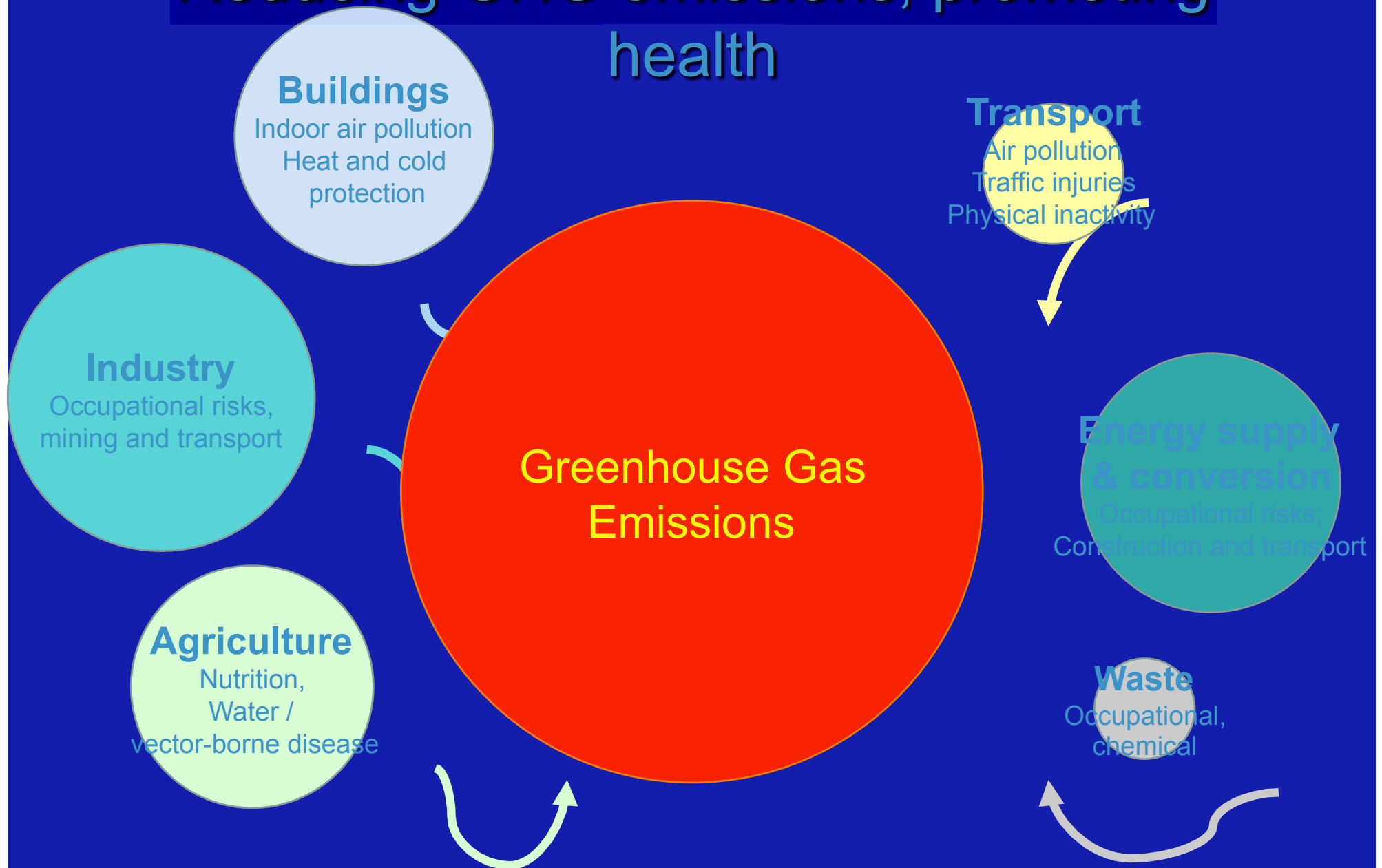
Malnutrition
Diarrhea
Toxic Red Tides

Environmental Refugees

Forced Migration
Overcrowding
Infectious diseases
Human Conflicts



Reducing GHG emissions, promoting health



Why governments should act?

To make optimal decisions in view of competing points of view

Car and Road lobby:

“Benefits outweigh the Costs, the health burden is a price societies pay for mobility and convenience they enjoy.”

Health &

Environment:

“Healthy transport can improve public health, safeguard the environment, enhance access and the economic vitality of cities”

Key role of PH experts and Health Authorities:

To influence other sectors to incorporate health objectives into their policies (stewardship)

- Health standards and norms
- Gather relevant knowledge about health implications of decisions
- Inform and engage stakeholders about health issues in other sector policies

Key role of PH experts and Health Authorities:

To influence other sectors to incorporate health objectives into their policies (stewardship)

- Provide feedback about expected and actual health consequences of policies in other sectors, including health equity aspects
 - Monitoring system (accountability)
 - Communicate Positive feedback

- Establish partnerships with actors in other sectors and stakeholders

Kiosk

JCDecaux

**Reduce
carbon
emissions.**

**Walk to
the pub.**



Hand-made by the Cooper family. Est. 1862.