

HEALTHY AND AGE-FRIENDLY CITIES IN THE PEOPLE'S REPUBLIC OF CHINA

A Framework for Mainstreaming Health Impact Assessment and Healthy and Age-Friendly City Action and Management Planning for Cities, Projects, and Master Plans

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Key challenges and vision? Health and ageing as opportunities in an urbanizing four-generation world

1. **Health and wellbeing** will be central for people and communities, and city competitiveness.
2. **Urbanization and ageing:** most people will live in cities, many will be above 60, and many of these will grow to high ages, requiring changes in policies and public health perspectives.
3. **Urbanization challenges:** social and demographic inclusion, community cohesion, social protection systems'- and urban fiscal sustainability, environmental- and climate change.
4. **Four-generation society:** small families, small households and singles, more elderly, fewer babies, children and young adults require more vibrant and interconnected community life.
5. **Future of work and technology:** polarization of work and employment, changing work-life patterns, technology opportunities like age-friendly smart cities and communities.



What we offer? Operational tool integrating sustainable urban planning and management with health and age-friendly outcomes and care systems to achieve Strategy 2030 outcomes

Developed framework with two interconnected tools:

- 1. HIA: Health Impact Assessment** (including needs / challenges of specific age-groups)
- 2. HACAMP: Healthy and Age-Friendly City Action and Management Plan**
 - *Mainstreaming for cities and projects (analogous to EIA and EMP) as constructive contributions;*
 - *Building on historical and recent evidence-based scientific and piloting work;*
 - *Integrating urban, health and ageing aspects promoting positive outcomes;*
 - *Adding some innovative new aspects;*
 - *Aligning with sustainable urban planning principles with many co-benefits for health, aligned with OP4 and Strategy 2030.*



Background: Health and city planning have been intrinsically linked throughout history

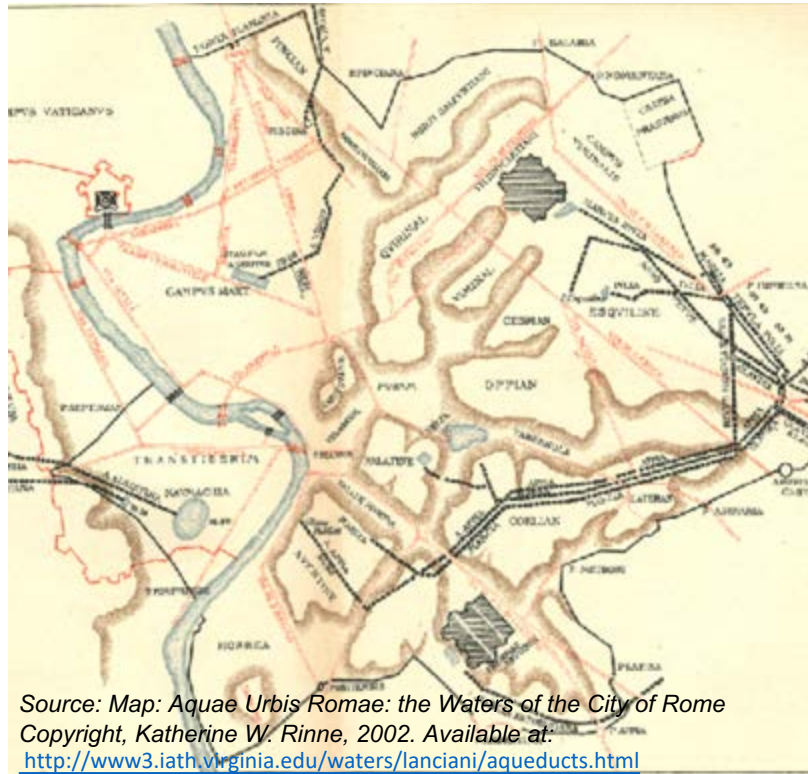
- Even before ancient **Greek and Roman times** planners considered variety of health dimensions for location and layout of cities
- They had access to food and methods for safe food storage,
- water supply systems, sewers, latrines, public baths, water, and downstream dilution of sewage and stormwater,
- good natural ventilation, sun exposure and shadow for housing, public space.
- **Middle ages:** Plague, cholera, other epidemics - land use rules along rivers, hospitals, animal markets outside city walls, rules of hygiene, bath houses



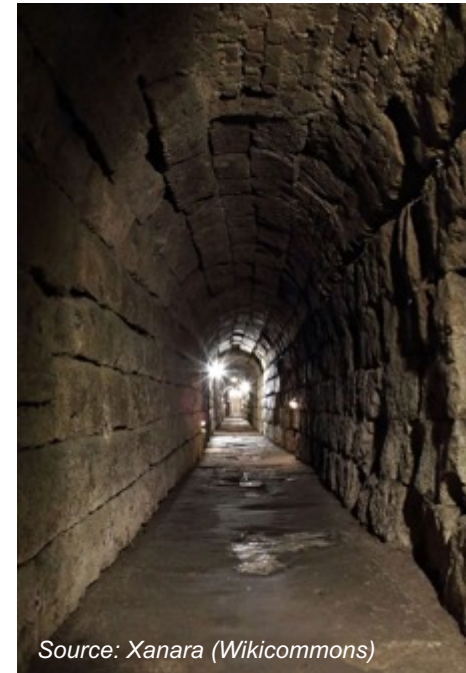
Source: Natalie Azarova (Wikicommons)



Source: Fubar Obfusco (Wikicommons)



Source: Map: *Aquae Urbis Romae: the Waters of the City of Rome*
Copyright, Katherine W. Rinne, 2002. Available at:
<http://www3.iath.virginia.edu/waters/lanciani/aqueducts.html>



Source: Xanara (Wikicommons)

Referals: Leonard Duhl, Evelyn de Leeuw, Vitruvius, Thomas Morus, Frederick Law Olmsted, Ebenezer Howard, Patrick Geddes, Daniel H, Burnham, Jane Jacobs, Lewis Mumford, Leonardo Benevolo, Peter Hall, Jan Gehl



Background: Health and city planning have been intrinsically linked throughout history

Industrialization and urbanization in **1800s**:

- John Snow map in London links cholera outbreak to polluted water source and 'Great Stink' in London (1854 and 1858) prompt sewer and embankment works
- Large urban expansions in Europe and United States integrate sewer and wastewater treatment (i.e. Berlin, Barcelona)
- Chicago: slaughterhouses and heavy industries pollute lake Michigan, cholera outbreak, change of flow of river in 1900
- Critique of urban conditions leads to Garden Cities and City Parks



E. Howard: Welwyn Garden City. Available at: <https://www.alamy.com/stock-photo-welwyn-garden-city-an-example-of-town-planning-56680331.html>



Referals: Leonard Duhl, Evelyn de Leeuw, Vitruvius, Thomas Morus, Frederick Law Olmsted, Ebenezer Howard, Patrick Geddes, Daniel H, Burnham, Jane Jacobs, Lewis Mumford, Leonardo Benevolo, Peter Hall,



Healthy Cities Programs since 1985: WHO Europe Healthy Cities Project Early Principles

Source: World Health Organization. Available at: http://www.euro.who.int/data/assets/pdf_file/0013/101650/E87743.pdf

11 Qualities of a Healthy City

1. Clean, safe, high-quality environment
2. **Stable and sustainable ecosystem**
3. Strong, mutually supportive and non-exploitative community.
4. **Public participation (life, health wellbeing)**
5. Meet basic needs for all people (food, water, shelter, income, safety, work)
6. **Variety of experiences and resources, contacts, interaction and communication.**
7. **Diverse, vital and innovative economy.**
8. **Encourage connections with cultural and biological heritage**
9. City form and design that enhances the above parameters and forms of behavior.
10. Public health and sick care services for all.
11. High health status (high positive health status and low disease status).

(Hancock and Duhl, 1986)

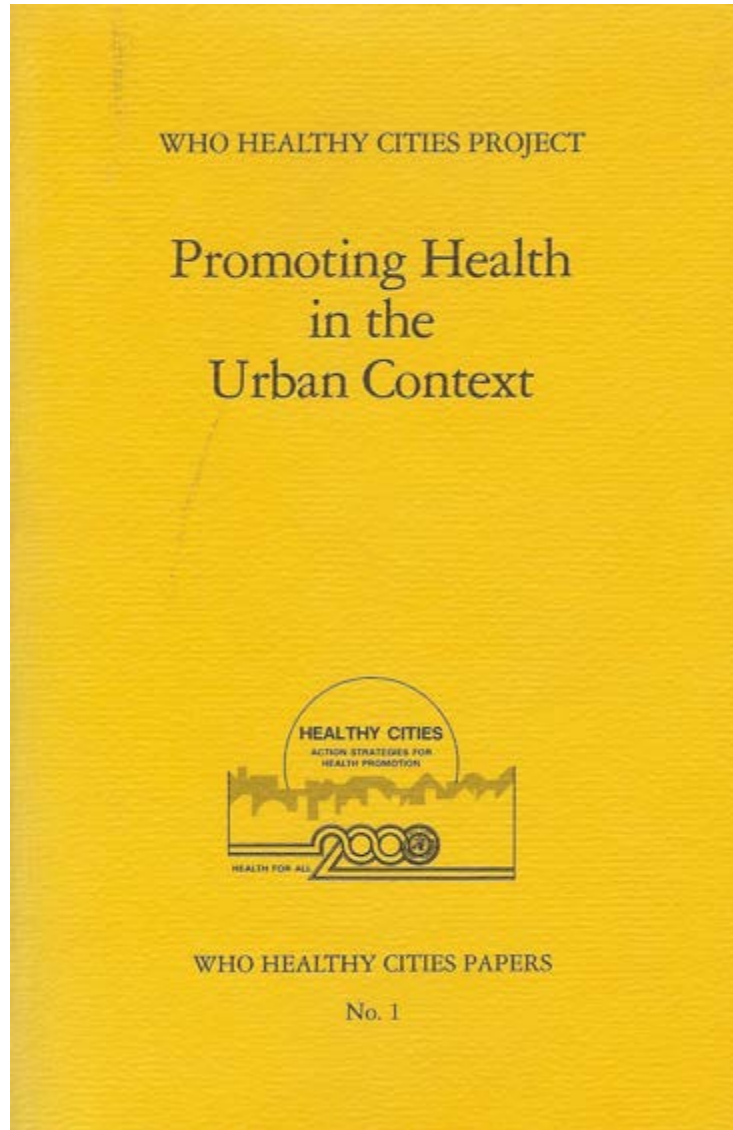


Table 1 Possible Indicators of a Healthy City

Parameter	Possible Indicator
1. Physical environment quality	- overall index
- pollution	- air pollution index
- urban design	- per cent green space
- housing	per cent national/international standards
2. Ecosystem sustainability	- local survival of sensitive species
- viability	- ratio of non-renewable energy imports to local renewable energy production
- sustainability	
3. Community strength	- coherence (Antonovsky, 1979)
- mutuality	- self-esteem perceived social support
4. Participation & Control	- municipal democracy index (Morris 1982)
5. Basic human needs	- POLI index
- food and water	- per cent hungry
- shelter	- per cent homeless
- income	- per cent below poverty line
	- relative distribution of income
	- violent crime rate
	- per cent employed (formal and informal economies)
6. Access to variety	- perceived and objective
- access	- scope and variety reported
- variety	
- experiences	
- resources	
- contact/interaction	
7. Diverse city economy	
- variety	
- types of enterprise	
- size of enterprises	
- innovation	
- level of wealth	
- distribution of wealth	
8. Sense of connectedness	
- history	
- culture	
- other people	- social ties, networks
- nature/biology	
9. City form	
- fit /Lynch)	- stability
	- adaptability
10. Optimum public health & health care services	
- appropriateness	- extent of primary care, home care
- accessibility	- per cent not covered by »insurance«
- health protective legislation	- non-smoking by-laws
	- community prevention index (Irvine)
11. High Health Status	
a) High positive health	
- preventive behaviour	- diet or exercise
- perceived well-being	- happiness, satisfaction with health
- social well-being	- support perceived
- overall	- coherence, self-esteem
b) low negative health (disease)	
- risk behaviour	- per cent smoking
- stress	- life events
- morbidity	- days of reported disability
- mortality	- life expectancy at age 40



WHO Europe: Healthy Cities Programs

“Healthy cities are places that deliver for people and the planet. They engage the **whole of society**, encouraging the participation of all communities in the pursuit of peace and prosperity. Healthy cities lead by example in order to achieve change for the better, **tackling inequalities and promoting good governance and leadership for health and well-being**. Innovation, knowledge sharing and health diplomacy are valued and nurtured in healthy cities.”
[WHO]

Definition of *Health* from constitution of WHO: **Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity**. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief or economic and social condition.



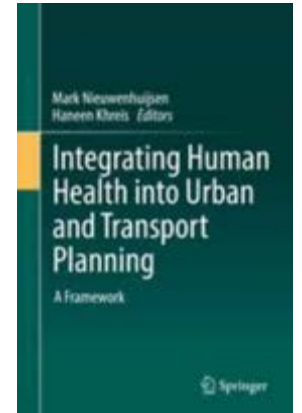
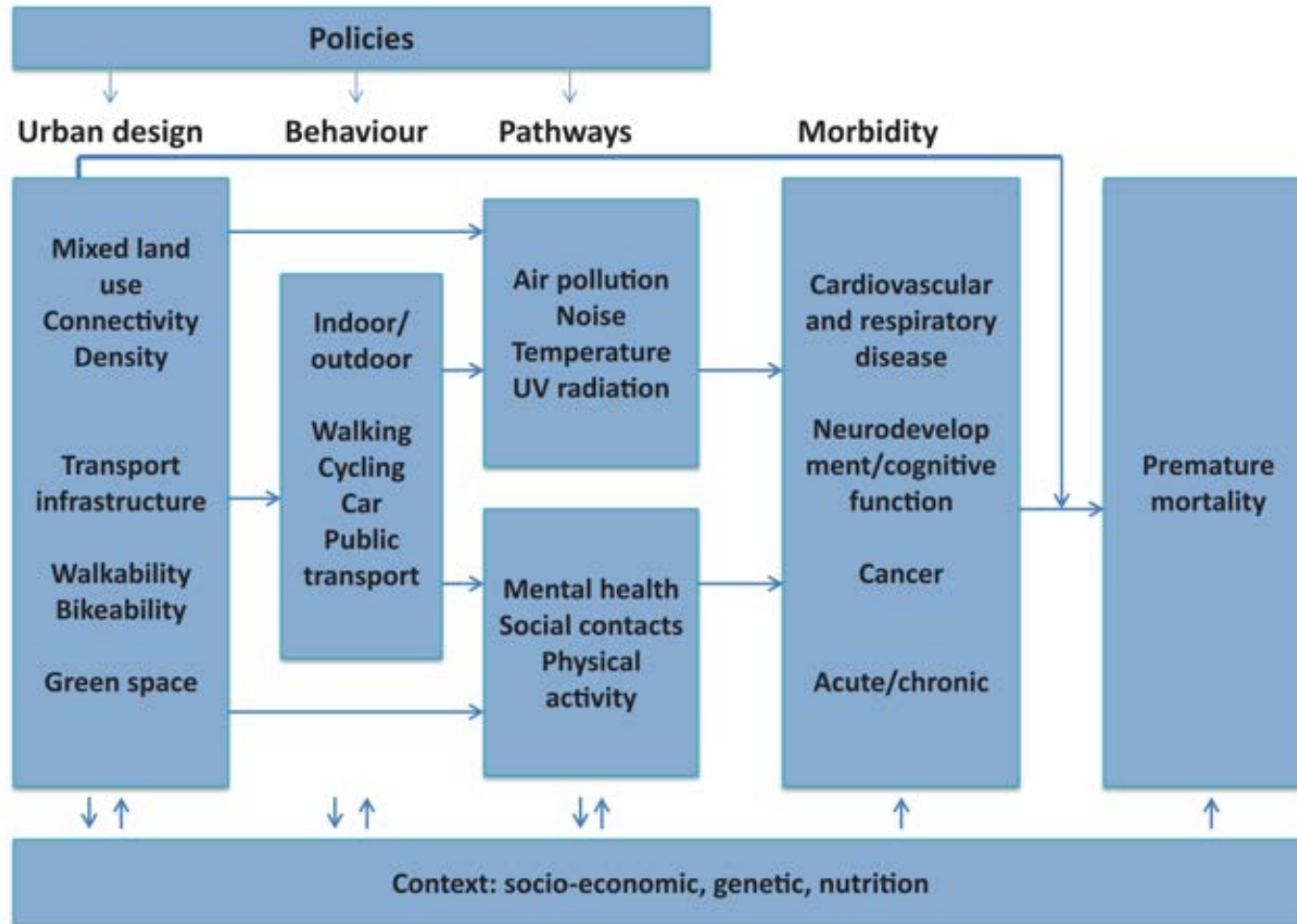
Source: UNICEF. *Shaping Urbanization for Children - Handbook*.

Available at: https://www.unicef.org/publications/files/UNICEF_Shaping_urbanization_for_children_handbook_2018.pdf



WHO Europe: Healthy Cities Programs

Figure 1: Inter-linkages and pathways linking policies to urban infrastructure, behaviour and health effects.



Source: Nieuwenhuijsen MJ. Urban and transport planning, environmental exposures and health new concepts, methods and tools to improve health in cities. Environ Health. 2016;8;15 Suppl 1:38. doi: 10.1186/s12940-016-0108-1.



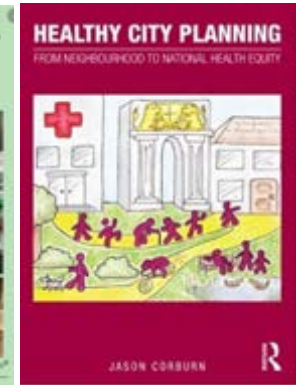
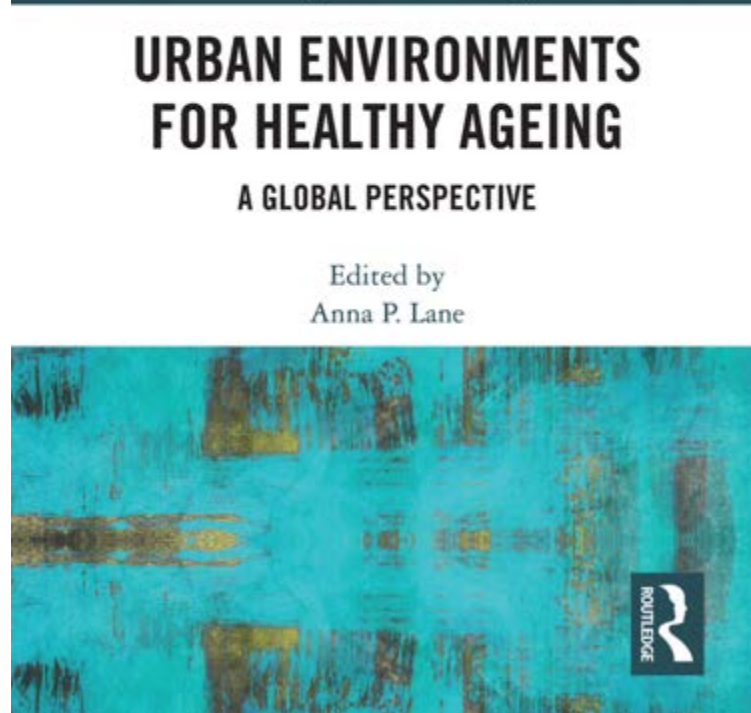
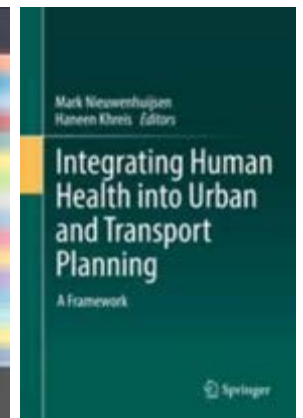
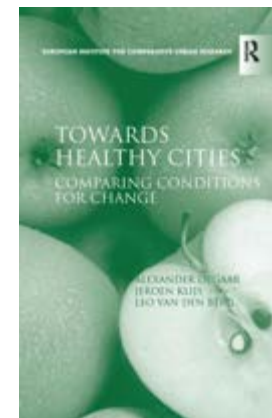
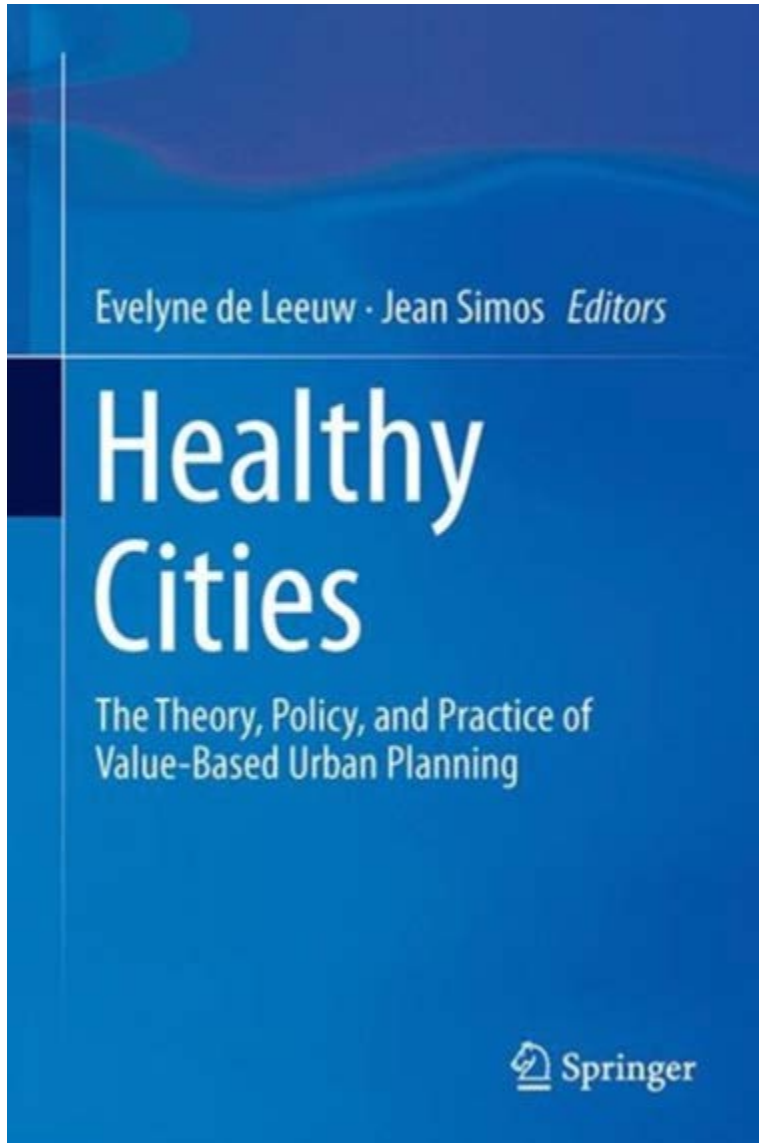
WHO Europe: Health benefits of Green Spaces

Source: World Health Organization. Available at: www.who.int/data/assets/pdf_file/0010/342289/Urban-Green-Spaces_EN_WHO_web3.pdf?ua=1





Healthy Cities: Scientific Approaches, Textbooks and Practice Guides





International Healthy Cities Networks – Current Objectives

Source: World Health Organization. Available at: <https://www.who.int/healthpromotion/conferences/9gchp/9gchp-mayors-consensus-healthy-cities.pdf?ua=1>



Shanghai Consensus on Healthy Cities 2016



Healthy Cities
MAYORS FORUM
健康城市 市长论坛

Our governance principles

As mayors we commit to five Healthy Cities governance principles:

1. **Integrate health as a core consideration in all policies:** prioritize policies that create cobenefits between health and other city policies, and engage all relevant actors in partnership-based urban planning;
2. **Address all – social, economic and environmental – determinants of health:** implement urban development planning and policies which reduce poverty and inequity, address individual rights, build social capital and social inclusion, and promote sustainable urban resource use;
3. **Promote strong community engagement:** implement integrated approaches to promoting health in schools, workplaces, and other settings; increase health literacy; and harness the knowledge and priorities of our populations through social innovation and interactive technologies;
4. **Reorient health and social services towards equity:** ensure fair access to public services and work towards Universal Health Coverage;
5. **Assess and monitor wellbeing, disease burden and health determinants:** use this information to improve both policy and implementation, with a special focus on inequity – and increase transparency accountability.

Our ten priority Healthy City action areas

As mayors we commit to ten Healthy Cities action areas which we will integrate fully into our implementation of the 2030 sustainable development agenda. We will:

1. work to deliver the **basic needs of all our residents (education, housing, employment and security)**, as well as work towards building more equitable and sustainable social security systems;
2. take measures to **eliminate air, water and soil pollution in our cities, and tackle climate change** at the local level by making our industries and cities green and ensure clean energy and air;
3. **invest in our children**, prioritize early child development and ensure that city policies and programs in health, education and social services leave no child behind;
4. **make our environment safe for women and girls**, especially protecting them from harassment and gender-based violence;
5. **improve the health and quality of life of the urban poor, slum and informal settlement dwellers, and migrants and refugees** – and ensure their access to affordable housing and health care;
6. **address multiple forms of discrimination**, against people living with disabilities or with HIV AIDS, older people, and others;
7. **make our cities safe from infectious disease** through ensuring immunization, clean water, sanitation, waste management and vector control;
8. **design our cities to promote sustainable urban mobility**, walking and physical activity through attractive and green neighborhoods, active transport infrastructure, strong road safety laws, and accessible play and leisure facilities;
9. implement **sustainable and safe food policies** that increase access to affordable healthy food and safe water, reduce sugar and salt intake, and reduce the harmful use of alcohol including through regulation, pricing, education and taxation;
10. **make our environments smoke free**, legislating to make indoor public places and public transport smoke-free, and banning all forms of tobacco advertising, promotion and sponsorship in our cities.

We – more than 100 mayors from around the world – have come together on 21 November 2016 in Shanghai, China – united in the knowledge that health and sustainable urban development are inextricably linked, and steadfastly committed to advancing both. We also recognise that health and wellbeing are at the core of the United Nations Development Agenda 2030 and its Sustainable Development Goals.



Jan Gehl Technical Guides

- 1. Inclusion is outcome:** All people who use a public space feel welcome, respected, safe, and accommodated, regardless of who they are etc.
- 2. Inclusion is a process:** Inclusionary public space processes recognize and respect needs and values and actively engaging and cultivating trust allowing all community members to shape, achieve, and sustain a common vision.
- 3. Inclusion is a tool:** Can reduce and ultimately eliminate health inequities stemming from long-term systemic discrimination and other barriers.
- 4. Healthy inclusive public places can support health equity:** Accessible and welcoming to all; Reflect shared social values (i.e. dignity, respect)

Source: Jan Gehl Institute



etplace in Burlington, Vermont (Photo: Steve Mease via Ch

Source: Jan Gehl Institute

Inclusive Healthy Places

A Guide to Inclusion & Health
in Public Space: Learning
Globally to Transform Locally



Jan Gehl Technical Guides



Principle 1: Context

Recognize community context by cultivating knowledge of the existing conditions, assets, and lived experiences that relate to health equity.

Principle 2: Process

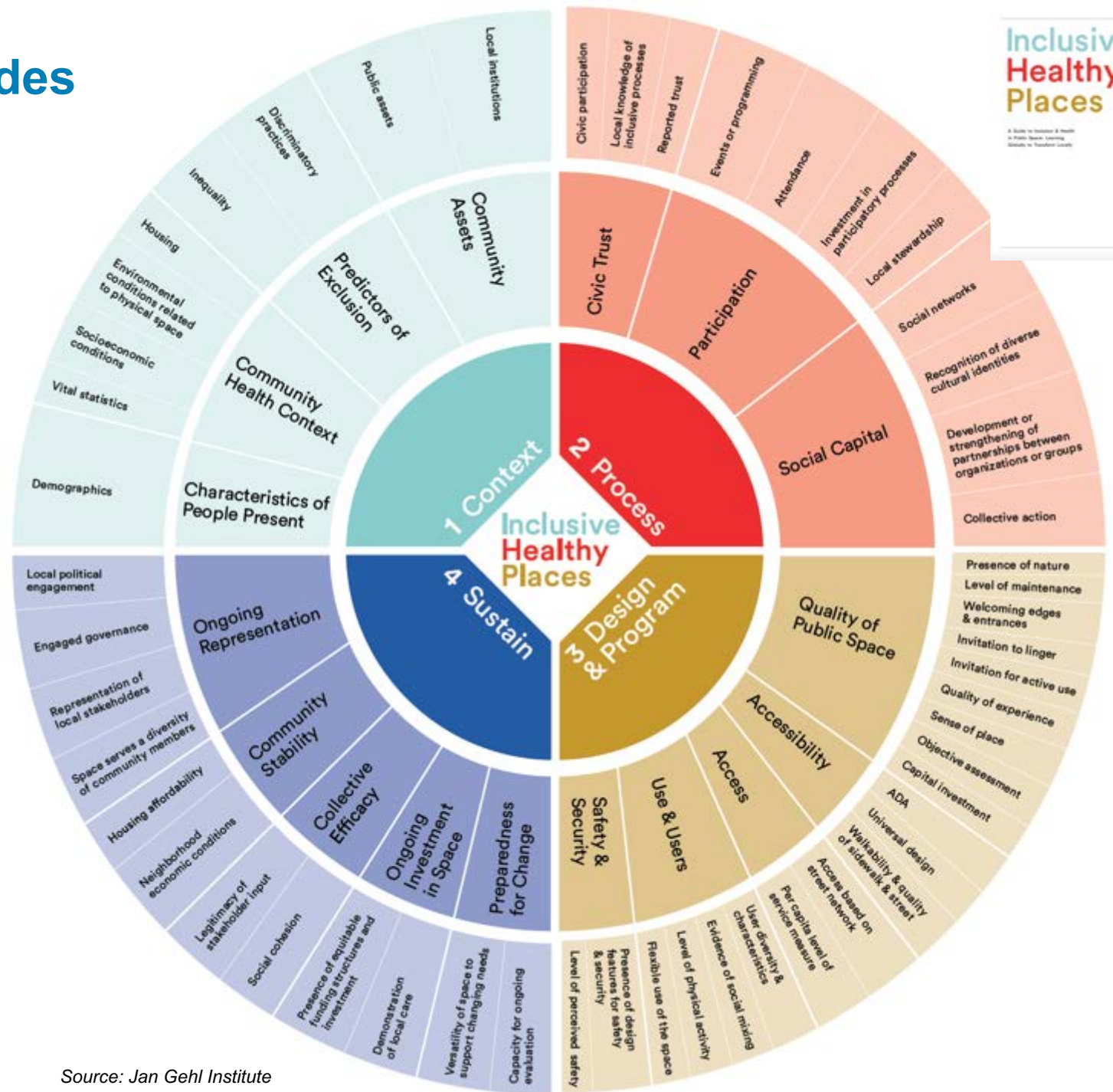
Support inclusion in the processes that shape public space by promoting civic trust, participation, and social capital.

Principle 3: Design & Program

Design and program public space for health equity by improving quality, enhancing access and safety, and inviting diversity.

Principle 4: Sustain

Foster social resilience and capacity of local communities to engage with changes in place over time by promoting representation, agency, and stability.



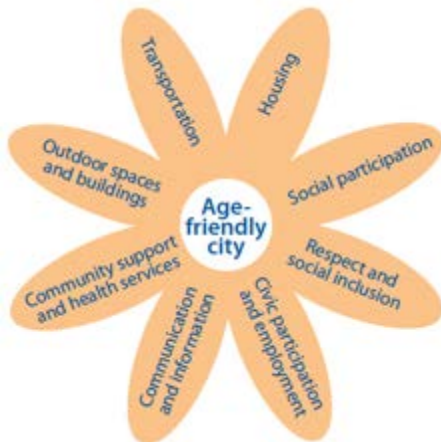


Age-Friendly Cities: WHO Concept of Active Ageing

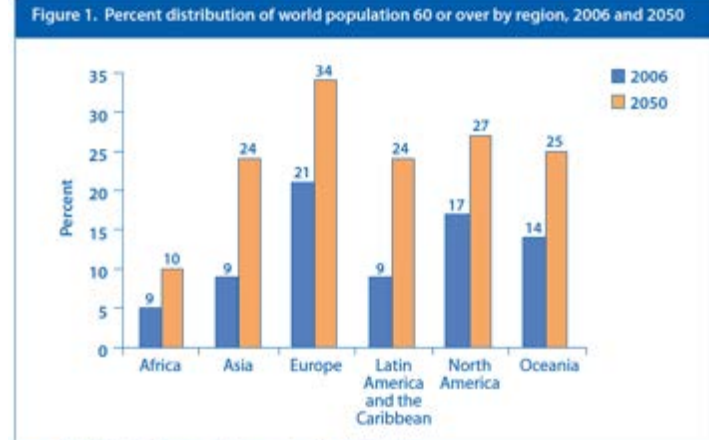
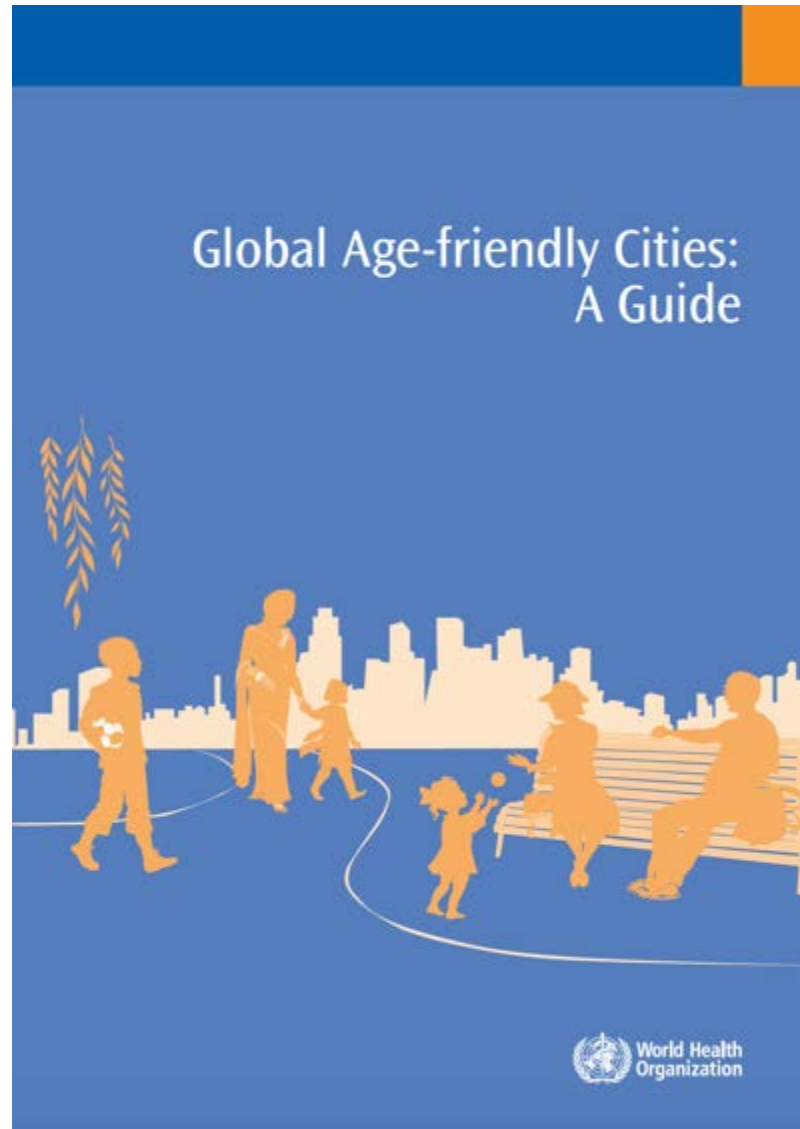
Active ageing optimizes opportunities for health, participation and security to enhance quality of life as people age.

Age-friendly cities enable active aging:

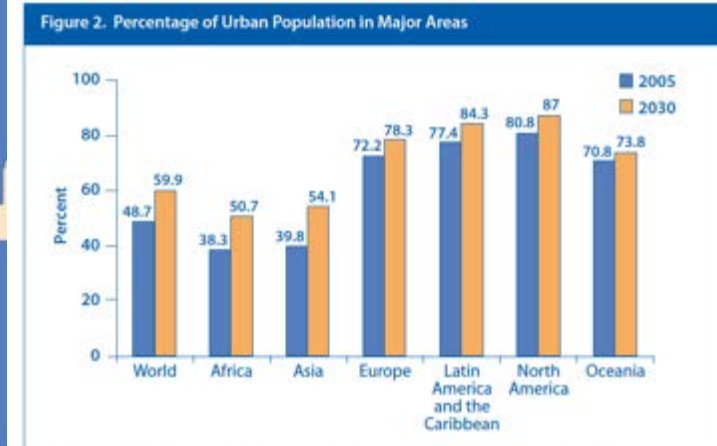
1. recognize capacities and resources of older people;
2. anticipate and respond flexibly to ageing-related needs and preferences;
3. respect their decisions and lifestyle choices;
4. protect most vulnerable; and
5. promote inclusion in and contribution to all areas of community life.



Source: World Health Organization. Available at: https://www.who.int/ageing/publications/Global_age_friendly_cities_Guide_English.pdf



Source: United Nations Department of Economic and Social Affairs (7).



Source: United Nations Department of Economic and Social Affairs, Population Division (6).



WHO Age-Friendly Cities Checklists



Source: World Health Organization. Available at: https://www.who.int/ageing/publications/Global_age_friendly_cities_Guide_English.pdf

Age-friendly outdoor spaces and buildings checklist

Environment

- The city is clean, with enforced regulations limiting noise levels and unpleasant or harmful odours in public places.

Green spaces and walkways

- There are well-maintained and safe green spaces, with adequate shelter, toilet facilities and seating that can be easily accessed.
- Pedestrian-friendly walkways are free from obstructions, have a smooth surface, have public toilets and can be easily accessed.

Outdoor seating

- Outdoor seating is available, particularly in parks, transport stops and public spaces, and spaced at regular intervals; the seating is well-maintained and patrolled to ensure safe access by all.

Pavements

- Pavements are well-maintained, smooth, level, non-slip and wide enough to accommodate wheelchairs with low curbs that taper off to the road.
- Pavements are clear of any obstructions (e.g. street vendors, parked cars, trees, dog droppings, snow) and pedestrians have priority of use.

Roads

- Roads have adequate non-slip, regularly spaced pedestrian crossings ensuring that it is safe for pedestrians to cross the road.
- Roads have well-designed and appropriately placed physical structures, such as traffic islands, overpasses or underpasses, to assist pedestrians to cross busy roads.
- Pedestrian crossing lights allow sufficient time for older people to cross the road and have visual and audio signals.

Traffic

- There is strict enforcement of traffic rules and regulations, with drivers giving way to pedestrians.

Cycle paths

- There are separate cycle paths for cyclists.

Safety

- Public safety in all open spaces and buildings is a priority and is promoted by, for example, measures to reduce the risk from natural disasters, good street lighting, police patrols, enforcement of by-laws, and support for community and personal safety initiatives.

Services

- Services are clustered, located in close proximity to where older people live and can be easily accessed (e.g. are located on the ground floor of buildings).
- There are special customer service arrangements for older people, such as separate queues or service counters for older people.

Buildings

- Buildings are accessible and have the following features:
 - elevators
 - ramps
 - adequate signage
 - railings on stairs
 - stairs that are not too high or steep
 - non-slip flooring
 - rest areas with comfortable chairs
 - sufficient numbers of public toilets.

Public toilets

- Public toilets are clean, well-maintained, easily accessible for people with varying abilities, well-signed and placed in convenient locations.

Source: World Health Organization. Available at: www.who.int



Linking communities across oldest and youngest: organizing communities for four generations with fewer children and more elderly

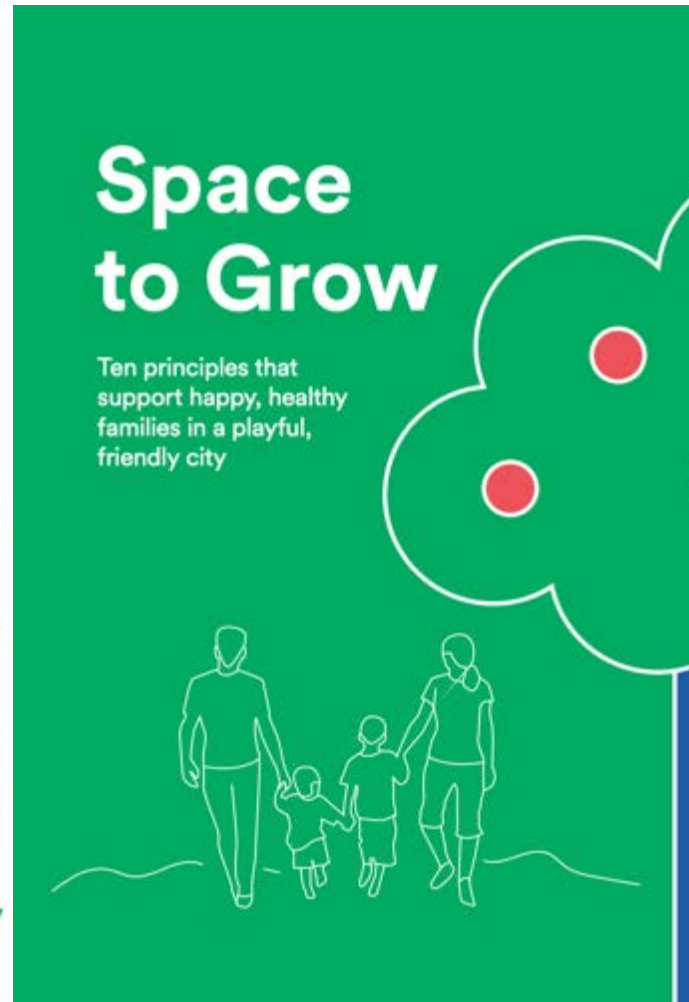
Source: World Health Organization. Available at: www.who.int

6. Take collective responsibility for children

Source: Jan Gehl Institute

What if every child is the community's child? Parents in cities can often feel isolated, exhausted, and lacking in support for what is an around-the-clock job, especially during the first critical years of their children's lives. Courtyards, parks, streets, and plazas that are intentionally designed to be both shared and child-friendly offer opportunities for families and caregivers to connect and foster a support network with one another. Parents and city staff can work with communities to create culturally specific programming that meets the desires of children and adults of all ages. These spaces not only promote social interaction and improve connections between individuals, but also strengthen the larger system of community which can provide collective support to those who need it.

Referrals: Maria Montessori, Remo Largo, Ken Robinson, Manfred Spitzer, Martina Leibovici-Mühlberger, Michael Winterhoff, Jan Gehl, Sweden Elderly-Youth Housing



Source: Jan Gehl Institute



Source: Sweden Age-Mix Housing available at: <https://www.bbc.com/worklife/article/20200212-the-housing-project-where-young-and-old-must-mingle>



Definition of Health Impact Assessment

How an event, policy or project can
influence health and determinant of health outcomes

Systematic, evidence-based
decision and management support tool

Focused on health promotion and protection to
achieve maximum benefits at the local level



HIA Process for Healthy Cities



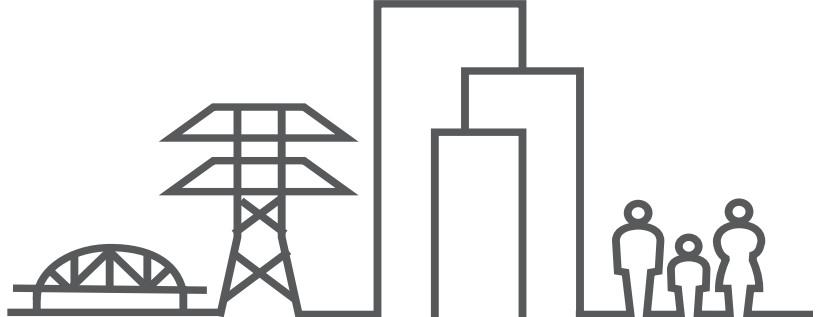
Scoping health issues needing attention

Profiling/
Data Collection to fully understand

Risk assessment to prioritize issues

Develop & implement management measures

Surveillance (monitor) & Respond



Source: Asian Development Bank.



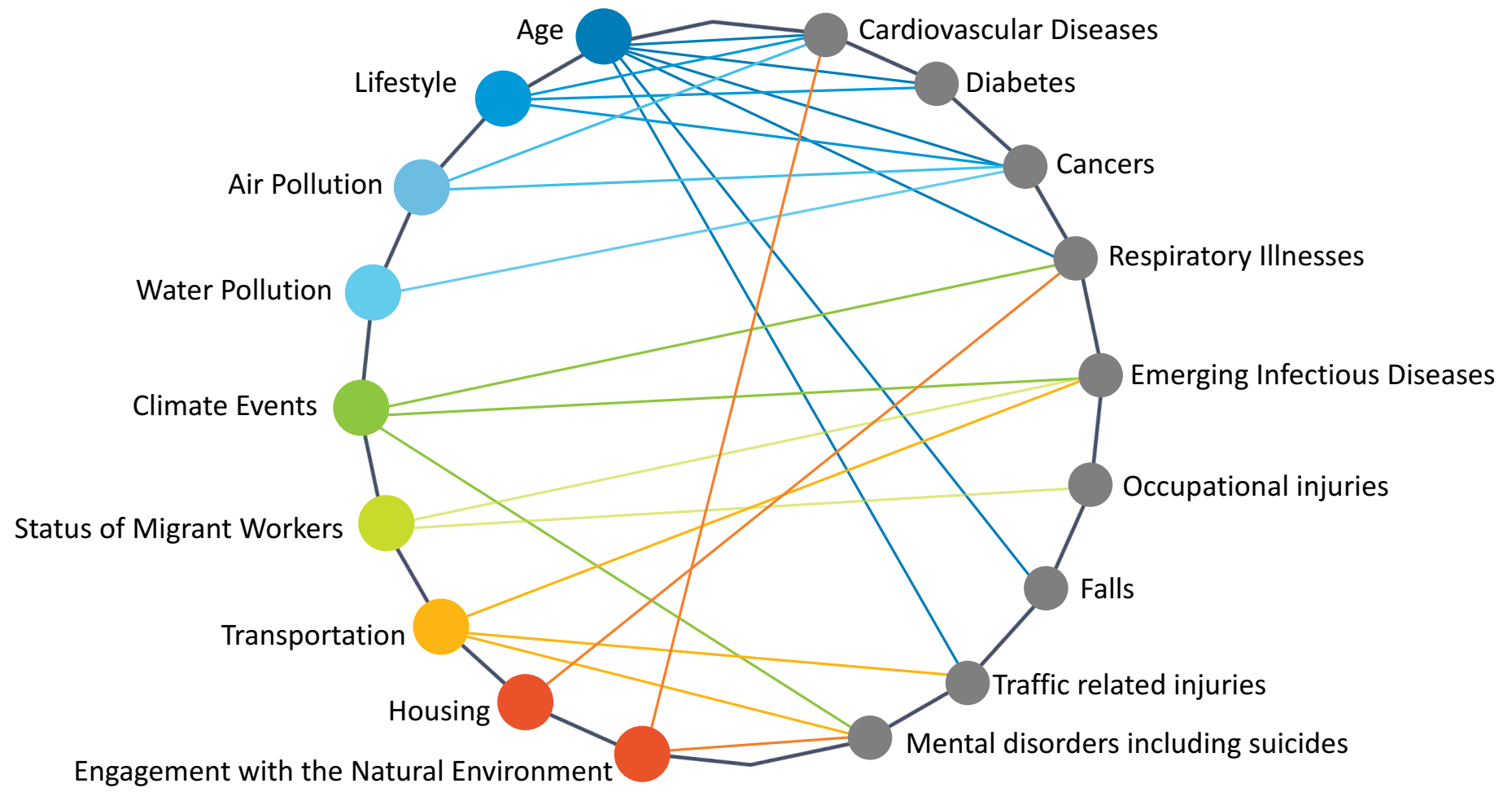
Purpose of the sourcebook is to provide ADB environmental safeguards, poverty, and social analysis, and compliance staff support to ensure health risks and opportunities are considered in project planning, approval and implementation. Also a resource for the public.



Purpose of the HIA framework is to assess countries in identifying and managing health risks and opportunities associated with unprecedented economic growth and development in the GMS. Some features and indicators are applicable to urban settings.



Urban health challenges and health outcomes in urban China: *Healthy China 2030 and Lancet Commission on Healthy Cities in PRC*

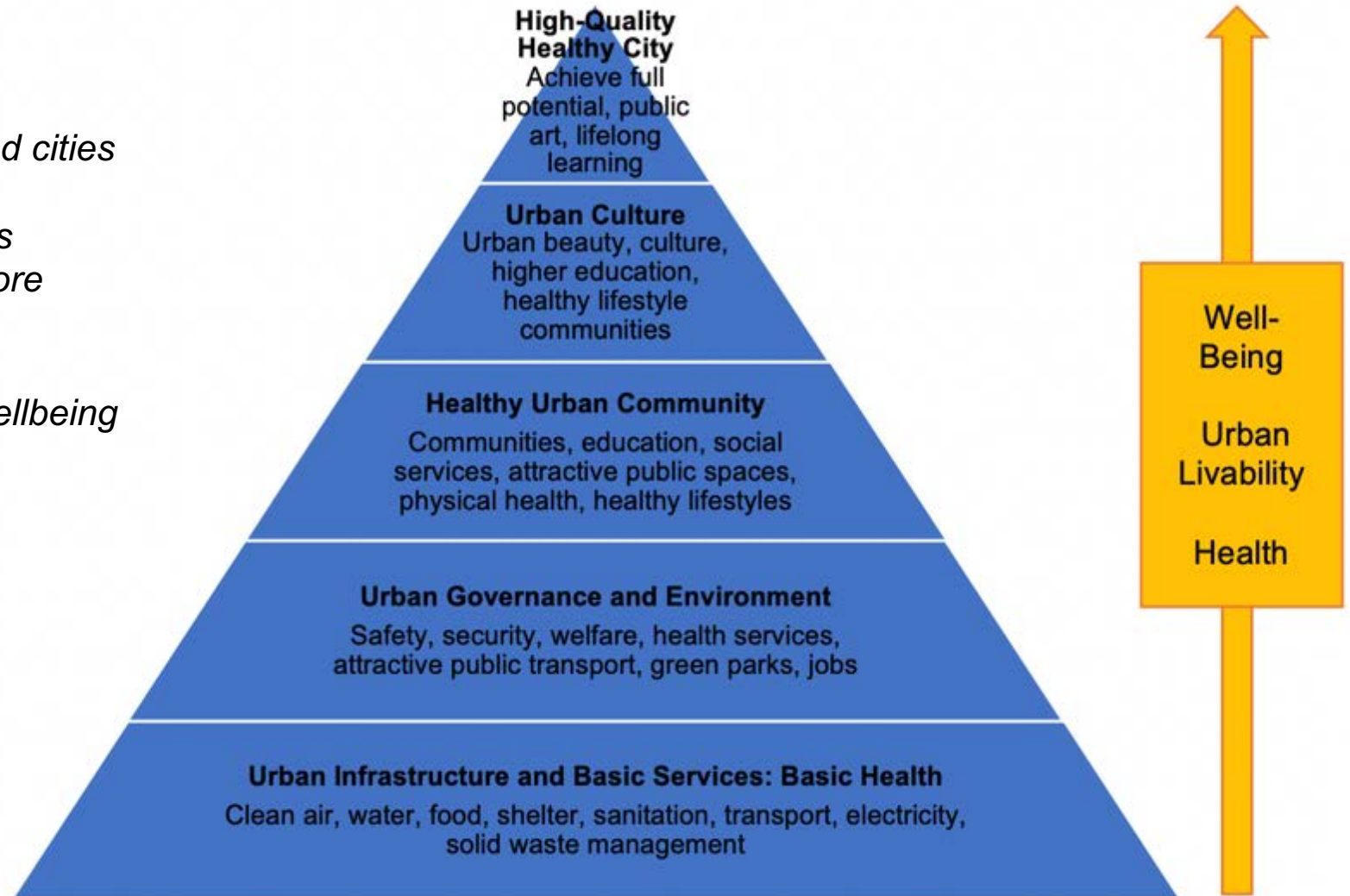


Source: Authors adapted from: Jun Yang et. al: The Tsinghua–Lancet Commission on Healthy Cities in China: unlocking the power of cities for a healthy China. 2018. Beijing. Available at: <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2818%2930486-0>.



HIA and HACAMP: Basic Concept: Public health needs and objectives in cities may follow hierarchy of needs principle

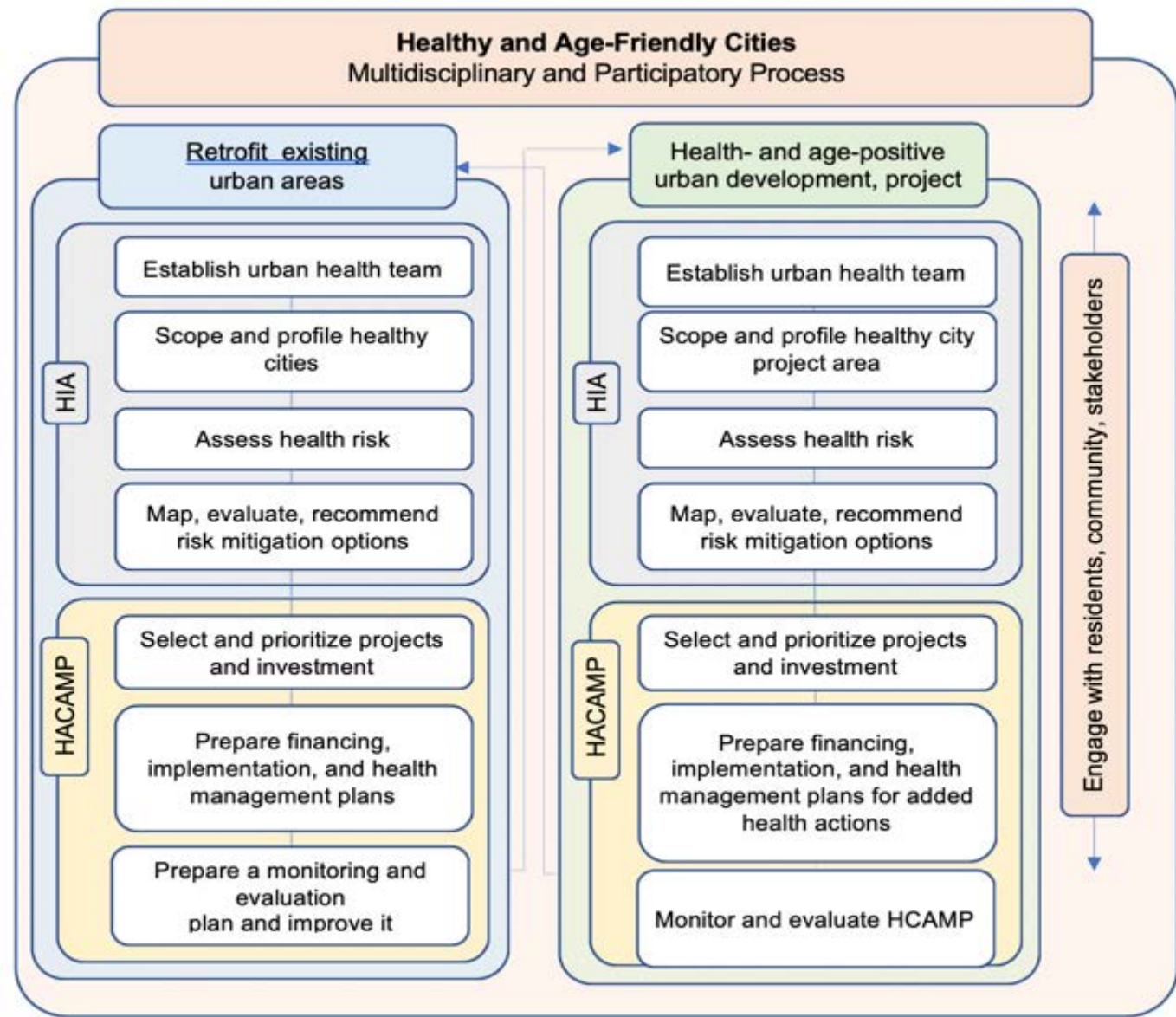
- *Cover basics first for lesser developed cities*
- *address more advanced health needs associated with lifestyle options in more developed cities*
- *ultimately achieving a high level of wellbeing for all residents*



Source: Authors, based on the theory of a hierarchy of needs by A. H. Maslow. 1943. A Theory of Human Motivation. *Psychological Review*. 50. pp. 370–96.



HIA and HACAMP Process

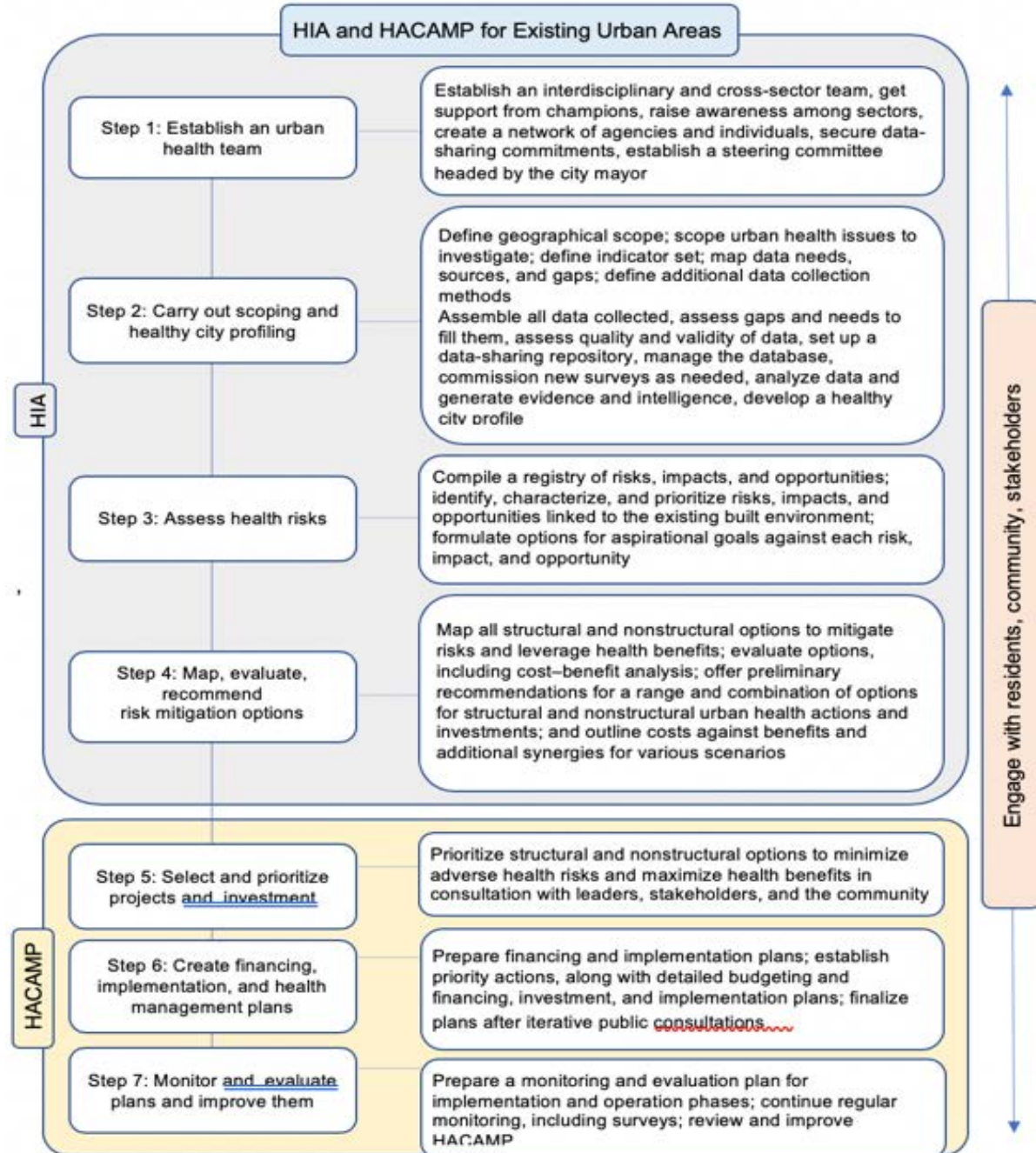


HACAMP = healthy and age-friendly city action and management plan, HIA = health impact assessment.
Source: Authors.



HIA and HACAMP:

Step-by-Step



HACAMP = healthy and age-friendly city action and management plan, HIA = health impact assessment.
Source: Authors.



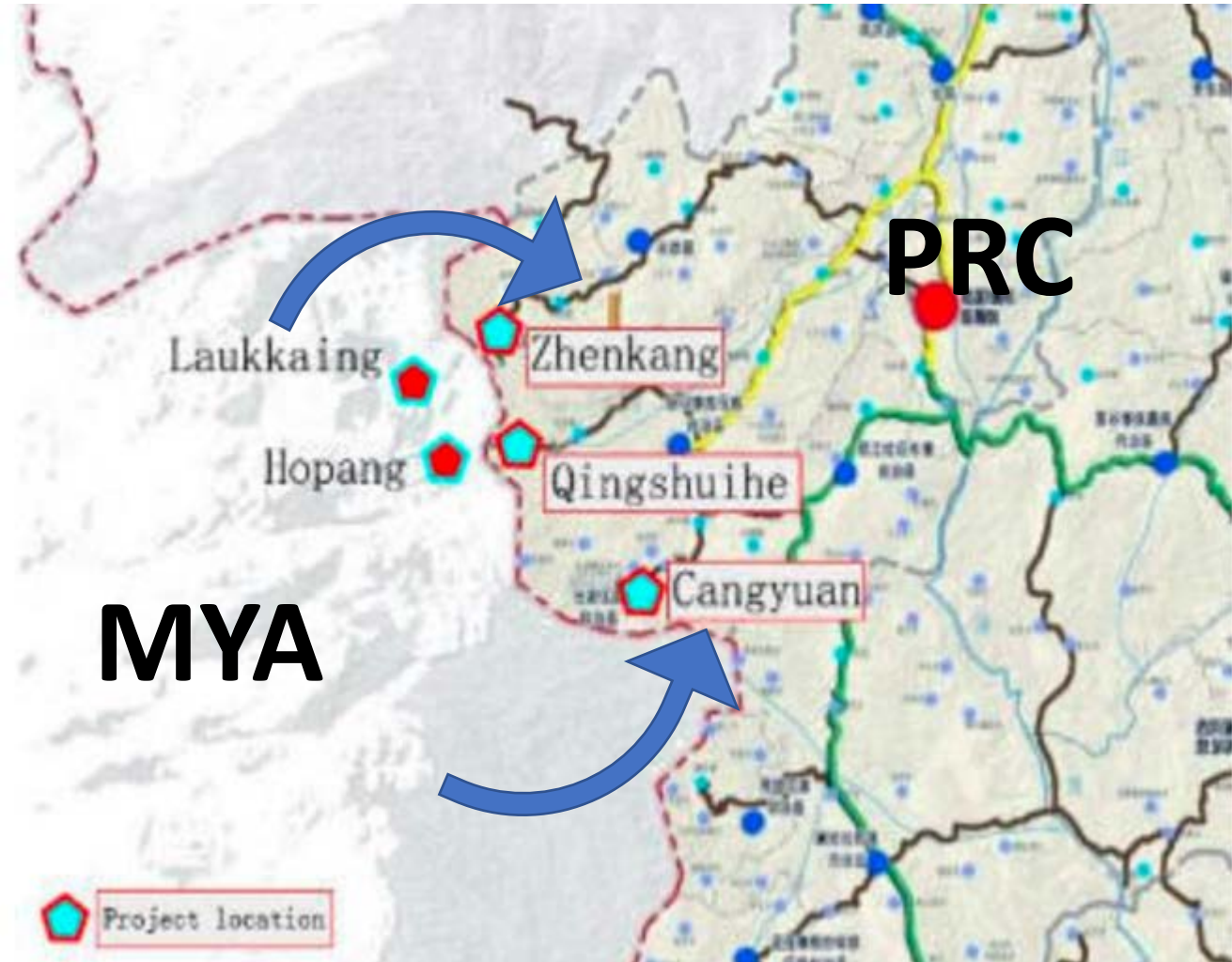
ADB Project Case in PRC: Yunnan Lincang Border Economic Cooperation Zone Development Project

Source: Asian Development Bank

- Infectious diseases
- Road safety issues
- Wildlife trade
- Significant risks because of existing weak social infrastructure
- Rapid HIA conducted and public health management plan initiated



Source: Asian Development Bank Project Documents – Lincang Government



Source: Asian Development Bank Project Documents – Lincang Government



ADB Project Case in PRC: Jilin Yanji Low-Carbon Climate-Resilient Healthy City Project

HIA: baseline assessment of health determinants and risks and adverse impacts of project, challenges and opportunities for improved health outcomes

HACAMP: control communicable diseases and significantly reducing non-communicable diseases and promote healthy lifestyles, including:

- environmental health factors
- basic urban services associated with health
- specific health care services and access to them
- urban actions that enable healthier and safer lifestyles; and
- urban and building design features like universal accessibility of public spaces and facilities and public transport by people of all ages.



Source: Asian Development Bank



Source: Asian Development Bank Project Documents



Source: Asian Development Bank Project Documents