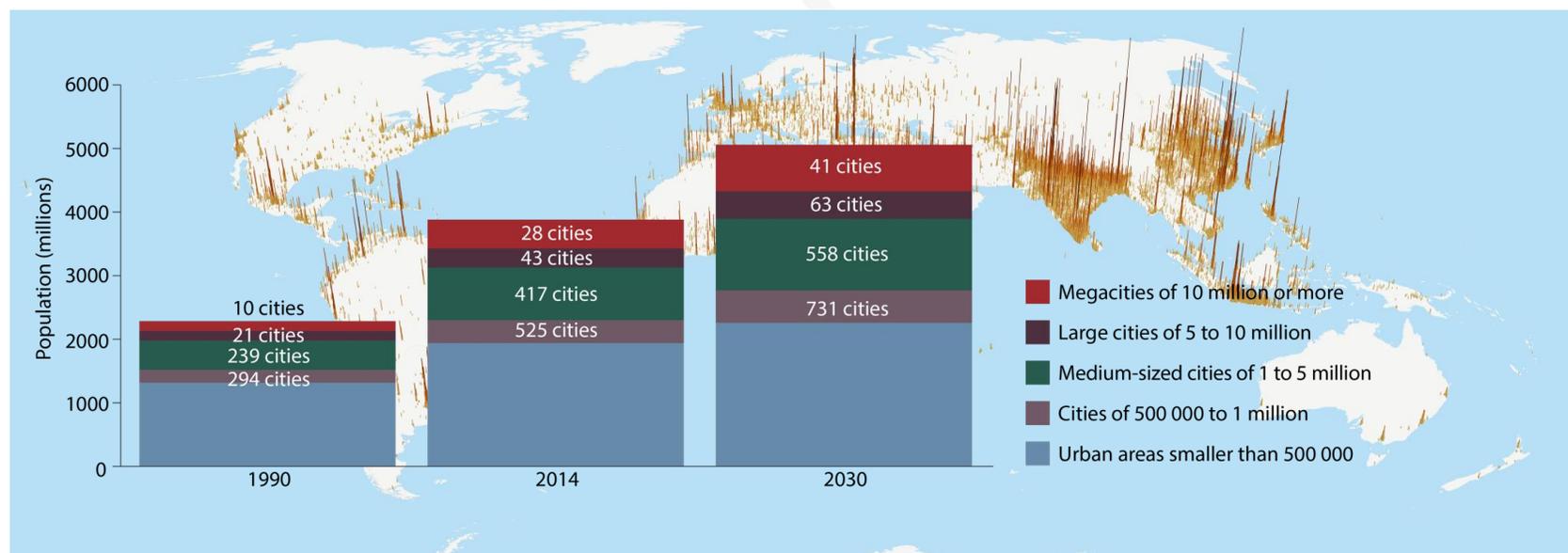


Urban Health

Dr Nathalie Roebbel
WHO Urban Health Team Lead

An urbanizing world & growth of cities

More Cities of All Scales & Population Density (1km² grid cell)



Many of the Cities of 2050 have yet to be built!

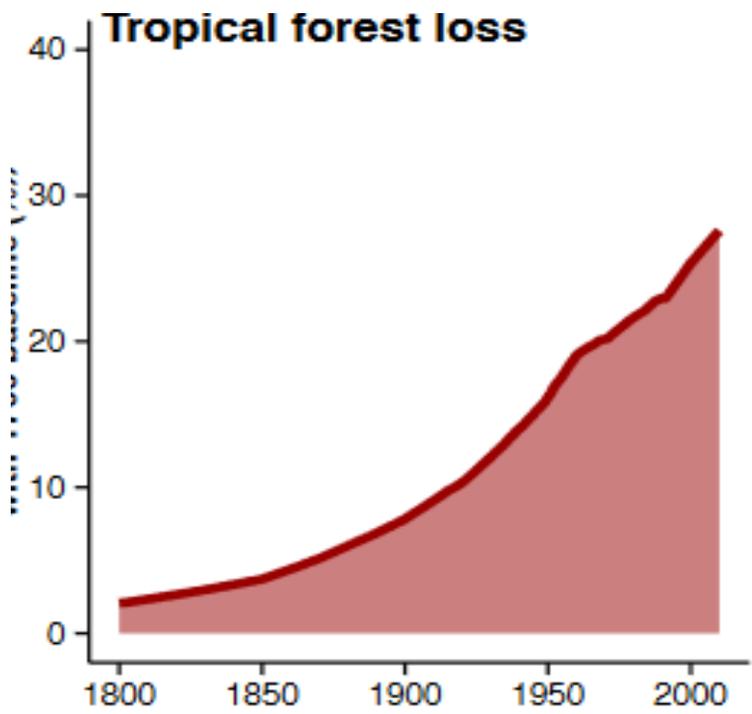
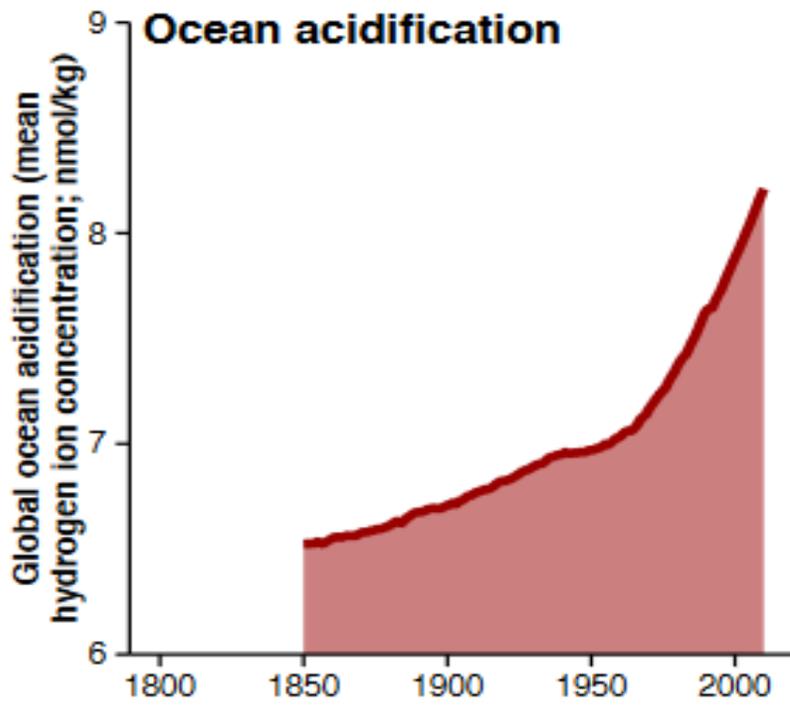
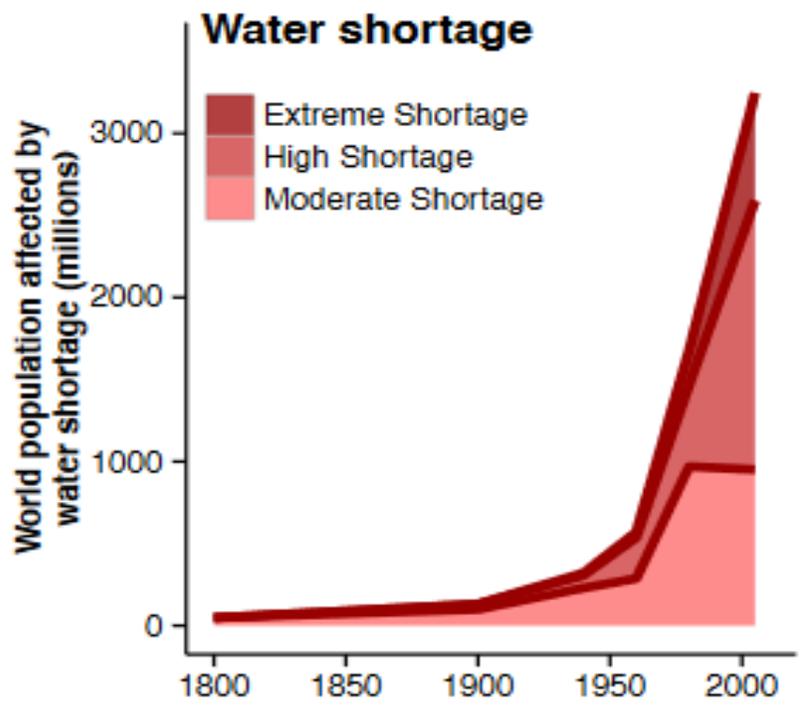
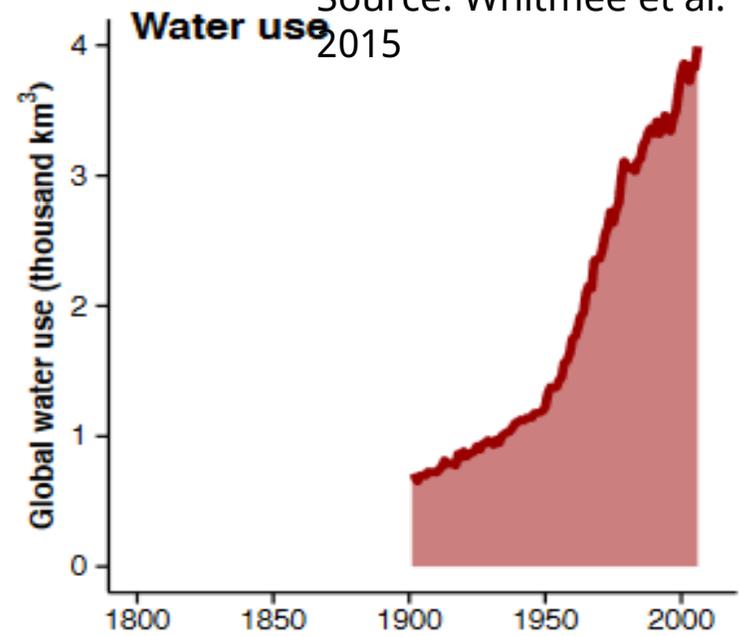
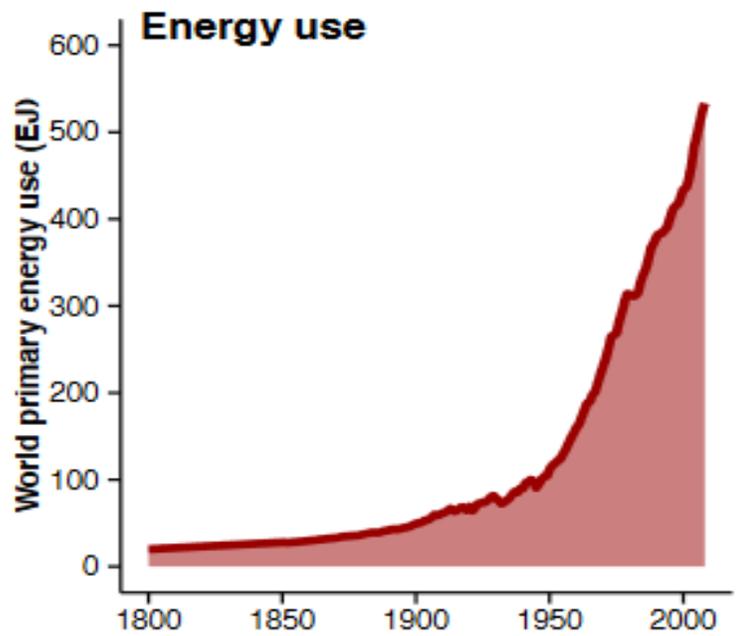
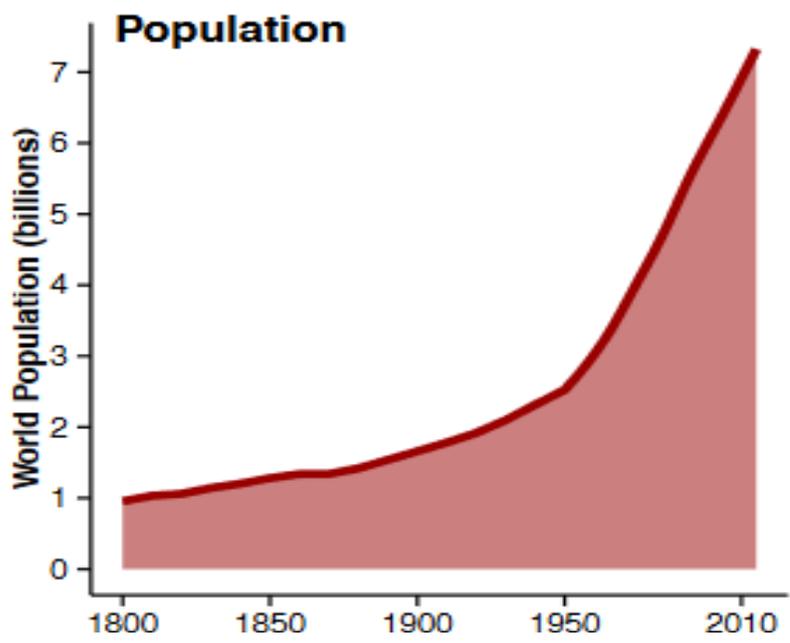
Our world is changing fast...



**INCREASED
INTERACTIONS AT THE
HUMAN-ANIMAL-
ENVIRONMENTAL
INTERFACE**



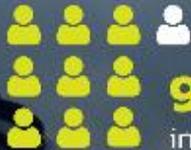
Source: Whitmee et al. 2015



Cities at the heart of public health



World Health Organization



9 in 10 people in urban areas breathe **polluted air**.

Urban **Health**



World Health Organization



Cities may experience temperatures **3-5° C higher** than surrounding rural areas.

Urban **Health**



World Health Organization



Over **1/3** of the global urban population **does not** have access to **safely managed sanitation services**.

Urban **Health**



World Health Organization

Urbanization is strongly associated with the **risk of obesity**.

Urban **Health**



World Health Organization

Urbanization accompanied by rapid motorization leads to an increased **risk of road traffic deaths and injuries**.

Urban **Health**



World Health Organization

Cities are among **the highest risk areas** for infectious disease outbreaks. (such as the current COVID-19 Pandemic)

Urban **Health**



World Health Organization

Urbanization is strongly associated with **rapid spread of vector borne diseases**.

Urban **Health**



World Health Organization

Most of the **top 10** causes of death closely related to **poor urban design and planning**.

Urban **Health**

Health inequalities within cities

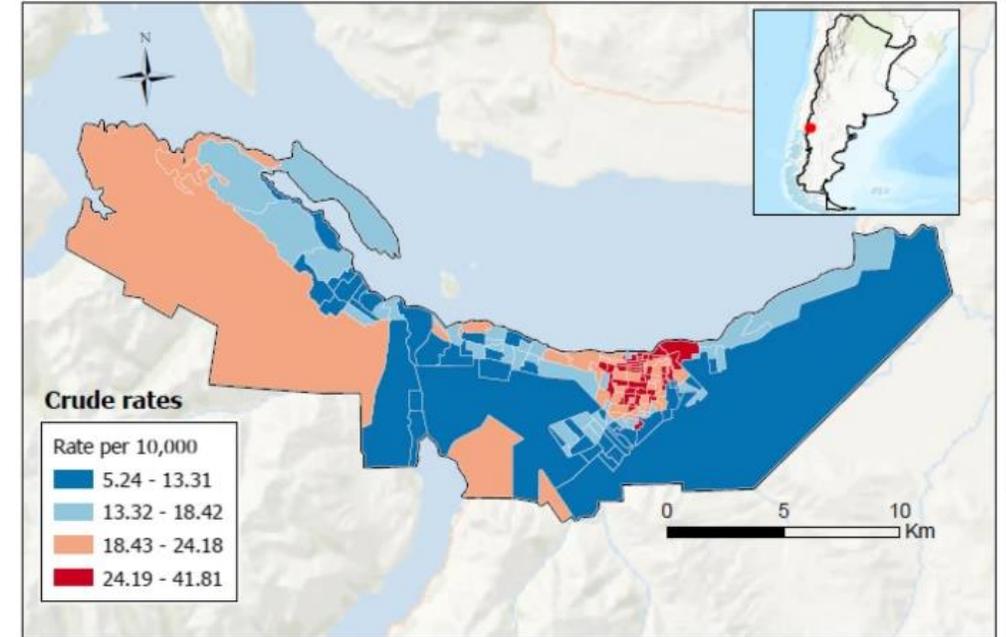


Approx. **350 million children** live in **slums**



60% of refugees & 80% of internally displaced people settle in **urban** areas.

Beyond reach of traditional humanitarian operations.



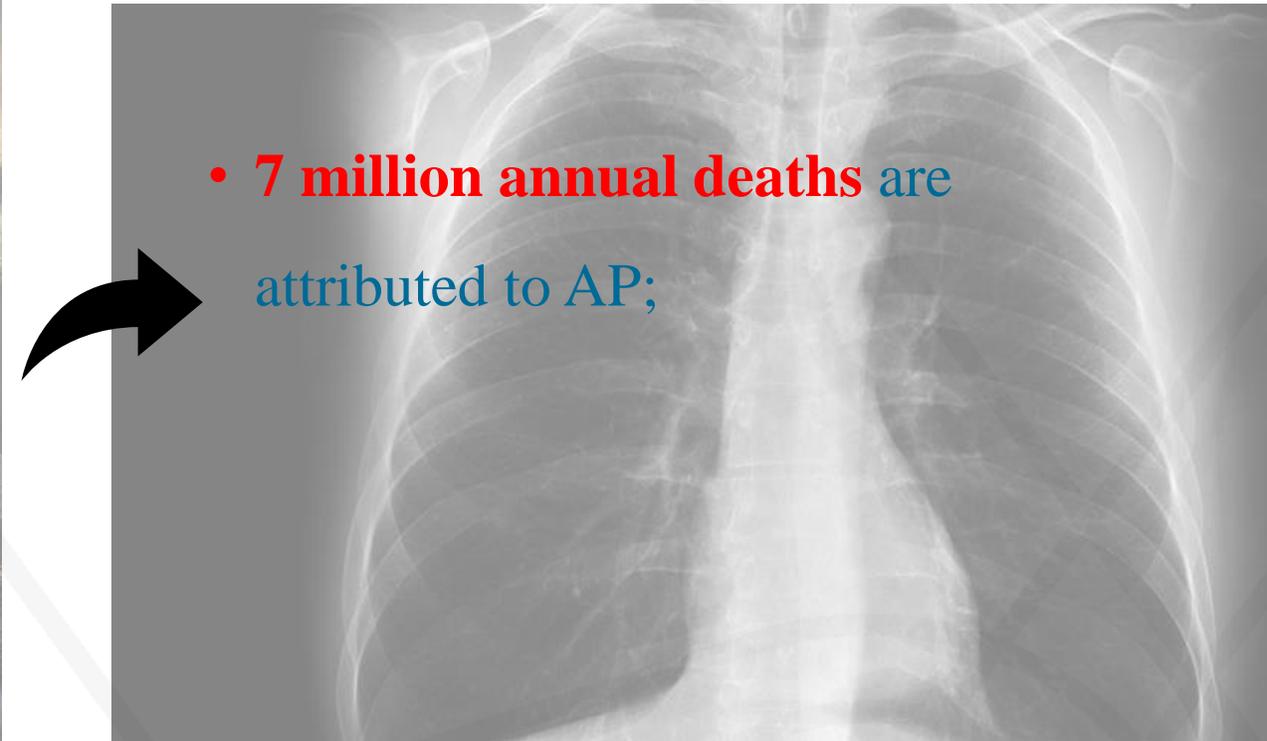
Crude COVID-19 mortality rate per 10,000. Bariloche, Argentina. June 2020—May 2022.

Air pollution – public health emergency

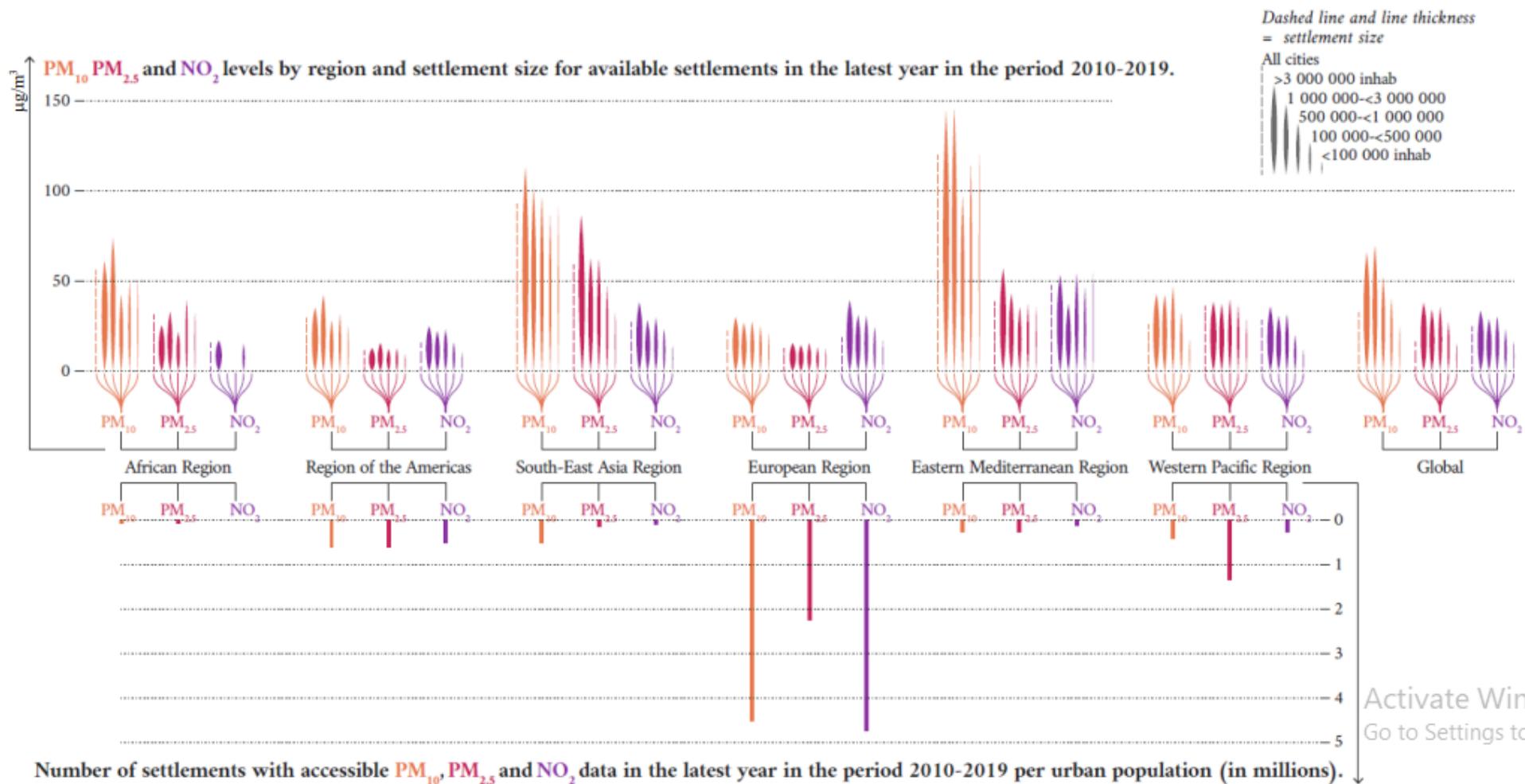
Ambient exposure



Burden of disease



WHO Air Quality Database 2022

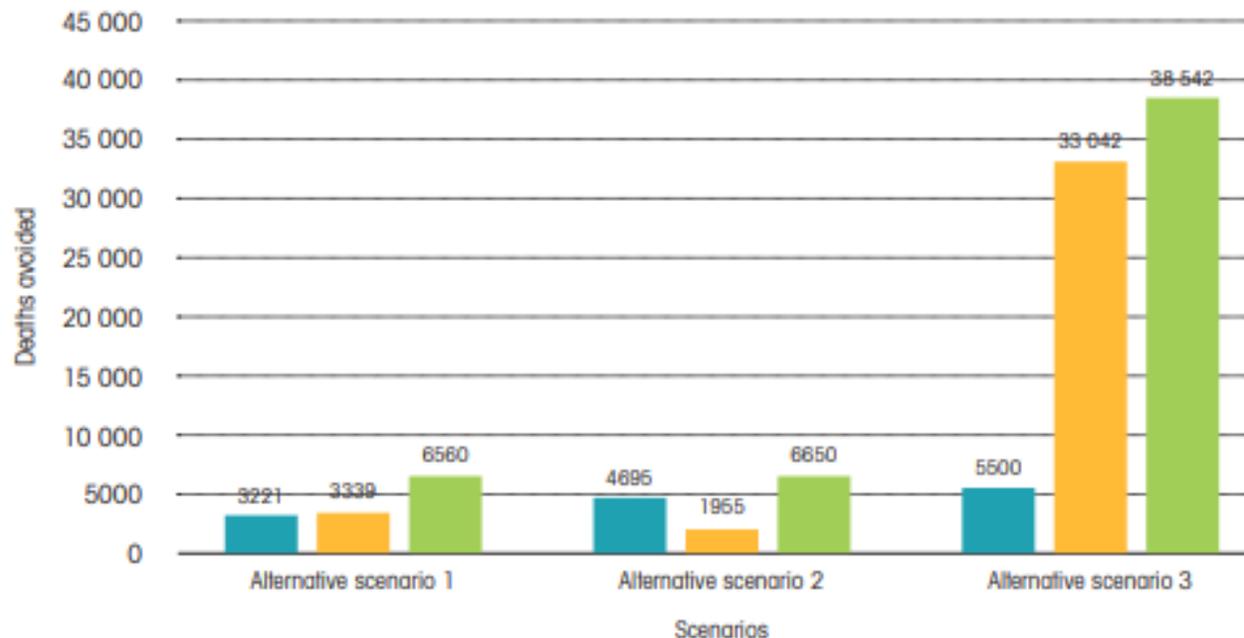


Activate Windows
Go to Settings to activate Windows.

WHO Urban Health Initiative – Transport scenarios and impact on health (Ghana)

Fig. 8
 Premature mortality avoided under three transport scenarios in Accra, 2015–2050, compared with business as usual, using IStHAT model

■ Air pollution
 ■ Physical activity
 ■ Total



Note: Alternative scenario 1: cordon charges and other vehicle restraint measures, plus improvements in vehicle fuel economy and emission factors. Alternative scenario 2: scenario 1 plus land-use measure to reduce overall travel demand. Alternative scenario 3: scenario 2 plus shift from cars to buses and cycling, plus bus type shifts towards compressed natural gas (CNG), plus car type shifts towards hybrid and battery electric power. IStHAT: Integrated Sustainable Transport Health Assessment Tool.

Epidemiological evidence of health benefits of green spaces

Environmental benefits	 <p>Reduced urban heat island effect (e.g. Bowler et al., 2010)</p>	 <p>Flood mitigation (Gill et al., 2007)</p>	 <p>Improved air quality (e.g. Nowak et al., 2006)</p>
Nature benefits for humans	 <p>Anthropogenic noise buffering and production of pleasant sounds (e.g. Pathak et al., 2008)</p>	 <p>Exposure to diverse microbiota (e.g. von Hertzen et al., 2015)</p>	 <p>UV exposure (e.g. Grant and Holick, 2005)</p>
Social benefits	 <p>Social interaction (e.g. Maas et al., 2009)</p>	 <p>Community Cohesion (e.g. Weinstein et al., 2015)</p>	 <p>Promotion of physical activity (e.g. Bowler et al., 2010a)</p>
Mental benefits	 <p>Enhanced nature connection (e.g. Cleary et al., 2017)</p>	 <p>Stress reduction (Ulrich et al., 1991)</p>	 <p>Attention restoration (Kaplan, 1995)</p>

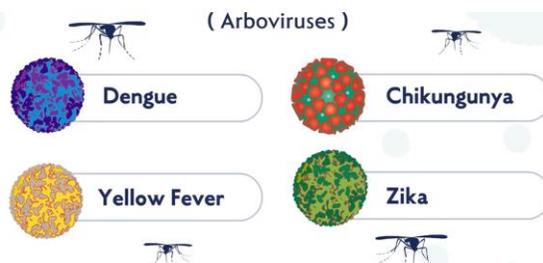
- **Reduced cardiovascular morbidity:** Hypertension, stroke, coronary heart disease
- Reduced type 2 diabetes
- **Improved pregnancy outcomes:** Greater birthweight, reduced pre-term births
- **Reduced mortality:** Cardiovascular, respiratory, all internal causes
- **Improved mental health:** Reduced depression, improved cognition, behavioral development in children

Vector borne diseases

Global framework for the response to malaria in urban areas



Aedes-transmitted diseases



Lancet Commission: Controlling *Aedes*-transmitted Viral Diseases in Cities

Annelies Wilder-Smith^{1,2}, Steven W. Lindsay³, Linda S. Lloyd⁴, Oliver J. Brady⁵, Graham Alabaster⁶, Thomas W. Scott⁷, Eng Eong Ooi⁸, Duane J. Gubler⁸

¹ London School of Hygiene & Tropical Medicine, UK

² Heidelberg Institute of Global Health, University of Heidelberg, Germany

³ Department of Biosciences, University of Durham, UK

⁴ Aquacycl, San Diego, CA, US

⁵ London School of Hygiene & Tropical Medicine, UK

⁶ Department for Public Health and Environment from UNHABITAT, Geneva, Switzerland

⁷ Department of Entomology and Nematology, University of California, Davis, US

⁸ Programme in Emerging Infectious Diseases, Duke-NUS Medical School, Singapore

Correspondence to:

Annelies Wilder-Smith

Email: anneliesws@gmail.com

WHO technical consultation on the burden of and response to malaria in urban areas

Strategic Information for Response Unit,
WHO Global Malaria Programme. Geneva, Switzerland

Covid-19 impacts on cities & their response

The Covid-19 pandemic = an X-ray of existing inequities and divisions in urban settings

The impacts have been governed by:

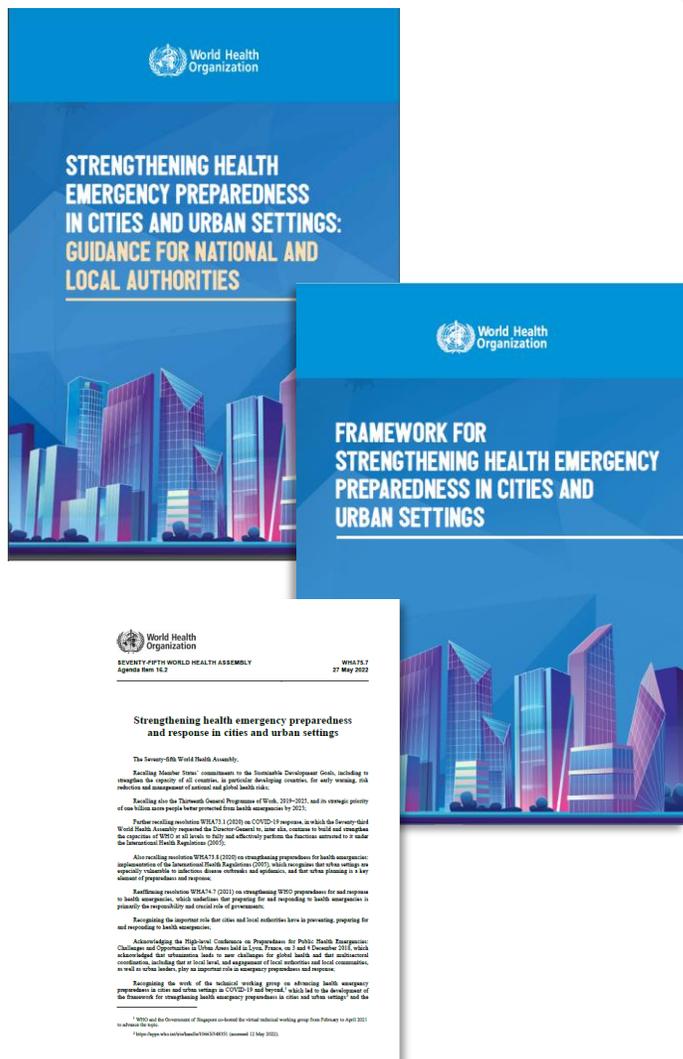
- Overcrowding AND density
- Co-morbidities (Global South= communicable diseases /Global North= non-communicable disease)
- Treatment-seeking behaviour
- Demographics (age profile, mobility)
- Cities' ability to respond (isolating the vulnerable)
- Socio-economic situation of the most vulnerable (slums in the global south, Migrant communities in global north)

The “nimble” performance of city-governments = critical in support of national gov.

Many of the interventions NEED spatially disaggregated local-level data



WHO Urban health emergency preparedness

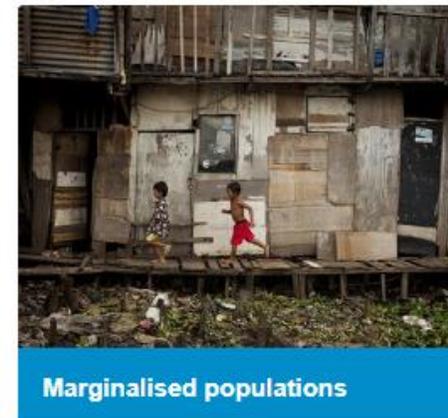
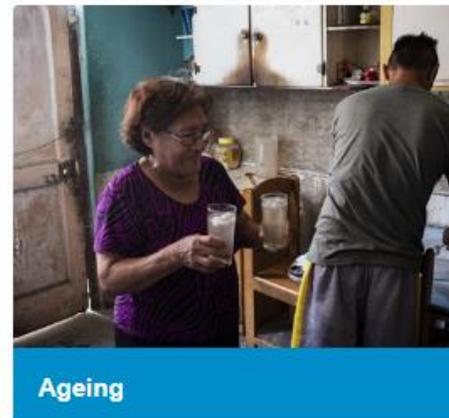


- Application of the legally binding International Health Regulations (2005)
- Resolution WHA 75.7 (2022) on Strengthening Health Emergency Preparedness and Response in Cities and Urban Settings
- Global Framework and operational
- Supporting the engagement of local authorities in national health security activities

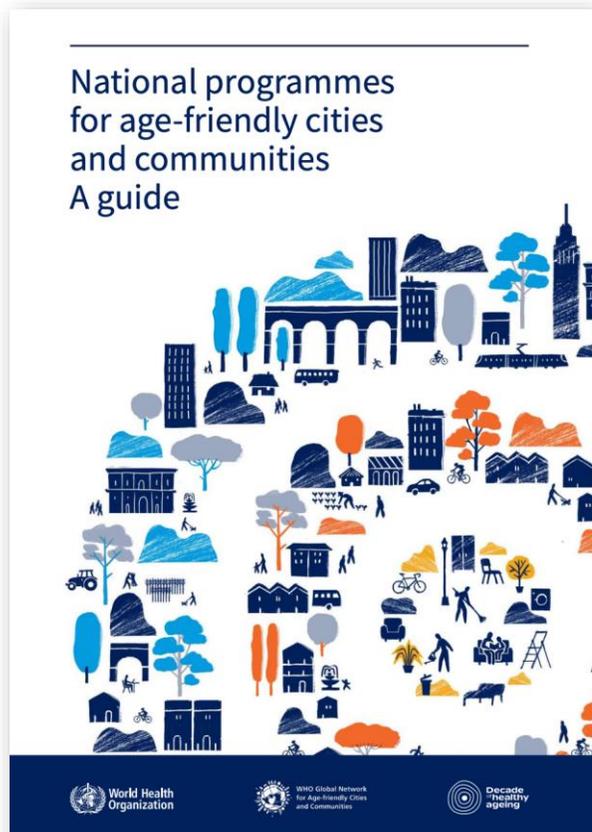


<https://www.who.int/teams/social-determinants-of-health/urban-health/covid-19/>

COVID-19 is having a detrimental impact on urban population health. The virus has caused hundreds of thousands of deaths. At the same time, public health and social measures to prevent virus transmission are having wider health consequences. Loss of employment and income has exacerbated food insecurity, health services have been partially or completely disrupted across the world, and many measures have had adverse impacts in terms of mental and physical health. Negative health impacts of COVID-19 are disproportionately being felt by populations living in vulnerable circumstances, widening existing health inequalities.



Ageing in urban areas



Box 3. Oslo's common principles for universal design

In 2014 Oslo City Council adopted common principles for its local implementation of the Norwegian national action plan on universal design. The principles provide guidelines for each city department and agency, which are required to develop individual plans for universal design. The city's Agency for Social and Welfare Services is in charge of coordinating these initiatives across the municipality.

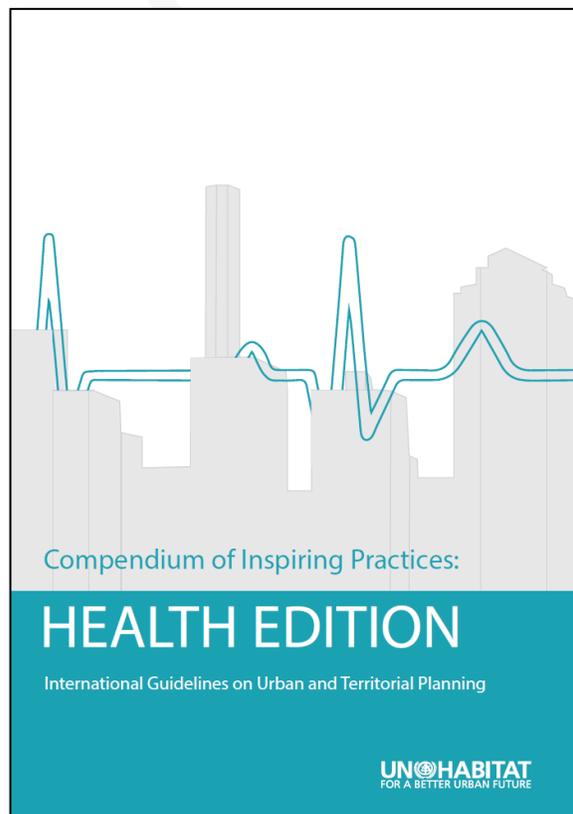
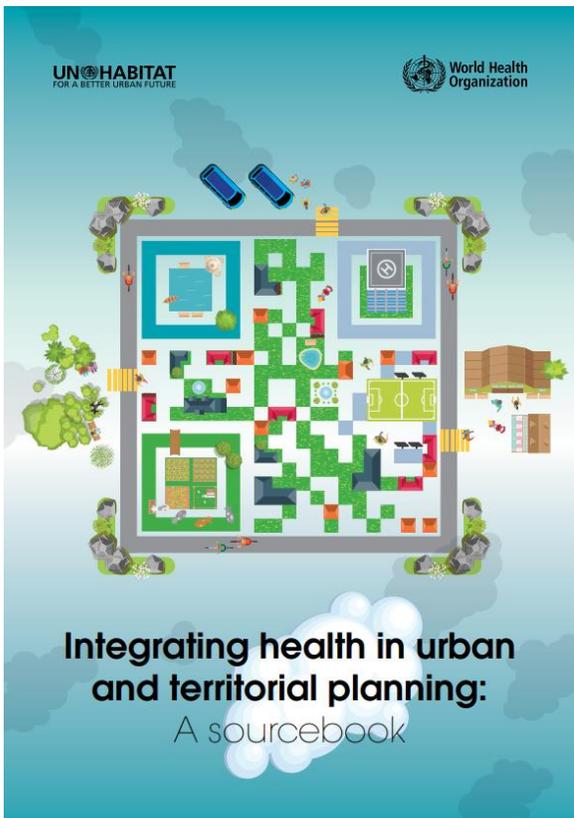
The principles of universal design cover three main areas:

- transport and communication
- planning of construction, property and outdoor areas
- information and communication technology (ICT).

The common principles are based on the government's vision that universal design is to be implemented in Norway by 2025.

Source: City of Oslo (2014), WHO (2015c).

Urban planning and health



World Health Organization UN-HABITAT FOR A BETTER URBAN FUTURE

Integrating health in urban and territorial planning: the directory
 Directory of resources for planning healthy environments
 NOTE: Use the "Find & Select" feature in Excel (Home - Editing, Right top of the screen) to search for some particular text and/or value in this tab/worksheet. You can also click on the drop-down arrow in the lower right corner of each cell.

Directory reference number	Title of resource	Description	Target audience						URL resources		Primary resource category			Type of resource					
			Policy makers	Public health professionals	Urban planners	Academics	Civil society	Others	URL_1 (main page)	URL_2 (pdf)	Action-oriented	Descriptive resources	Physical tool	Briefing	Policy guide	Evidence	Initiative	Network	Overview
D172	BlueHealth Toolbox: linking environment, climate & health	The BlueHealth Toolbox is for planners, designers and other decision-makers responsible for blue spaces. The tools provide the means to make comparable assessments of urban blue spaces before and after any proposed changes. Such changes can include a wide range of interventions, from physical alterations to the environment to advertising campaigns that influence how people interact with it. The tools provide evidence about the quality of blue environments, as well as information about how people and communities use, perceive and interact with blue spaces. They also assess the state of people's health and wellbeing.	X	X	X	X			https://bluehealth2020.eu/resource/toolbox/	https://bluehealth2020.eu/resource/toolbox/center/uploads/2020/06/BlueHealth-Toolbox-Horizon-2020.pdf	X		X						
D173	Heat Resilient Cities: Measuring benefits of urban heat adaptation	The Excel-based Heat Resilient Cities benefits tool has been designed to help city planners and decision-makers to quantify the health, economic and environmental benefits of common urban heat adaptation actions. Cities can use	X		X				https://www.cd0knowledgehub.org/article/heat-resilient-cities-measuring-benefits-of-urban-heat-adaptation/	n/a	X		X						

2. RESOURCES 3. FAQs

Innovation in planning - Designing public spaces together with youth to achieve better urban health

IMPROVED HEALTH AND WELL-BEING OF YOUNG PEOPLE IN INTERMEDIARY CITIES IN SENEGAL, COLOMBIA AND INDIA



YOUTH GOVERNANCE

Strengthening governance frameworks to advance the health and well-being of young people.



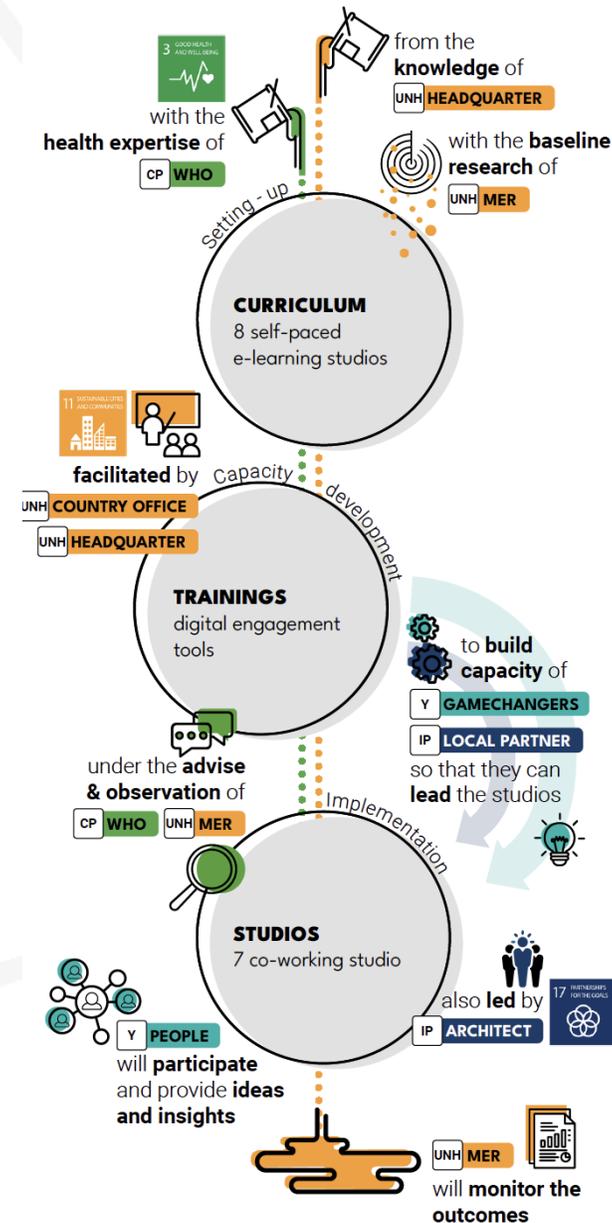
DIGITAL ENGAGEMENT

Empower young people with voice and agency and equip them with the right digital skills to engage in governance.



INCLUSIVE PUBLIC SPACES

Supporting local authorities to deliver public spaces that are youth-friendly, safe, accessible and inclusive



Analytical tools to support Health and Economic Impact Assessments and policy choices

AirQ+ (air pollution)

ISThAT (transportation)

HEAT (walking and cycling)

GreenUR (green space)

HOMES (household energy)



About this repository

Over 55% of the world's population live in urban areas – a proportion that is expected to increase to 68% by 2050. This trend calls for strengthened support to address health at the urban level. To this end, WHO's new repository on urban health gives access to a broad range of WHO-generated resources to enhance local action for health.

The repository reflects WHO's renewed commitment to promoting urban health worldwide and includes resources that provide technical support and build capacity, strategic reports and guidelines, health impact assessment tools, and other products relevant to urban health and cities.

The repository is a living resource, open to modifications and additions, and is automatically updated each time new products become available. It covers topics such as urban planning, housing, environmental issues, transport and mobility, nutrition, physical activity, COVID-19 and many others. The search engine allows users to access existing WHO materials by health topic category, product type, geographical area and year of publication/development.

Some products in the repository relate specifically to urban health (e.g. local urban planning tools), while others relate to broader, cross-cutting issues that impact urban health (e.g. global guidelines on health threats such as air pollution, road traffic injuries, or violence against children that need to be endorsed at national level and implemented locally).

The initial content in the repository is based on a structured, non-exhaustive, technical mapping exercise identifying WHO activities and products across the organization. WHO hopes that users including researchers, practitioners, community actors, government and city officials, NGO reps, private sector agents, civil society members, donors, development partners, multilateral agencies and others in all Member States will find the repository a useful tool in the journey towards better urban health.

Search for Urban Health Resources

Urban Health topics

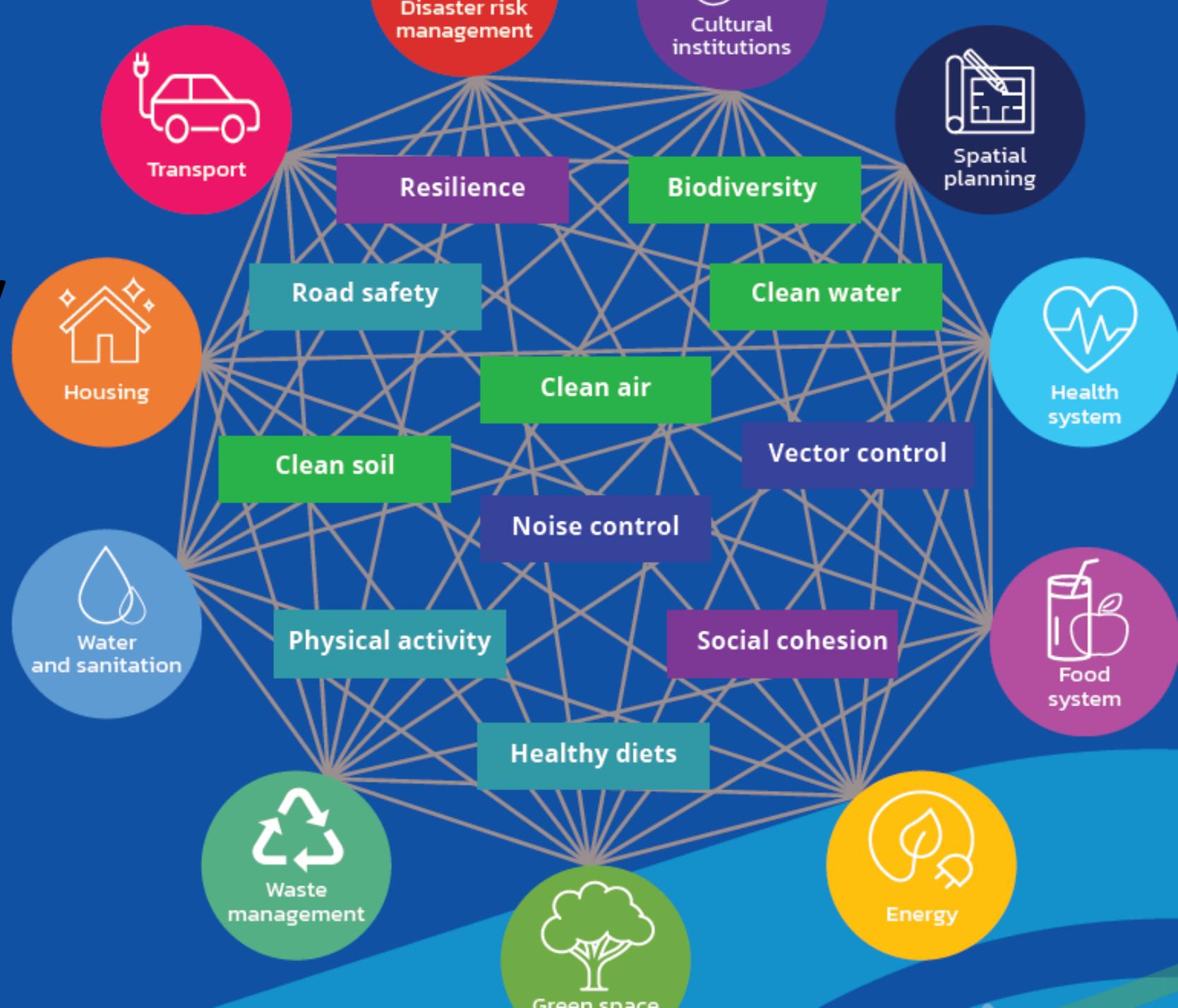
Regions Year Types of Urban Health resources

<https://urbanhealth-repository.who.int/>

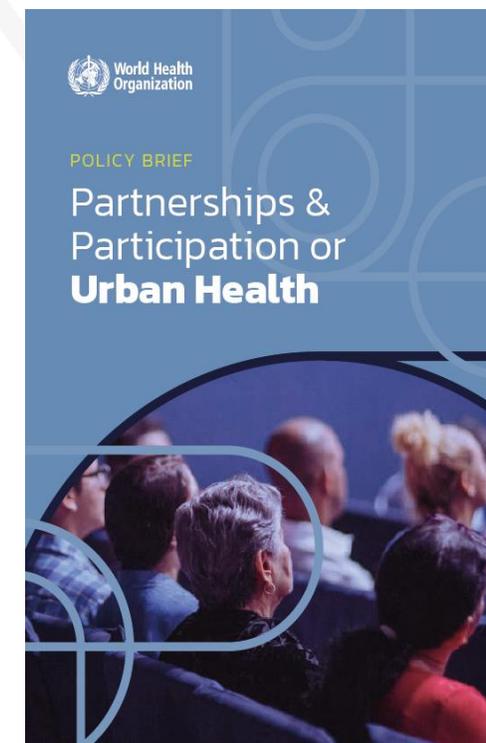
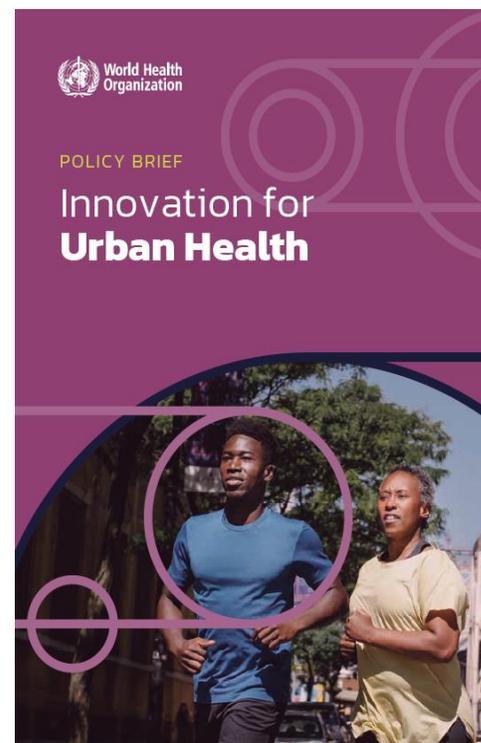
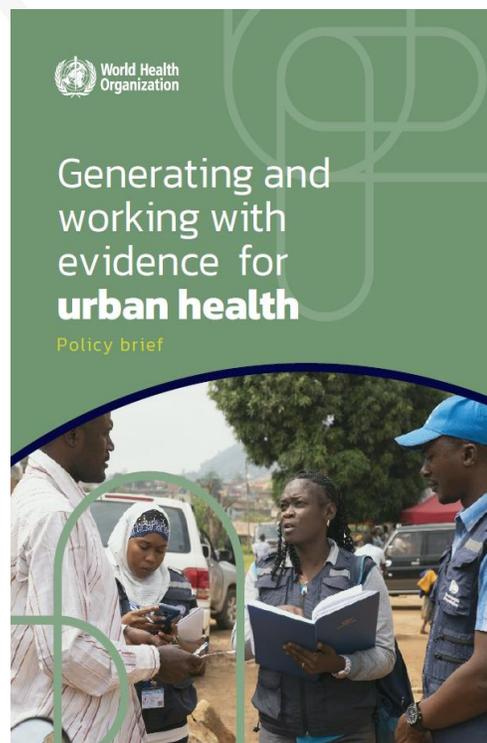
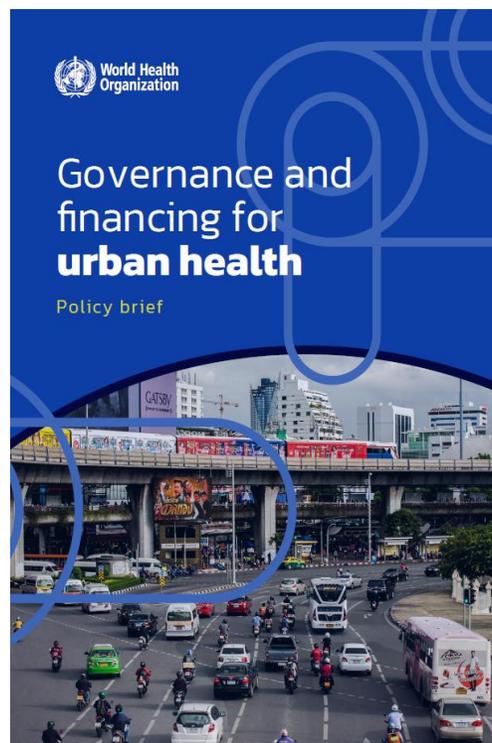
Development and application of analytical tools to support the assessment of the health and economic impacts of interventions in key sectors, including on transport, household energy, green space and land-use, solid waste management (open source, flexible, evidence-based tools)

Acting strategically for urban health across interconnected urban systems

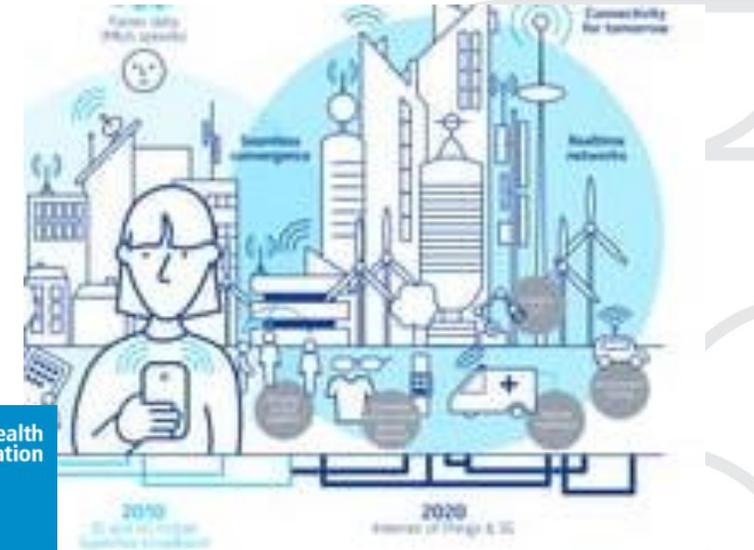
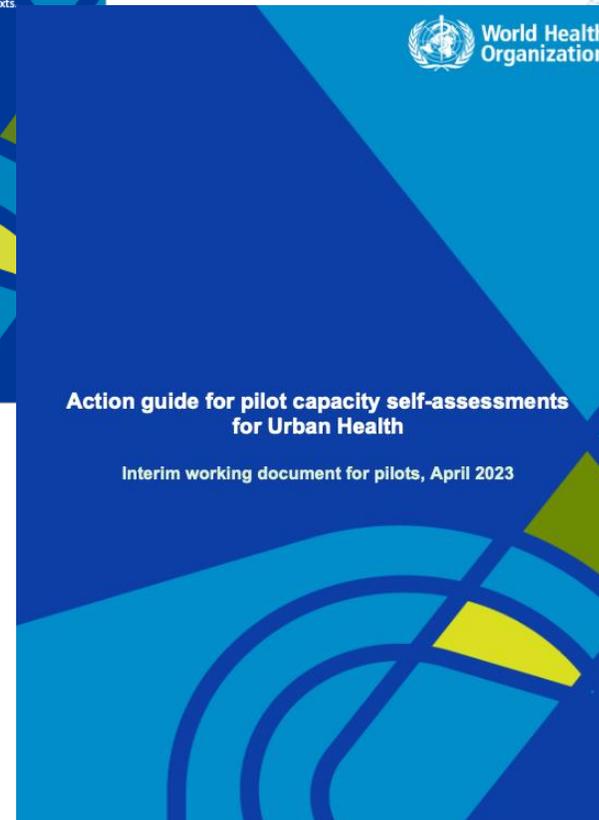
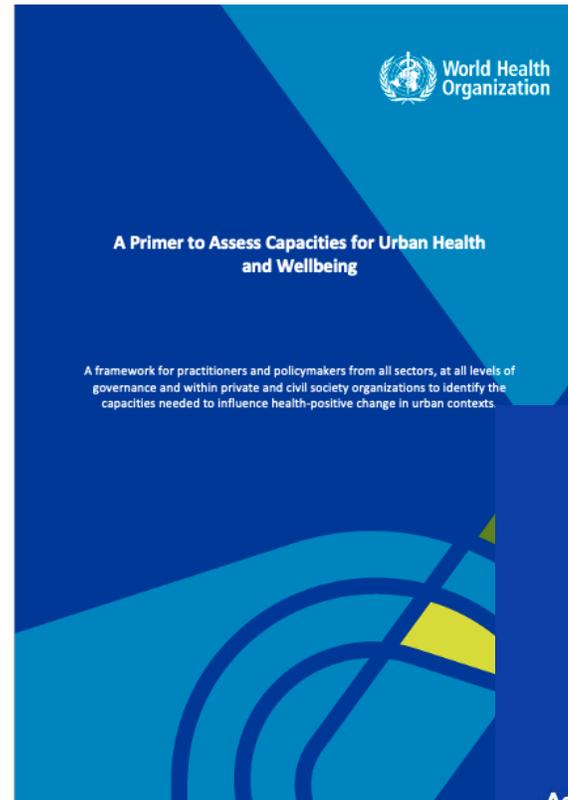
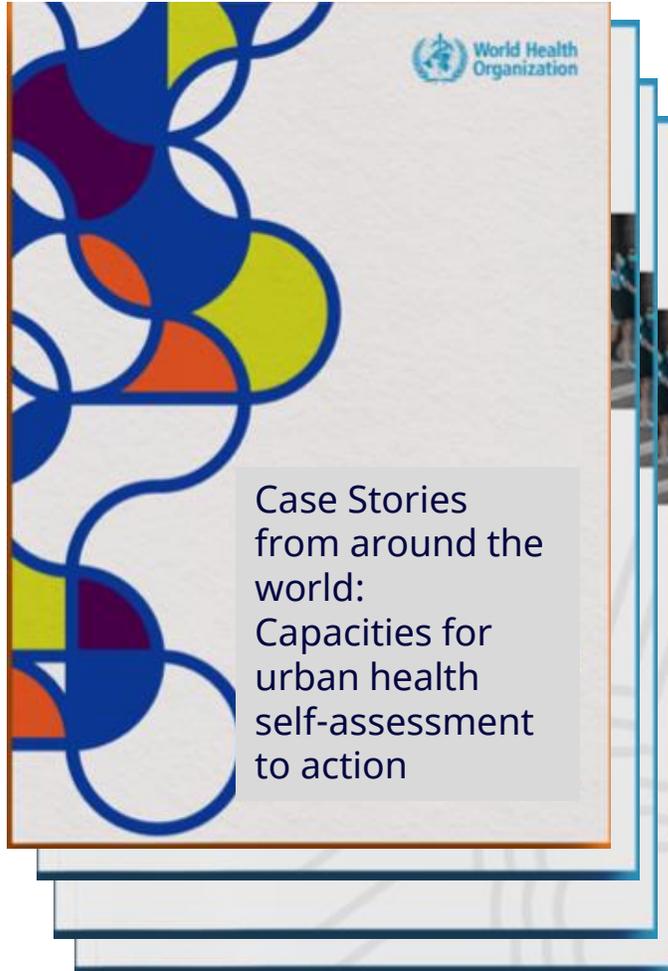
Issues, entry points, and best practices



Enabling a strategic approach for urban health



Primer, Action Guide, Case Stories



E-learning short modules to accompany guide developed

WHO core functions and Urban Health Research Agenda (UHRA)

Providing leadership on matters critical to health and engaging in partnerships where joint action is needed.

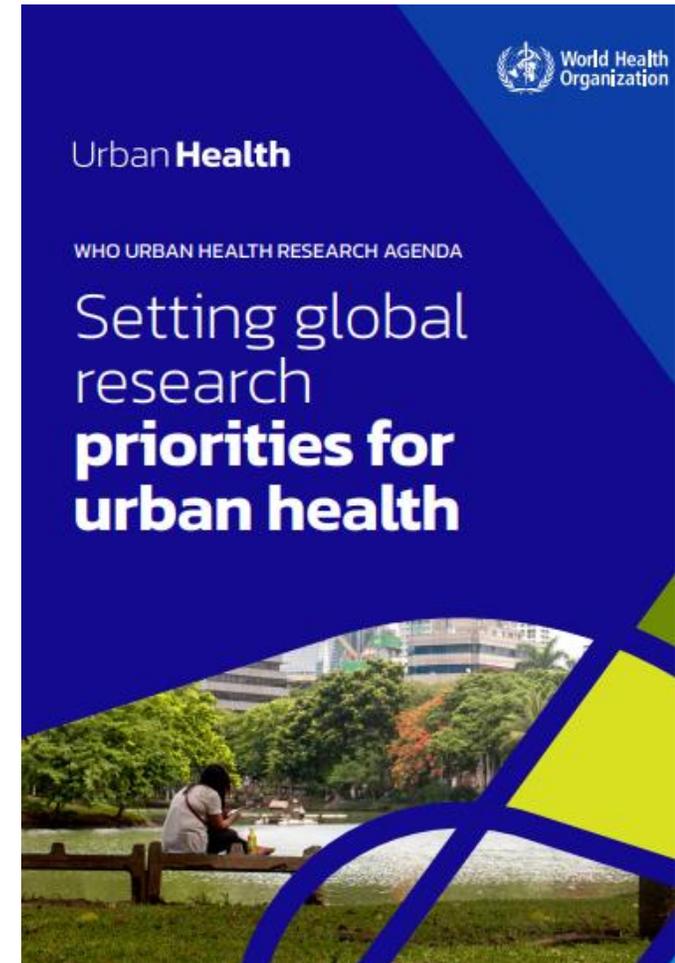
Shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge.

Setting norms and standards and promoting and monitoring their implementation.

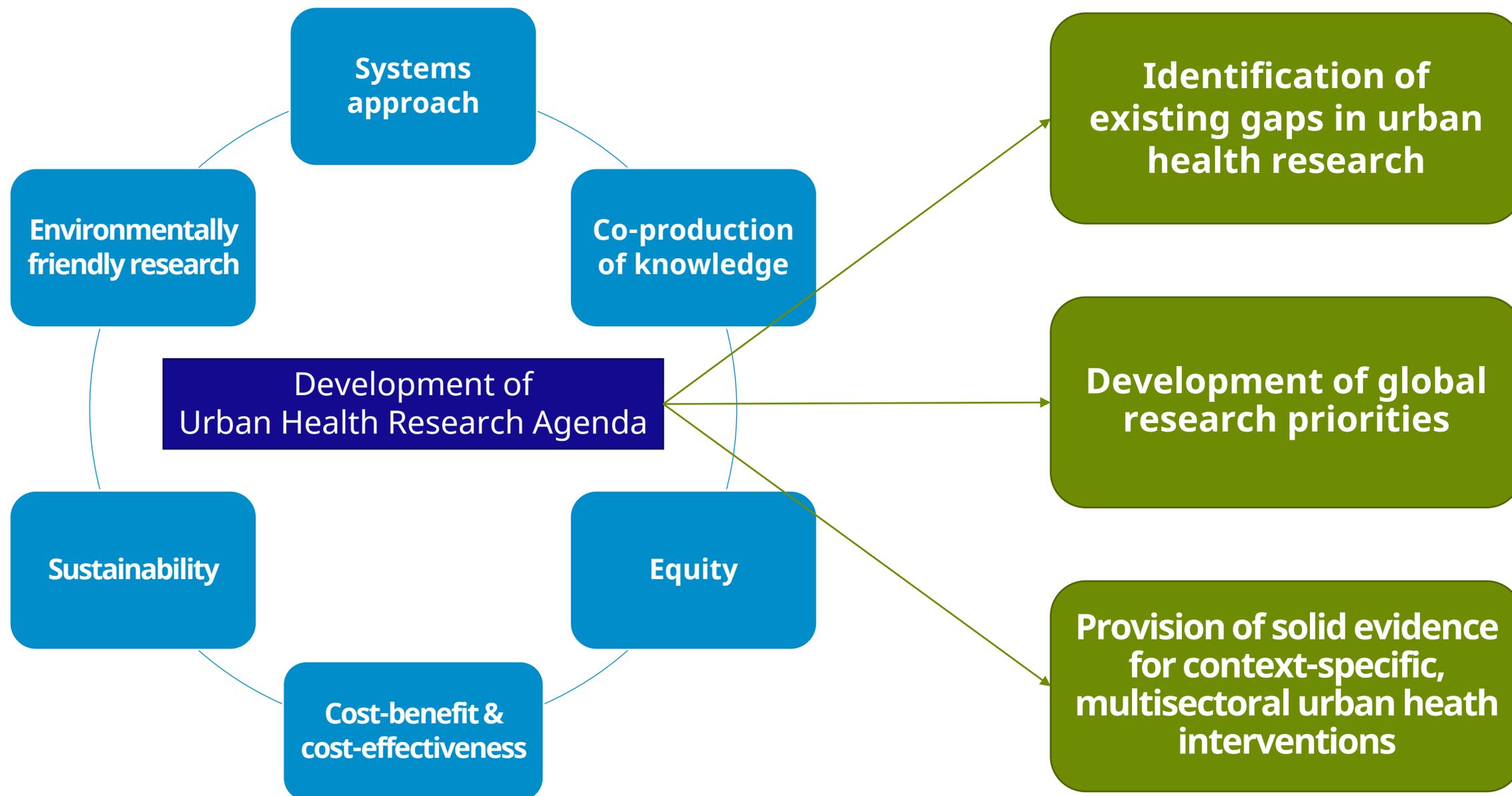
Articulating ethical and evidence-based policy options.

Providing technical support, catalyzing change, and building sustainable institutional capacity.

Monitoring the health situation assessing health trends.



Guiding principles and scope of UHRA



Setting global
research
**priorities for
urban health**



The four UHRA priorities:

- Strengthen links between urban health research findings and actions to promote urban health
- Build city-level evidence on the relationship between policy, environmental, economic, and social factors in urban environments and health outcomes
- Generate evidence on under-researched thematic areas
- Generate evidence on under-researched urban population subgroups

Strengthen links between urban health research findings and actions to promote urban health



- Map the evidence base on **existing urban health interventions, their enabling factors, and their health impacts**
- Explore user-centred **methodologies for more effective research and knowledge translation**
- Synthesize and appraise existing urban health **funding and resource mobilization strategies**
- Synthesize and appraise evidence on policy instruments to **improve equity in service provision**
- Explore **the application of innovative technologies for measuring** urban health risks and improving urban health outcomes
- Document and evaluate **the use and impact of existing health assessment tools**
- Synthesize and appraise evidence for **safeguarding health through its economic and commercial determinants**
- Synthesize and appraise evidence on **effective models for citizen participation**
- Explore approaches for **health integration into broader urban agendas**

Build city-level evidence on the relationship between policy, environmental, economic, and social factors in urban environments and health outcomes



- Investigate **local governance approaches to healthy urban development and policy-making**
- Consider multivariable **relationships between neighbourhood factors and social determinants of health**
- Research **the impact of geographic disparities within cities on vulnerable residents**
- Synthesize and appraise evidence on **access to health services and methods of engaging local health systems**
- Explore **how diverse population/stakeholder groups perceive urban health risks, protective factors and characteristics** within city contexts
- Generate more **dose-response models** of the association between the urban exposome and health outcomes
- Generate **spatiotemporal models** of the association between urban exposures and disease risk factors/health outcomes throughout the lifecourse.

Generate evidence on under-researched thematic areas



- Strengthen evidence on the **relations between climate change and urban health**
- Strengthen evidence on **effective strategies for preparing, responding and adapting to emergencies** in cities
- **Connect with existing global research frameworks** such as Planetary Health and One Health
- Strengthen evidence on **strategies to combat health disinformation and misinformation**, and communication to strengthen public trust in evidence in cities
- Strengthen evidence on **the drivers of, and interventions to address, urban mental health outcomes**
- Strengthen evidence on **the drivers of, and interventions to address, accidents and injuries in cities.**

Generate evidence on under-researched urban population subgroups



- Explore **urban inequities**, their role in compounding neighbourhood health risk and outcomes, and how addressing them can improve health equity and outcomes
- Collect, appraise, and develop **global data indicators for monitoring and evaluating urban health interventions directed at specific population groups and on equity outcomes**
- Investigate the relationship between physical and social urban environmental changes, exposures, policies and outcomes for:
 - **migrants**, including rural-urban migrants, internally displaced populations, homeless populations, and refugees
 - specific population subgroups including **women and girls, older persons, youth, LGBTQIA+ populations, workers, children, and their caregivers**
 - **residents of informal settlements**
 - **people with psychosocial, physical, sensory and intellectual disabilities**
- Investigate the **relationship between land use and zoning regulations and neighbourhood health inequities**

Learning from cities – THANK YOU !

7 April 2021
Dementia care at home: telemedicine assessments for dementia patients in Gangdong-gu, Republic of Korea

5 February 2021
Gdynia Senior Activity Centre's virtual – and very real – impact during COVID-19

5 February 2021
City Volunteering Service keeps older people safe in Łódź, Poland

28 October 2020
Lethbridge Helping Organizations COVID-19 Response

5 November 2020
Keeping Well At Home, Greater Manchester Combined Authority's Ageing Hub booklet

2 November 2020
Nantes Entraide – Citizen Mutual Aid Project

16 August 2021
Making clean cooking affordable and accessible during COVID-19: 'Pay-as-you-go' smart meters promote health equity, Nairobi

2 November 2020
Nantes Entraide – Citizen Mutual Aid Project

28 October 2020
Kampala turns data into action against COVID-19 inequalities

31 August 2020
Athens protects vulnerable communities during COVID-19

29 November 2021
Encouraging walking, Vienna, Austria - 2013

29 November 2021
Encouraging cycling in the city, Fortaleza, Brazil

26 October 2022
"The healthiest option should be the easiest option": Promoting healthier diets in Montevideo

29 November 2021
Promoting a healthy diet – London, United Kingdom

29 November 2021
Reducing the consumption of sugary drinks in Phnom Penh, Cambodia

28 October 2020
La Ruta del Movimiento (The Route of Movement), Bogotá, Colombia

23 October 2020
Lima responds to the COVID-19 pandemic on wheels

29 November 2021
Reducing the consumption of sugar-sweetened beverages in Cape Town

26 October 2021
Lima: increasing access to healthy food in schools

2 November 2020
Nantes Entraide – Citizen Mutual Aid Project

“Working together
towards healthier
populations”

Thank you

Dr Nathalie Roebbel
roebbeln@who.int

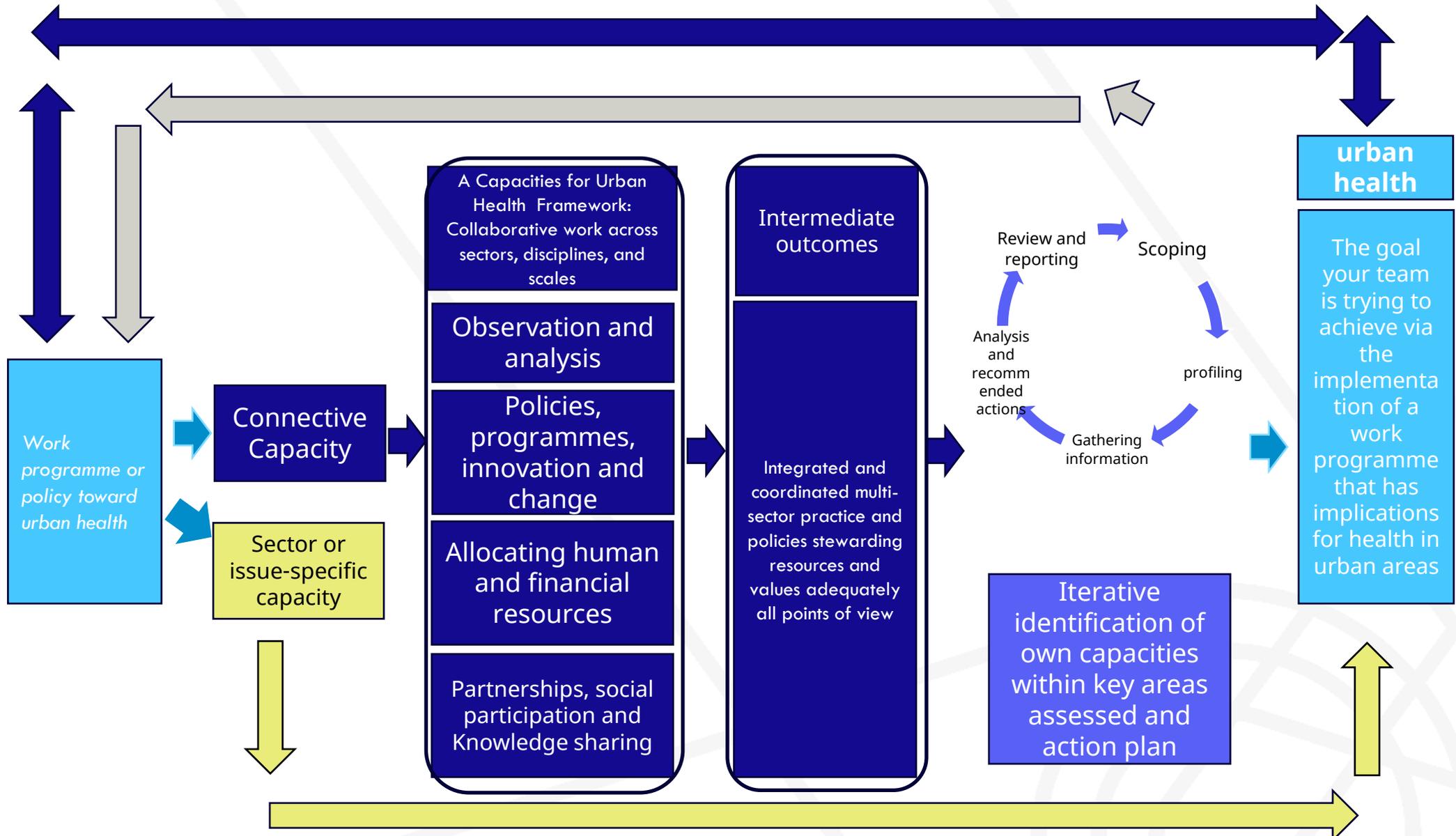


Building capacities for urban health

Whose capacity?

National, regional, provincial and local policymakers from sectors that impact urban health

Entities and individuals implementing programmes in urban areas that influence health in urban areas



urban health

The goal your team is trying to achieve via the implementation of a work programme that has implications for health in urban areas



Iterative identification of own capacities within key areas assessed and action plan