

Teachers Training Workshop

Belgrade, June 16-17, 2022



SESSION 2: OBJECTIVES AND METHODOLOGIES

The Teaching Methodological guidelines: OVERVIEW

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OUTLINE

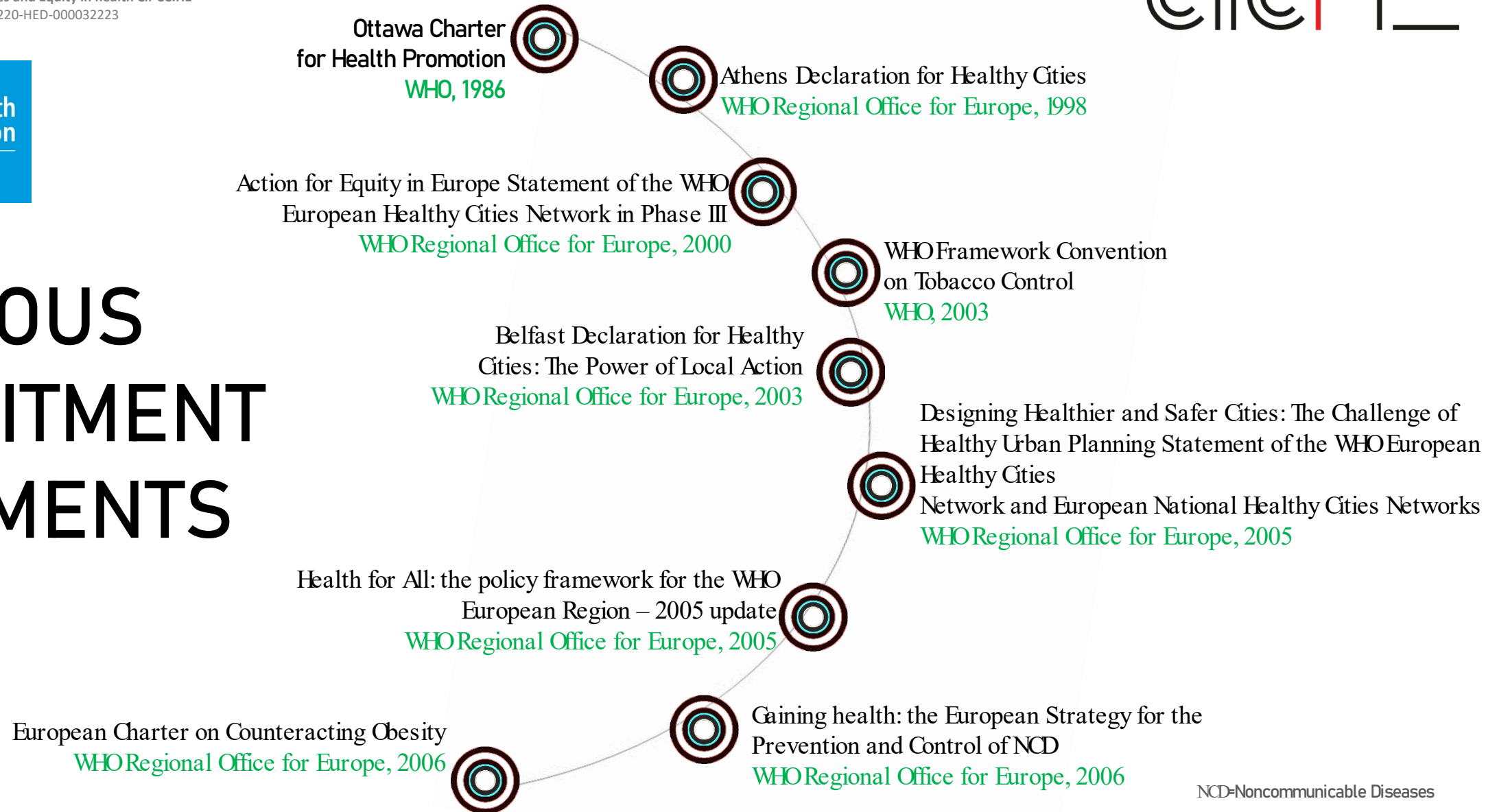


DOCUMENTS FROM INTERNATIONAL SCENARIO



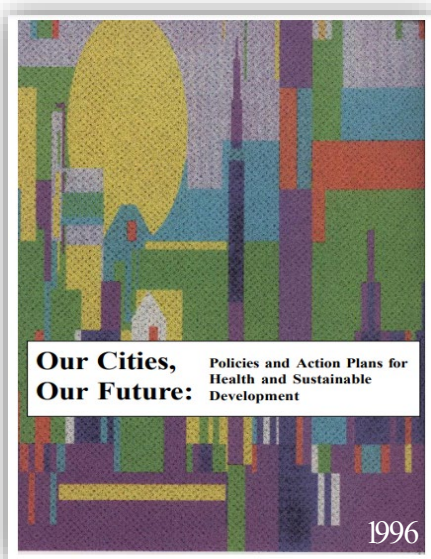


PREVIOUS COMMITMENT DOCUMENTS

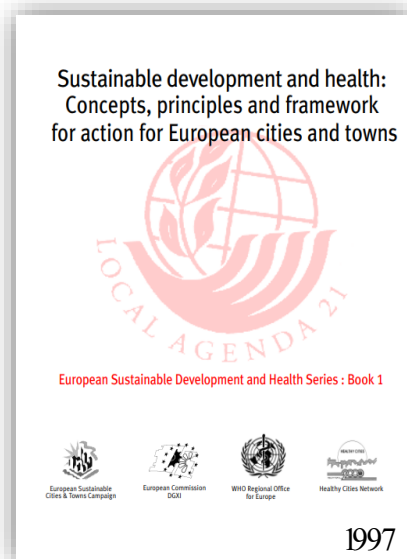


NCD=Noncommunicable Diseases

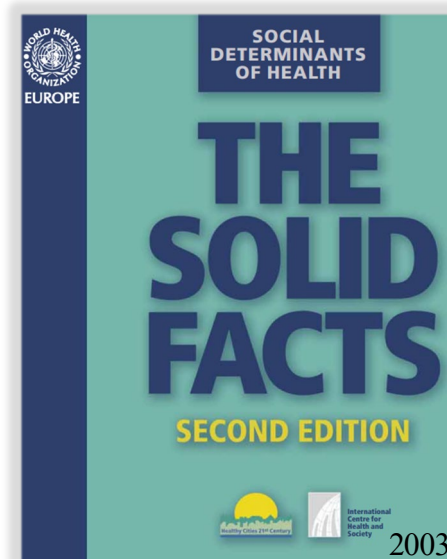
OUTLINE



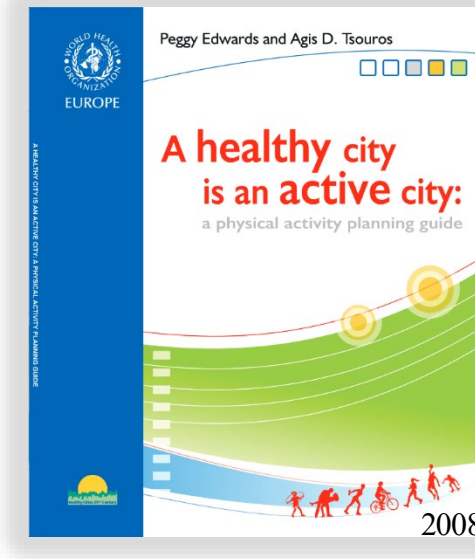
AIM Policies and action plans for health and sustainable development
Examples of innovative policy making and action are mainly drawn from cities belonging to the WHO Healthy Cities project and the Ecological Cities Programme of Organisation for Economic Co-operation and Development (OECD).



AIM To addresses the social, economic, health and environmental state of Europe's cities and towns and outlines the concerns for future development
The first document in a series on sustainable development and health produced by the WHO Healthy Cities project within the framework of the European Sustainable Cities & Towns Campaign.



AIM To develop tools and resource materials in the areas of health policy, integrated planning for health and sustainable development, urban planning, governance and social support.
Publication of the Centre for Urban Health, responsible for the Health Cities and Urban governance programme.



AIM to create a plan for physical activity, active living and sport in their city or community.
Describes how the approach relates to the Healthy Cities movement, why people need active living opportunities and who to involve; how to create, implement and evaluate the plan; what tools, good examples and other sources to use.





PREVIOUS COMMITMENT DOCUMENTS





PREVIOUS COMMITMENT DOCUMENTS



INTERNATIONAL GUIDELINES ON URBAN AND TERRITORIAL PLANNING

UN HABITAT
FOR A BETTER URBAN FUTURE

2015

A framework for improving global policies, plans, designs and implementation processes, which will lead to more compact, socially inclusive, better integrated and connected cities and territories that foster sustainable urban development and are resilient to climate change.

THE GOALS

- To develop a **universally applicable** reference framework to guide urban policy reforms;
- To capture universal principles from national and local experience that could support the development of diverse planning approaches adapted to different contexts and scales;
- To complement and link to other international guidelines aimed at fostering sustainable urban development;
- To raise the urban and territorial dimensions of the development agendas of national, regional and local governments.

URBAN AND TERRITORIAL PLANNING

A powerful instrument for reshaping the forms and functions of cities and regions in order to generate endogenous economic growth, prosperity and employment, while addressing the needs of the most vulnerable, marginalized or underserved groups.

A decision-making process aimed at realizing economic, social, cultural and environmental goals through the development of spatial visions, strategies and plans and the application of a set of policy principles, tools, institutional and participatory mechanisms and regulatory procedures.

International Guidelines on
Urban and Territorial Planning, 2015

Improve the quality of life in existing and new urban settlements.

Promote recommendations that can assist all countries and cities to effectively guide urban demographic changes (growth, stagnation or decline).

Promote key urban and territorial planning principles.



At supranational and transboundary level

- Could help direct investment to address global issues such as climate change and energy efficiency.

At national level

- To support structure and balance system of town and cities.

At city-region and metropolitan level

- To strengthen adaptation to climate change impacts addressing social and spatial disparities.

At city and municipal level

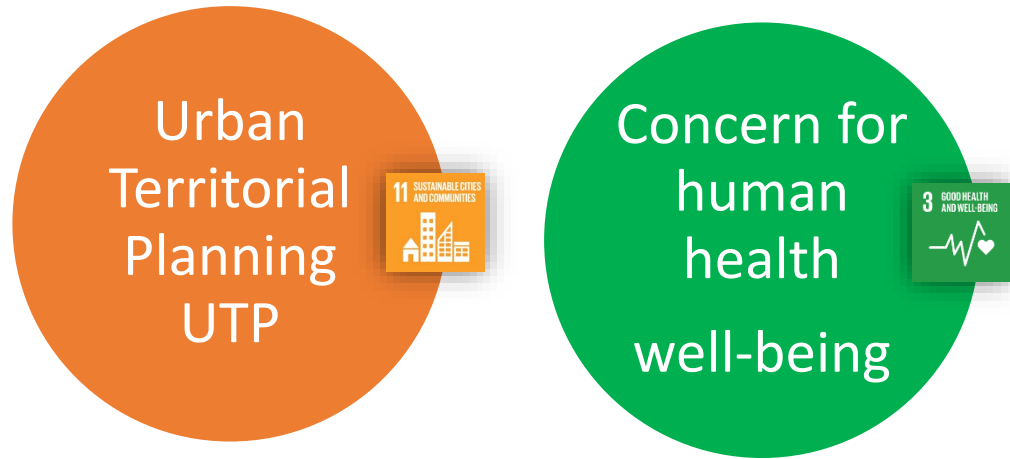
- Land-use could contribute to the protection of environmentally sensitive areas.

At neighbourhood level

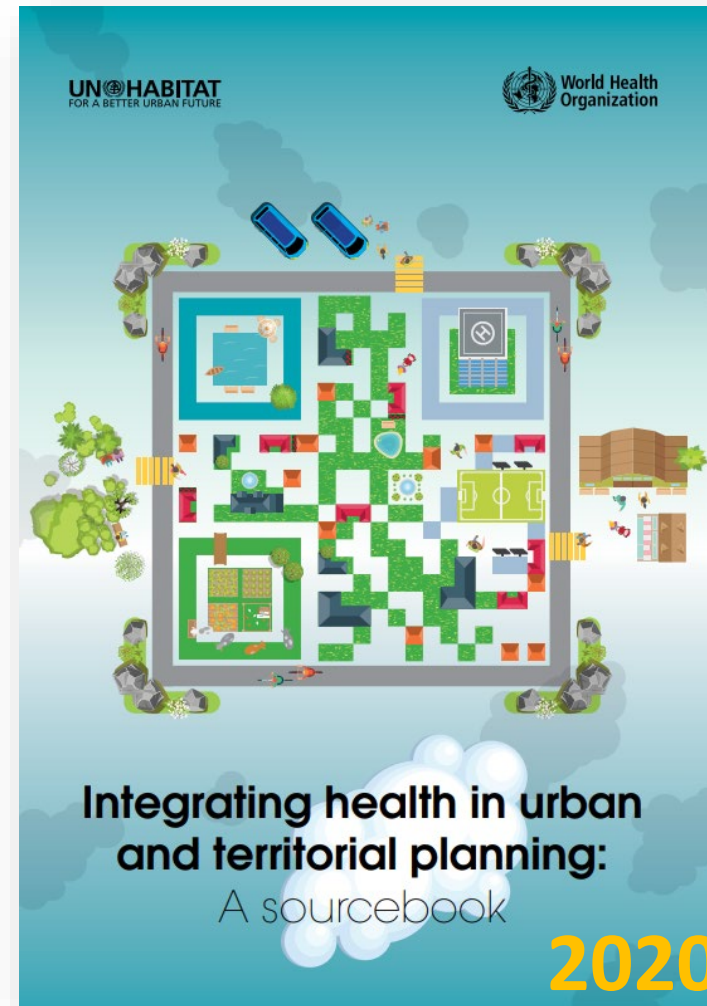
- Participatory planning could contribute to improved spatial integration and connectivity, human security and resilience.

INTERNATIONAL GUIDELINES ON URBAN AND TERRITORIAL PLANNING, 2015

Two vital elements needed to build habitable CITIES on a habitable PLANET



**IG-UTP ADVOCATE FOR URBAN AND TERRITORIAL PLANNING
AS AN INTEGRATED AND PARTICIPATORY
DECISION-MAKING PROCESS TO PLAN AND MANAGE OUR
CITIES AND TERRITORIES IN A HOLISTIC MANNER**



PREVIOUS COMMITMENT DOCUMENTS

Roadmap to implement the 2030 Agenda for Sustainable Development, building on Health 2020, the European policy for health and well-being

WHO Regional Office for Europe, 2017

Copenhagen Consensus of Mayors. Healthier and happier cities for all

WHO Regional Office for Europe, 2017

Astana Declaration on Primary Health Care
2018

Ljubljana Statement on Health Equity
2019

European Programme of Work, 2020–2025 – “United Action for Better Health in Europe”
2020

Spatial Factor



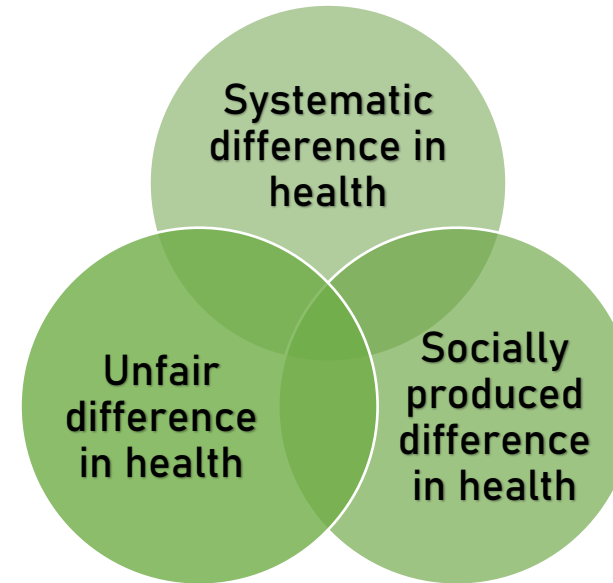
INEQUITY IN HEALTH



Ms Maimunah Mohd Sharif
Executive Director
UN-Habitat



Dr Tedros Adhanom Ghebreyesus
Director-General
World Health Organization

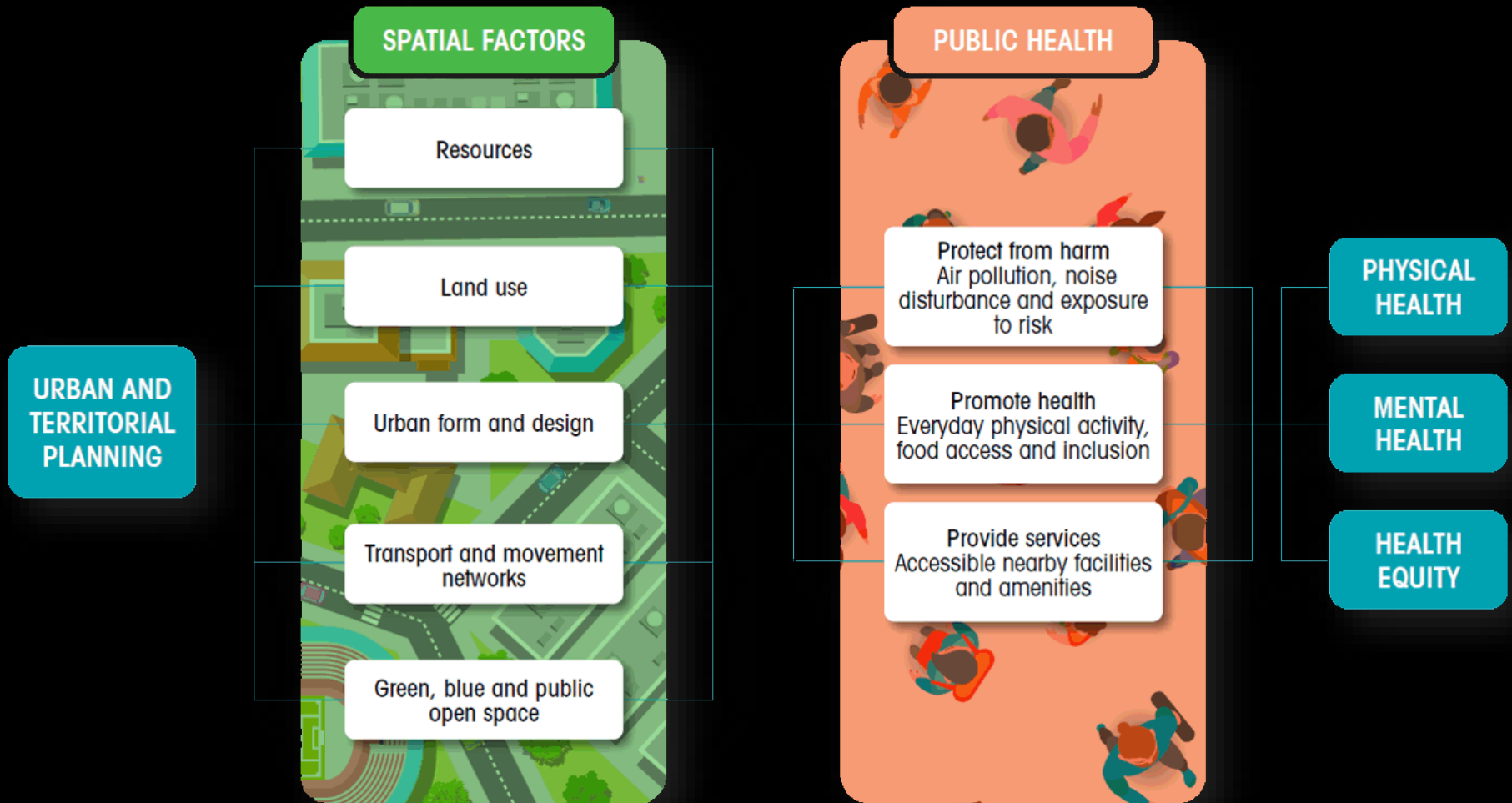


The way we plan and build our cities defines our **quality of life**. affects not only the quality of our living spaces and transport, but also the air we breathe, the water we drink, and our access to nutritious food, education, health care services and employment.

INTEGRATING HEALTH IN URBAN AND TERRITORIAL PLANNING: A SOURCEBOOK, 2020



How spatial factors impact on HEALTH AND HEALTH EQUITY



How can

HEALTH

unlock



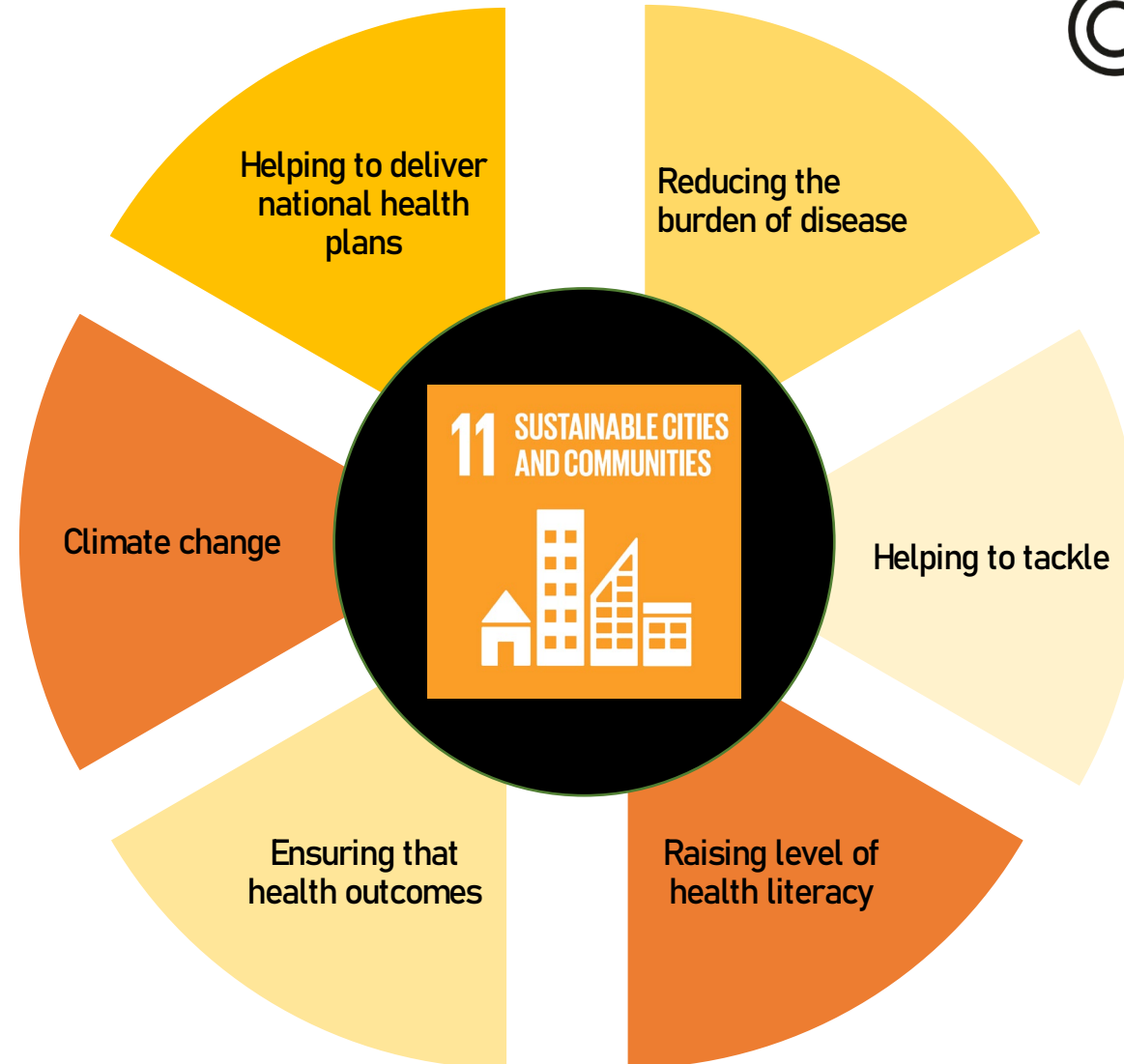
new opportunities for
Urban and Territorial Planning



How can URBAN AND TERRITORIAL PLANNING contribute



HEALTH



INTEGRATING HEALTH IN URBAN AND TERRITORIAL PLANNING: A SOURCEBOOK, 2020

FOSTERING SUSTAINABLE URBAN AND TERRITORIAL PLANNING



INTEGRATING HEALTH IN URBAN AND TERRITORIAL PLANNING: A SOURCEBOOK, 2020

Sustainable Development Goals and ENVIRONMENT- HEALTH Links



Prüss- Ustün et al, 2016.

Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks.



- Health is threaded throughout the 17 SDGs, and not restricted to SDG 3 (*health and well-being*).
- Non-communicable diseases threaten the resiliency and sustainability of cities.
- The **strong reciprocal links** that exist **between UTP and health protection** and supporting health promotion also provide a basis whereby many of the targets in SDG 11 (*sustainable cities and communities*) support population health.

KEY POINTS

OUTLINE



SUGGESTED OBJECTIVES

OUTLINE



SUGGESTED OBJECTIVES



Identify / map the areas at greatest risk in terms of exposure to Urban Health Impact (UHI), urban/demographic and socio-health factors.



- Altitude
- Urbanization
- Vegetation
- Population
- High traffic roads
- Deprivation index



OUTLINE

SUGGESTED OBJECTIVES

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EXAMPLE



Territorial characteristics: land use

Surface (Km²)

City center altitude (m)

% surface area with high population density

% surface area with low population density

% surface for industrial use

% area for agricultural use

% area with urban green

Public green per capita (m²)

% surface with dense vegetation (NDVI)

Population density per km²

OUTLINE SUGGESTED OBJECTIVES

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EXAMPLE



Distribution of the population by vegetation level

NDVI: mean (SD)

Population (%)

1. Open soil (0.1-0.2)
 2. Sparse vegetation (0.2-0.4)
 3. Moderate vegetation (0.4-0.6)
 4. Dense vegetation (0.6-0.8)
- missing

OUTLINE

SUGGESTED OBJECTIVES

Identify / map the areas at greatest risk in terms of exposure to Urban Health Impact (UHI), urban/demographic and socio-health factors.

EXAMPLE



Distribution of the population by summer temperature (May-September) of average temperatures	
°C	
Min	
1 st	
Mean	
3 rd	
Max	
Population (%)	
Low (1 st qnt)	
Medium low	
Medium high	
High (3 rd qnt)	

OUTLINE

SUGGESTED OBJECTIVES

Identify / map the areas at greatest risk in terms of exposure to Urban Health Impact (UHI), urban/demographic and socio-health factors.

EXAMPLE



Distribution of the population by PM ₁₀	
PM ₁₀ (µg/m ³)	
1 st	
Mean	
3 ^o	
Population (%)	
Low (1 st qnt)	
Medium low	
Medium high	
High (3 st qnt)	

OUTLINE SUGGESTED OBJECTIVES

Identify / map the areas at greatest risk in terms of exposure to Urban Health Impact (UHI), urban/demographic and socio-health factors.

DEPRIVATION INDICATORS

X_1 : % of population aged 13-60 with an education equal to or lower than primary school

X_2 : % of the active population unemployed or seeking their first job

X_3 : % of households with rented dwellings

X_4 : % of single-parent families with dependent children <18 years living together

X_5 : population density



The index is a continuous variable and represents the deviation from the municipal mean, reduced, of the deprivation indicators (x_j)

Deprivation index
Population (%)
1. Low level
2.
3.
4.
5. High Level
missing

OUTLINE SUGGESTED OBJECTIVES

Identify / map the areas at greatest risk in terms of exposure to Urban Health Impact (UHI), urban/demographic and socio-health factors.

EXAMPLE



Description of some morphological characteristics

Resident population

Altitude

% area with high population density

High speed roads density

Density other roads

Railway density

% public green area

% with the presence of water



Report on the quality of life in European cities, 2020

European Commission, Directorate for Regional and Urban Policy
October 2020

Main Questionnaire

Q1. [PROG: SINGLE RESPONSE GRID]

Generally speaking, please tell me if you are very satisfied, rather satisfied, rather unsatisfied or very unsatisfied with each of the following issues in your city or area.

Rows [PROG: Randomise items 1-10]

1. Public transport, for example the bus, tram or metro.
2. Health care services, doctors and hospitals.
3. Sport facilities such as sport fields and indoor sports halls.
4. Cultural facilities such as concert halls, theatres, museums and libraries.
5. Green spaces such as parks and gardens.
6. Public spaces such as markets, squares, pedestrian areas.
7. Schools and other educational facilities.
8. The quality of the air.
9. The noise level.
10. Cleanliness.

Columns

4. Very satisfied
3. Rather satisfied
2. Rather unsatisfied
1. Very unsatisfied
99. Don't know/No Answer/Refuses (DO NOT READ OUT)

https://ec.europa.eu/regional_policy/en/information/maps/quality_of_life



OUTLINE



SUGGESTED OBJECTIVES



Identification of UHI mitigation interventions in urban areas / "win-win" strategies with greater co-benefits in terms of health.



Assessment of albedo, the reflective power of a surface.

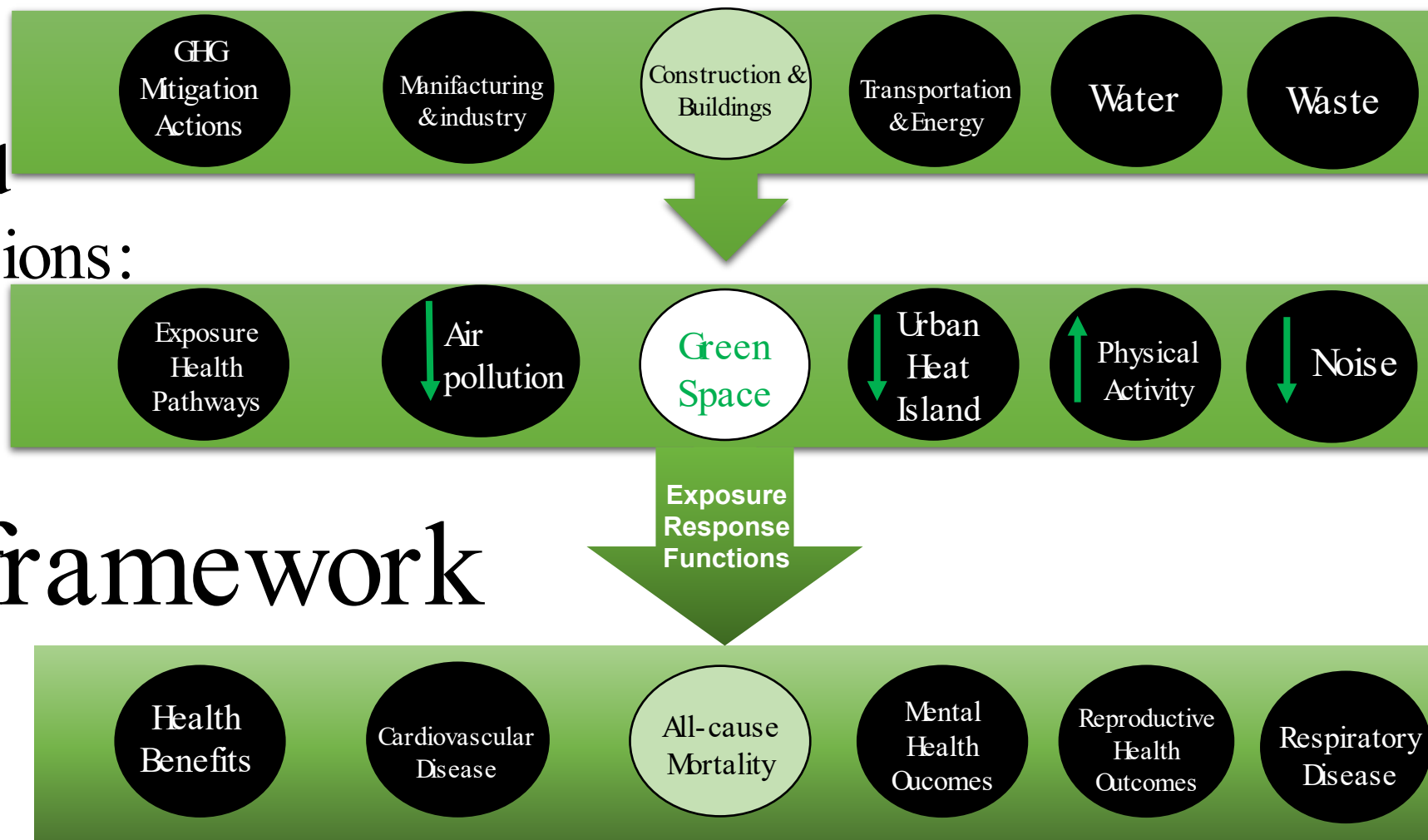


Construction of the three-dimensional model ENVI-met.



Health mitigation and
co-benefits interventions:

conceptual framework



- **Socioeconomic disadvantage (deprivation index) is a determinant of health outcomes.**
- **The variability of the deprivation index in the city tends to assume geographical patterns.**
- **Some indicators of soil characteristics and anthropization bring out signals potentially correlated with the deprivation index.**

KEY POINTS

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DOCUMENTS FROM INTERNATIONAL SCENARIO



SUGGESTED OBJECTIVES



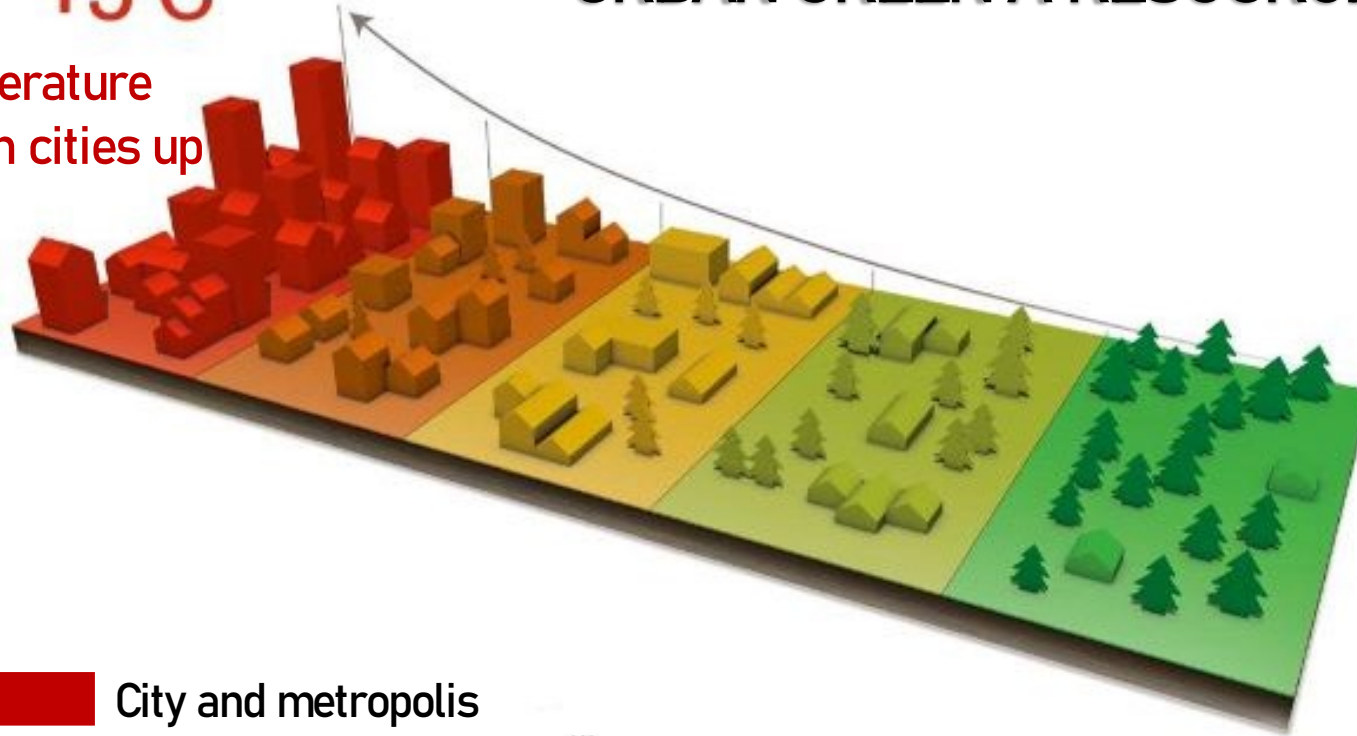
HEALTH MITIGATION INTERVENTION



URBAN GREEN A RESOURCE FOR HEALTH

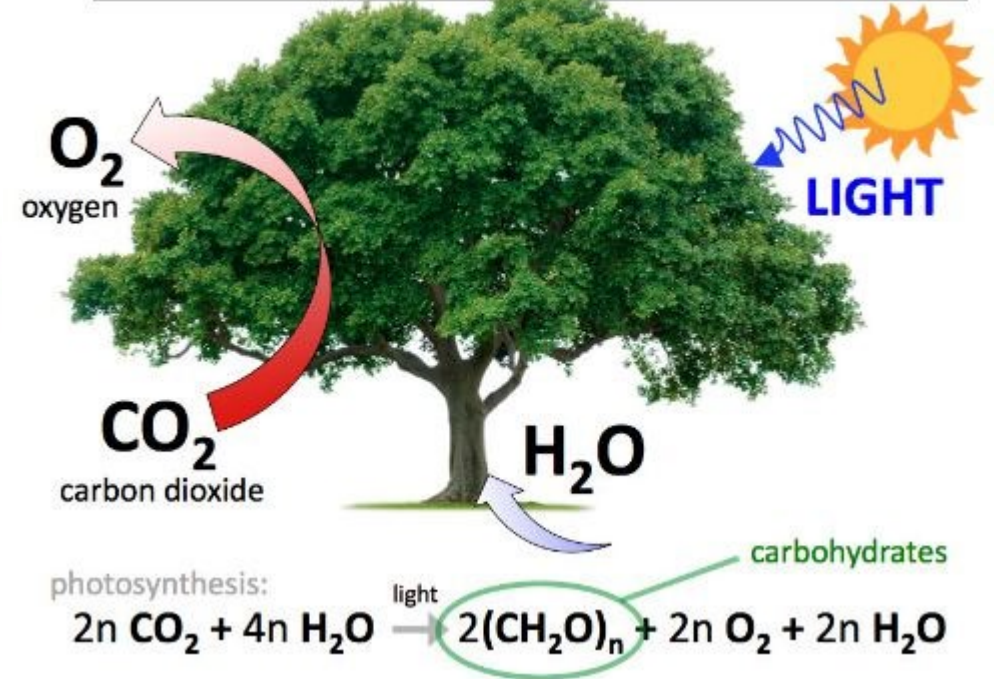
+5°C

Temperature rise in cities up to

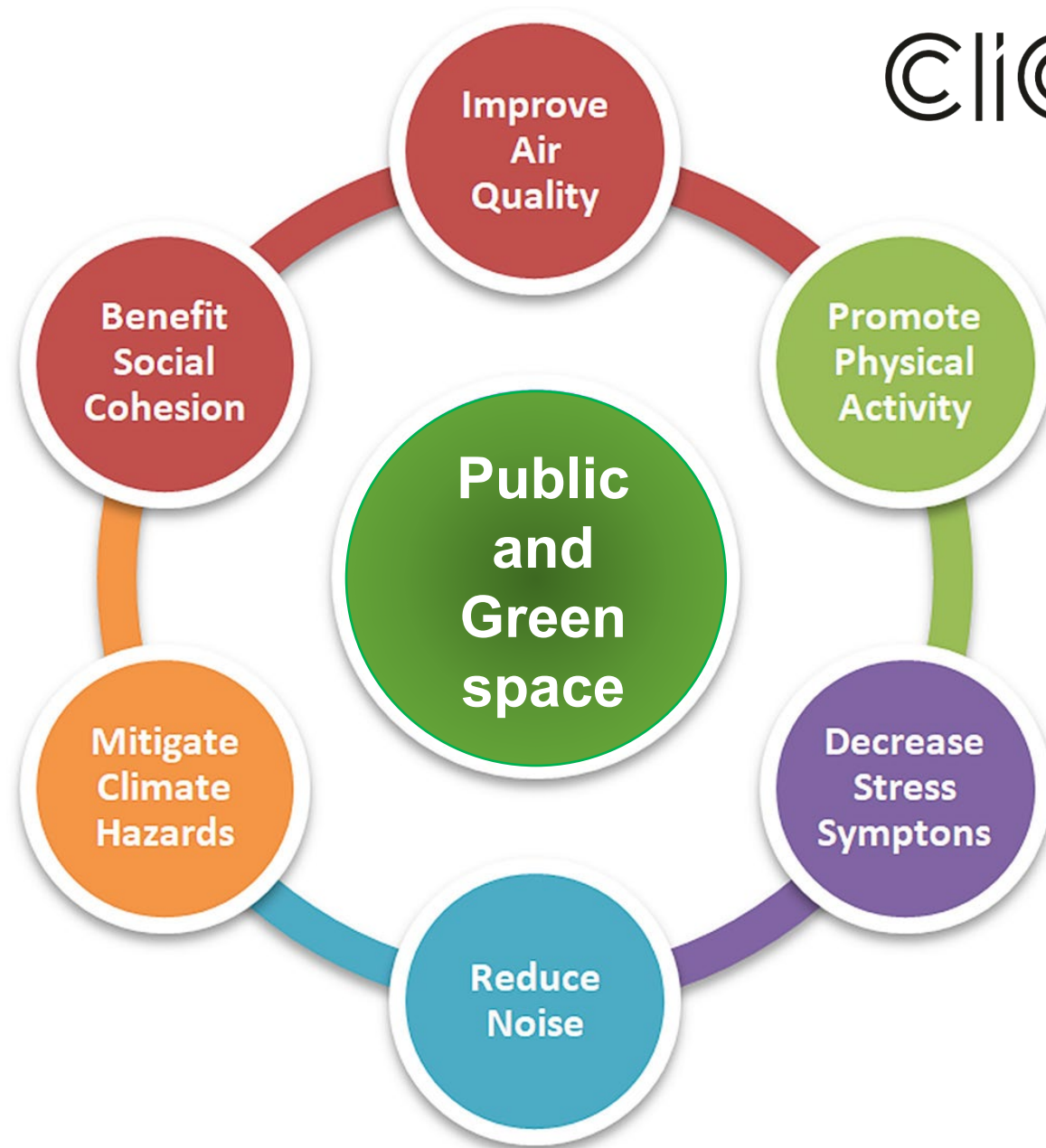


- City and metropolis
- Urban centers with medium population density
- Urban suburbs with parks and surrounding greenery
- Rural areas, crops - not very populated
- Natural areas scarcely or not at all populated

Carbon Dioxide & Carbon Fixation



URBAN GREEN A RESOURCE FOR HEALTH



URBAN
GREEN
A RESOURCE
FOR HEALTH



HEALTH MITIGATION INTERVENTIONS

Total and average annual reduction of deaths attributable to a temperature reduction of 1.3°C of the specific city average temperature in the period

Total and average annual reduction of deaths attributable to a temperature reduction of 2°C of the specific city average temperature in the period

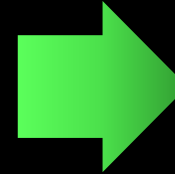
Total and average annual reduction of deaths attributable to a temperature reduction of 1.3°C and 2°C of the specific city average temperature in the period

EXAMPLE

Selected area for NBS interventions

Selected area: examples of critical issues

- heavily built up area
- poor vegetative cover
- high prevalence of population > 65 years
- presence of pollutant production activities



What to do: examples of activities

- analysis of the actual state of the area using the ENVI-met microclimatic software
- survey of plant species present and selection of tree, shrub and herbaceous species to be included
- elaboration of different cooling scenarios
- simulation through ENVI-met of the scenes with quantification of the benefits (temperature, relative humidity, etc.)



EXAMPLE

Selected area for NBS interventions

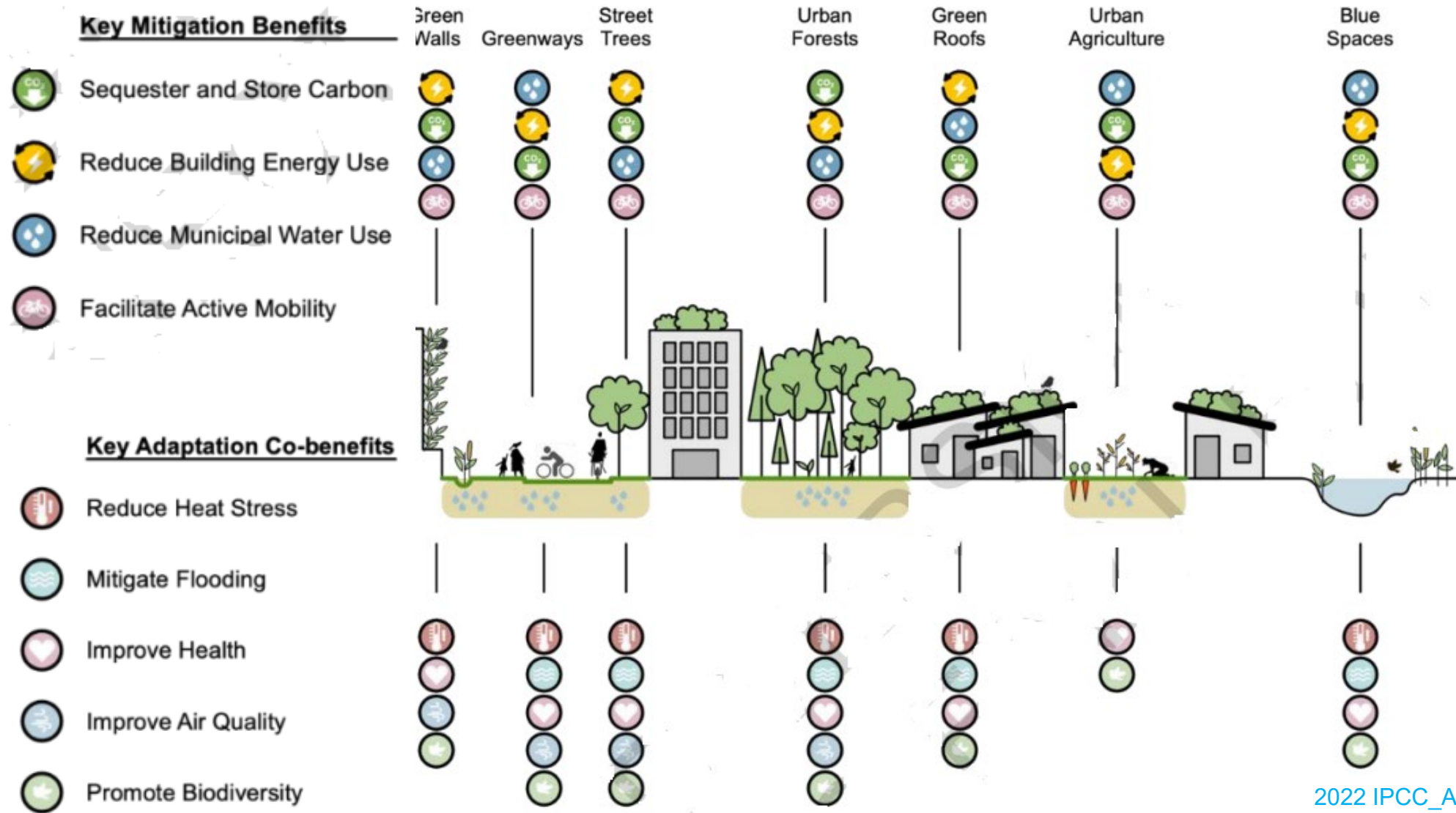
Selected area:
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- heavily built up area;
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What to do:
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- analysis of the actual state of the area using the ENVI-met microclimatic software;
- survey of plant species present and selection of tree, shrub and herbaceous species to be included;
- elaboration of different cooling scenarios;
- simulation through ENVI-met of the scenes with quantification of the benefits (temperature, relative humidity, etc.).

Potential
 integration of
 various green
 and blue
 infrastructure
 strategies within
 an urban system



2022 IPCC_AR6_WGIII_FinalDraft_Chapter08.pdf

Urban forests and street trees provide the greatest mitigation benefit because of their ability to sequester and store carbon while simultaneously reducing building energy demand.

	Urban Green and Blue Infrastructure	Mitigation Benefits	Adaptation Co-benefits	SDG Linkages
Urban Forests		<ul style="list-style-type: none"> CO₂ sequestration (Green bar) Energy savings (Yellow bar) Water savings (Blue bar) Health and well-being (Pink bar) 	<ul style="list-style-type: none"> Health and well-being Quality of life Resilient infrastructure Life on land 	
Street Trees		<ul style="list-style-type: none"> CO₂ sequestration (Green bar) Energy savings (Yellow bar) Water savings (Blue bar) Health and well-being (Pink bar) 	<ul style="list-style-type: none"> Health and well-being Quality of life Resilient infrastructure Life on land 	

2022 IPCC_AR6_WGIII_FinalDraft_Chapter08.pdf

➤ The assessments of mitigation benefits are dependent on context, scale, and spatial arrangement of **each green infrastructure type** and their proximity to buildings.

➤ Local implementations of **urban green infrastructure** can pursue toward **inclusive sustainable urban planning** (SDG 11.3) and the provision of safe, inclusive and accessible green and public spaces for all.

KEY POINTS

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DOCUMENTS FROM INTERNATIONAL SCENARIO



SUGGESTED OBJECTIVES



HEALTH MITIGATION INTERVENTION



CONCLUSIONS



CONCLUSIONS

- The importance of **urban green infrastructure** for reducing the total warming in urban areas due to its local cooling effect on temperature and its **benefits for climate adaptation**.
- **Urban green infrastructure** involves the protection, sustainable management, and restoration of natural or modified ecosystems while simultaneously providing **benefits for human well-being and biodiversity**.



CiC+HE

Thanks for your attention

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