

Multidisciplinary expert panels improving URBan HEALTH trainingS for technicians and trainers

Survey Results Working Document 12th April 2020

URB Health



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STRUCTURE

M1. REGULATIONS AND POLICIES pg 5

- Q1. Could you give any examples of the type of the regulation and/or policy would favour the encouragement of healthy environments?
- Q2. How would you suggest to make private sector get involved in the promotion of health through regulations and programs?
- Q3. How do you think that health care could be integrated in urban decision-making processes and policies?

M2. MULTICRITERIA ANALYSIS pg 24

- Tools**
- Q1.a. Could you give any examples of tools and/or system of indicators that would favour the encouragement, analysis and evaluation of healthy environments?
- System of indicators**
- Q1.b. Could you give any examples of tools and/or system of indicators that would favour the encouragement, analysis and evaluation of healthy environments?
- Q2. According to your own field of expertise, what types of data are most important in assessing urban health problems?
- Q3. Could you give any example of integration of public health data (e.g. chronic disease rates, injuries, distribution and accessibility of services; data available from healthcare services) into urban planning processes?
- Q4. Could you provide any example of impact evaluation of health promotion programs/projects?

M3. ACTIONS, EXPERIENCES & BEST-PRACTICES pg 42

- Q1. Could you give any examples of actions, experiences and best practices that would favour healthy environments?
- Q2. According to your experience, could you provide any best-practice on engage with multiple stakeholders and wide community, including citizens, in behaviour change and designing better environments towards healthier lifestyles?
- Q3. According to your experience, how could be improved the management of costs and sharing budget between different programs to promote health?

M4. BEST PRACTICE pg 58

*Note: answers that are marked join several ones that share a same topic. Separate answers can be found in the transcription of the survey.

[Ref. 1.a]. Grant, M. and Barton, H. (2013) No weighting for healthy sustainable local planning: evaluation of a participatory appraisal tool for rationality and inclusivity. *Journal of Environmental Planning and Management*, 56 (9). pp. 1267-1289. ISSN 0964-0568 Available from: <http://eprints.uwe.ac.uk/18695>

[Ref. 1.b]. WHO, WHIASU, PHE, HUDU in the UK have developed expertise in HIA processes. In the UK, the NPPF (2019) and National Planning Guidance on Safe and healthy communities (2019), the London Plan, and various London Boroughs have introduced a HIA policy.

[Ref. 1.c]. Health Impact Assessment through the Scottish Planning policy.

[Ref. 2]. *Age-friendly Action plan from Vancouver*. Available from: <https://vancouver.ca/people-programs/age-friendly-action-plan.aspx>

M1. REGULATIONS AND POLICIES

Q1. Could you give any examples of the type of the regulation and/or policy would favour the encouragement of healthy environments?

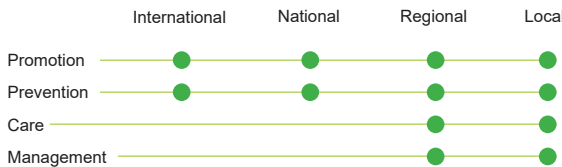
Current/in place

1 Health Impact Assessment (HIA)*



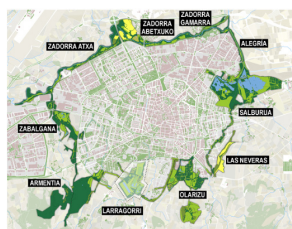
Strategic environmental assessments, including **Health Impact Assessment (HIA)** components, to be applicable for any larger urban development and to be embed as part of the planning applications process. Health Impact Assessments are requested for selected planning applications that are most likely to impact on human health. These include, but are not limited to: major residential developments (over 50 units); and developments requiring and Environmental Impact Assessment. Introducing HIA on new developments as it forces developers to consider their contribution to local plan and the public realm, not simply their private interests. The HIA has to be an **iterative Participatory** process in all spatial planning proposals and investments. Has to be participatory and not desktop, so that people are included and learn. Helps to shift the culture. Has to be iterative, as the design proposal develops, not just one at the start or just one at the end.

2 Program Age-Friendly Cities and Communities



Program Age-friendly Cities and Communities (OMS, 2007), destined to design and adapt public spaces, buildings and transport for an **aging society**, as well as to promote **active and healthy aging**.

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[Ref. 3]. Green Ring of Vitoria-Gasteiz is the ensemble of parks around the city. This strategy started during an environmental restauration project in 1993. The Green Ring has transformed the degraded periphery into a natural space of high ecological value and it has become the principal recreative area of the city. Available from: <https://www.vitoria-gasteiz.org/we001/was/we001Action.do?idioma=es&accionWe001=ficha&accion=anilloVerde>

[Ref. 4]. Vitoria-Gasteiz has a long-term program for creating a pedestrian urban city center. Available from: <https://www.vitoria-gasteiz.org>

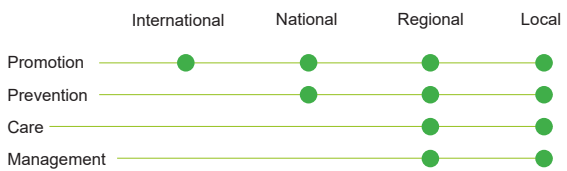
[Ref. 5]. The program of promotion of pilot *Superblocks in Barcelona* is part of the technical work that will take place around the drafting of the Plan of Urban Mobility of Barcelona 2013-2018. Map of Superblocks of Barcelona represents the new limitation of urban cells resulting from the definition of the new orthogonal network of buses of Barcelona. Available from: <http://bcnecologia.net/es/proyectos/programa-supermanzanas-piloto-en-barcelona>

3 Green areas: quality, accessibility and promotion*



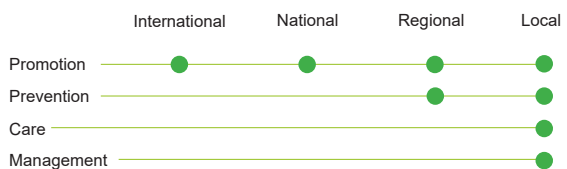
Introduction of green areas. This can be ring programs of parks connected to each other, surrounding cities, and serving as a natural lung. **High quality and accessible green spaces** that support the needs of the population across the full life-course. Better equipment in green areas, encouragement of contact with nature: urban allotments and urban gardens.

4 Walkable cities*



Pedestrianization program of the urban center, as well as reducing private traffic and promoting public transport. Actions to improve urban sidewalks and streets to **facilitate mobility/circulation/walks to all the citizens of all ages**: security in pedestrian cross roads, sidewalks with enough width, holes...

5 Super-blocks and urban tactical actions



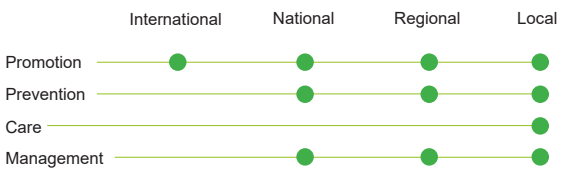
Super-blocks and other urban tactical actions that reduce the place of motor vehicles in public space placing the physical environment towards **health promotion and well-being of neighborhoods** in those urban spaces that don't have green equipments of where the implementation of them would be impossible, so these actions could impact on decreasing of affections to health by air and noise pollution.

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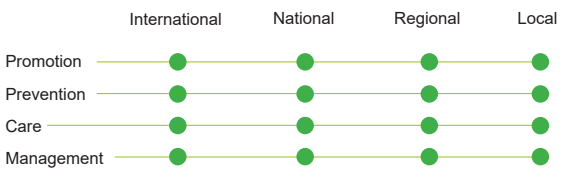
[Ref. 7]. Actual data concerning recognition of trees as the monuments of nature. Available from: *Ustawa z dnia 16 kwietnia 2004 r. o ochronie przyrody Dz.U. 2004 nr 92 poz. 880 (Act of 16 April 2004 on Nature Protection, 2004 No. 92 item 880)*

6 Bioclimatic design



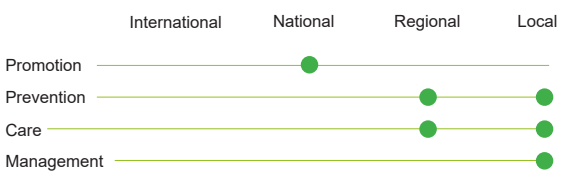
Increase shadowing on urban streets, by trees and other elements as well as the configuration of built volumes and orientation of streets. This can have an effect on reducing health affections related with heat.

7 Natural elements as heritage



Including trees and nature as part of the landscape and heritage monuments.

8 Transport Scotland Active Travel Framework



This document brings together the key policy approaches to improving the uptake of walking and cycling in Scotland for travel. It can also be utilised through planning application process to request 'active travel plans' to be developed and submitted as part of a planning application process. For example a development of new city peripheral commercial office complex may be required to submit and implement an active travel policy to prevent increased parking or to encourage companies to develop internal policies in relation to commuting to work.

[Ref. 9]. *National Planning Policy Framework (UK)* to set out requirements for planning to support delivery of local health and wellbeing priorities. <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

9 National Planning Policy Framework



National Planning Policy Framework and guidance (NPPF and PPG) through promotion of health, environmental care and practice within the development sector.

[Ref. 10]. Landscape identification and valorisation developed by Polish researchers to identify landscape units in local scale. Available from: *Ustawa z dnia 27 kwietnia 2001 r. Prawo ochrony środowiska, Dz.U. 2001 nr 62 poz. 627 (Act of 27 April 2001 Environmental Protection Law, 2001 No. 62 item 627)*

10 Landscape units in local scale



Landscape valorisation in local urban scale.

[Ref. 11]. The Act is unique to Wales attracting interest from countries across the world as it offers a huge opportunity to make a long-lasting, positive change to current and future generations. Available from: <https://futuregenerations.wales/about-us/future-generations-act/>

11 Well-being of Future Generations Act



National commitments to embed consideration of wellbeing into national policies. The Well-being of Future Generations Act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

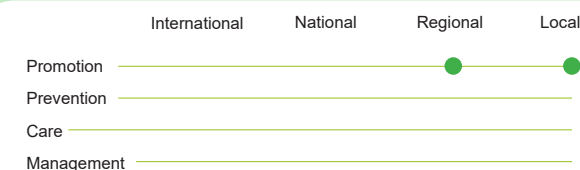
[Ref. 12]. Public Available Specifications such as PAS 1365 for dementia friendly neighbourhoods offer a holistic approach to healthy environments through recognition that environments are influenced by service provision, access to services as well as the physical environment.

12 Public Available Specification (PAS)



Public Available Specification is a useful and quick BSI route to developing and testing core standards prior to full adoption of the standard. This enables quick development, dissemination and feedback.

13 Safe infrastructures for bike

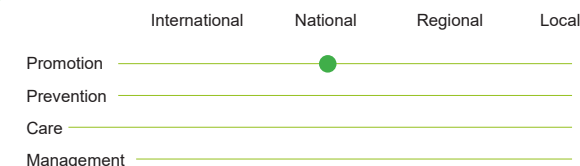


Policies to create safe infrastructures for bike use.

[Ref. 14a]. Royal Decree 132/2010 Available from: <https://www.boe.es/eli/es/rd/2010/02/12/132>

[Ref. 14.b]. Spanish Law 8/2013 (26th June). *Quality on education*. Available from: <https://www.boe.es/buscar/pdf/2013/BOE-A-2013-12886-consolidado.pdf>

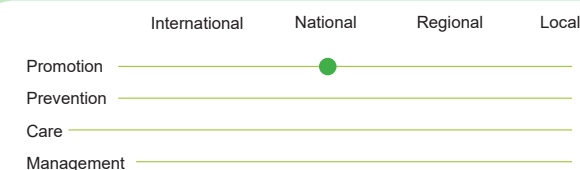
14 Guarantee for healthy education centres



Policies to **establish minimum requirements for infant, primary and secondary education centres**. This regulation establishes the minimum requirements to guarantee **healthy education centres**.

[Ref. 15]. *Spanish Technical Building Code* (Código Técnico de la Edificación). Available from: <https://www.codigotecnico.org>

15 Long-term strategy for energy rehabilitation



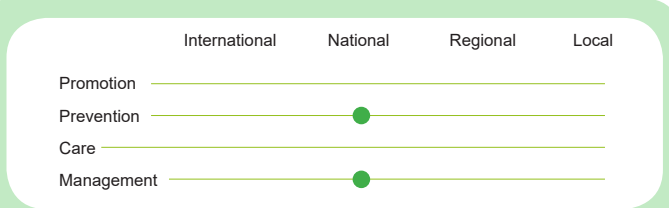
Long-term strategy for energy rehabilitation in building and housing sector.

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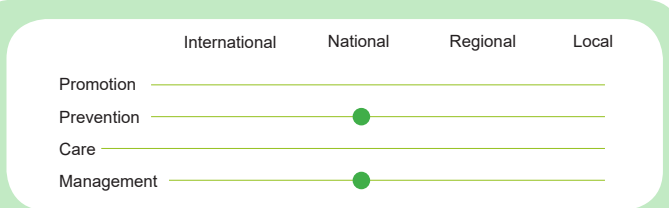
[Ref. 16]. RLD 7/2015, the Spanish Law of Rehabilitation, regeneration and urban renovation. Available from: <https://www.boe.es/buscar/act.php?id=BOE-A-2015-11723>

16 Land use rehabilitation policies



Land and Urban Rehabilitation Policies. The law that establishes the national framework of land use and its planification.

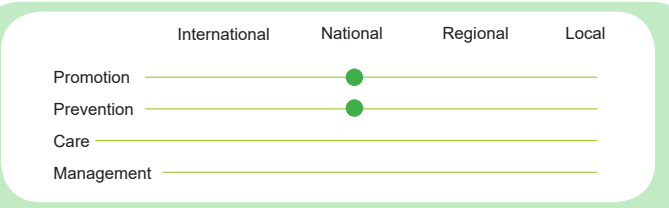
17 Environmental assessment



This law introduces the environmental protection in the decision making process of the approval of single activities or plans and programs.

[Ref. 17]. Spanish Law 21/2013 of 9 December on Environmental Evaluation. Available from: <https://www.boe.es/eli/es/l/2013/12/09/21/con>

18 VIH prevention



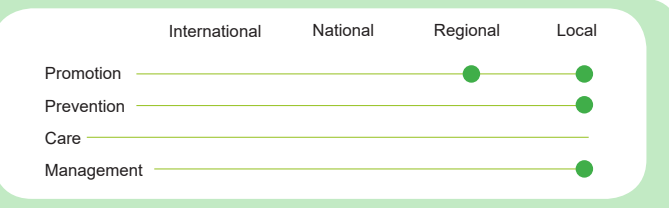
Research work with Spanish Gypsy population to understand their cultures and to implement policies for VIH prevention.

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[Ref. 20]. Health and well-being BREEAM certification embeds these criteria into design of buildings. Available from: <https://www.breeam.com/domrefurbmanual/content/05hea/hea00.htm>

19 Tax for vehicles



Tax on entry vehicles to municipalities.

20 Health and well-being certificates



Health and well-being certificates such as BREEAM or WELL standards embed well-being criteria into the design of buildings.

[Ref. 1]. Barton, H. and Grant, M. (2008) Testing time for sustainability and health: Striving for inclusiveness rationality in project appraisal. *The Journal for the Royal Society for the Promotion of Health*, 128 (3). pp. 130-139. ISSN 1466-4240
Available from: <http://eprints.uwe.ac.uk/8055>

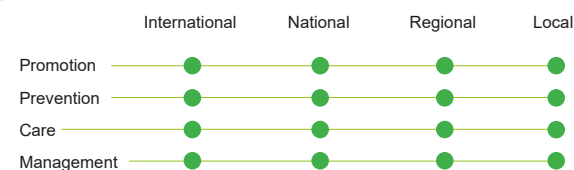
Suggestions/potential

1 Comprehensive policy including health and equity



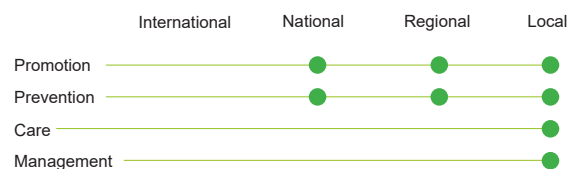
Including Health in All Policies. It is the obvious and most comprehensive policy to have the largest effect. Also including **health equity** is included in the development of this policy.

2 Safe public spaces



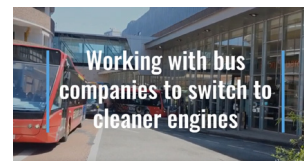
Conceptual modification of **urban functions and uses**, promoting mixity that enable open, active, diverse streets and also safety, moreover to most vulnerable population. This can positively impact to decrease health affections such as anxiety and stress of living and walk across unsafe streets.

3 Healthy urban planners



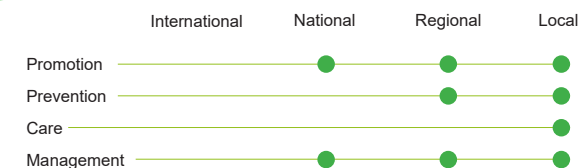
A policy of having to have people in planning departments that have public health expertise and the education of 'healthy urban planners'. An involvement of health actors in urban planning processes, and assurance that **local health authorities have the adequate skill set to effectively contribute to planning processes**.

[Ref. 3]. Bird, C. and Grant, M. (2011) Bringing public health into built environment education. *CEBE Briefing Guide series*, 17. ISSN 1744-9839
Available from: <http://eprints.uwe.ac.uk/15177>



[Ref. 4]. Newcastle Climate Emergency- policies set up through collaboration with Newcastle city council, NHS Trust and University. Available from: <https://www.newcastle.gov.uk/our-city/climate-change-newcastle>

4 Pollution reduction



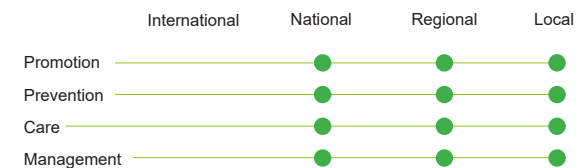
Pollution reduction.

5 Healthy food environment



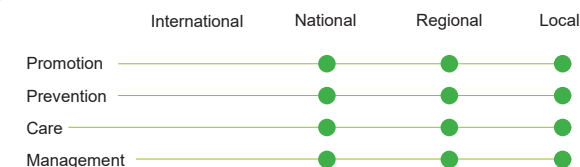
Agriculture, food markets and household food consumption. Local approaches to manage a healthier food environment.

6 Housing



Housing and building construction.

7 Transportation and mobility infrastructure*



Transportation and **mobility infrastructure and services**. Regulation on mobility issues in cities. Regulation on **mobility issues in cities**.

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[Ref 6]. *Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks*. Available from: https://www.who.int/quantifying_ehimpacts/publications/preventing-disease/en/

THE SUSTAINABLE DEVELOPMENT GOALS



[Ref. 8]. The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice. The 17 Goals are all interconnected, and in order to leave no one behind, it is important that we achieve them all by 2030. Available from: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

8 Sustainable Development Goals



Inclusion of **Sustainable Development Goals**. Developing sustainably is a consideration in all new development.

9 Standards for healthier working environments



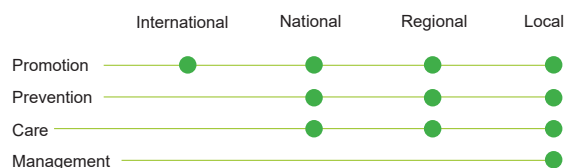
Provide **standards and guidance** to transform and develop **working environments** suitable for people with special needs and favor health conditions.

11 Limitation of marketing of unhealthy products



Policies and regulations to limit advertisement of **unhealthy aliments and products** and especially directed to children and teenagers.

12 Promotion of ageing in place

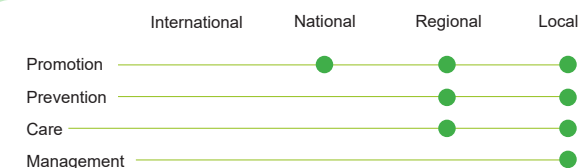


Policies and regulations that promote ageing in place. In the field of care and health of the elderly, it is clear that the longer they can stay at home, the better their health conditions will be in the aging process.

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13 Prioritize pedestrian mobility



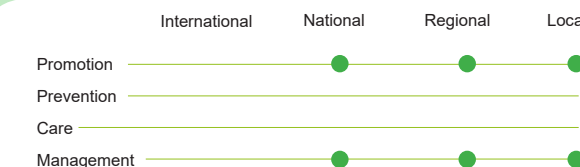
Policies and regulations that prioritize pedestrian mobility over the use of motor vehicles. Walking is the most sustainable and healthier way of moving around the city, but in many cases the urban environments do not offer the necessary conditions for people to walk.

14 Improvement of universal accessibility



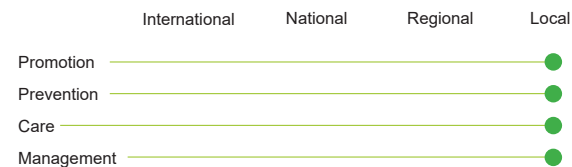
The improvement of universal accessibility (UA) regulations. In addition to improving urban environments quality and usability, UA implementation is the basis for promoting safe and inclusive urban mobility for pedestrians. UA makes it possible a healthier life for everyone, especially for elderly and persons with disabilities, also improving autonomy and care conditions.

15 Rental apartments for employees of big companies



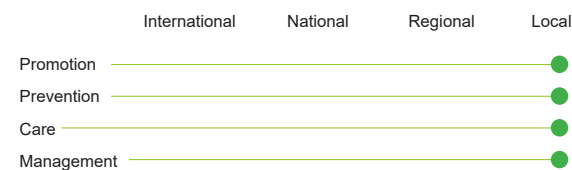
Incentives against commuting: make it compulsory for large corporations to **develop rental apartments for its employees** to reduce their mobility needs, and allow them to go home at lunch time.

16 Environmental and health monitoring



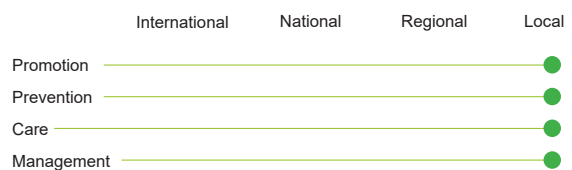
Adequate **environmental and health monitoring** on urban level to **identify environmental risks and problems to be addressed**, and unequal distributions of risks to be mitigated.

17 Community care networks in neighborhoods



Promote **Community Care networks** in neighbourhoods.

18 Promote Health and Care in all the urban policies



Promote Health and Care advocacy in all the urban policies.

19 Inclusive environments



Inclusive environments.

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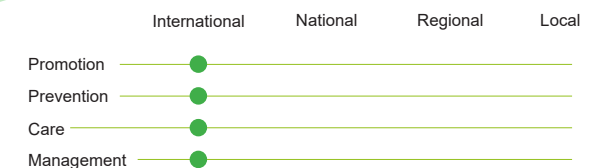
[Ref. 21]. Some city councils are applying molecular techniques (PCR) to identify DNA of stool and so, identify the dog and owner.

20 Commuting time as part of working hours



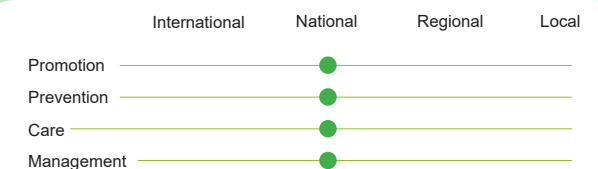
Compute commuting time as part of working hours. This would be an incentive for companies to establish work centres in accessible places and avoid the most crowded areas.

21 Control of pets' parasites



Despite beneficial effects dog have on humans (company, custody, hunt...), this animal still supposes a severe public health problem. **Dogs have many parasites that are transmissible to cattle, wild animals and humans.** Many of these parasites are transmitted by their stool, so this is important that they are taken out of streets and parks in towns and cities.

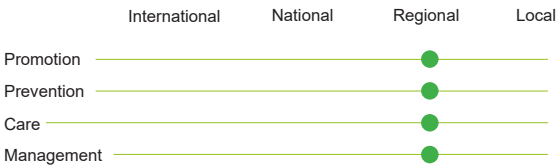
22 Control of mosquitoes proliferation



Some species of mosquitoes are vectors of multiple viral, bacterial or parasitic diseases. Recently, a new invasive species *Aedes Albopictus* (tiger mosquito) has appeared in Spain, which can transmit dengue, yellow fever and chikungunya.

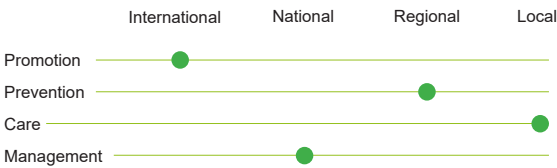
[Ref. 23]. In some Spanish cities are only adapting measures of fumigation.

23 Control of mites and other plagues



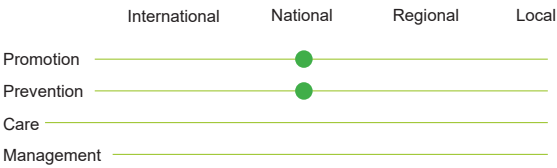
In some areas, such as parks, where there are crowds of birds, there can appear red mites or *Dermanyssus*, which are hematophagous and can also bite humans. There are not measures.

24 Energy poverty policy



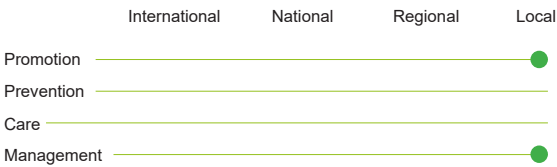
Energy poverty policy.

25 Place standard principles



Planning system underpinned by **place standard principles** that ensure new developments prioritise local public health needs.

26 Making big cities seizable

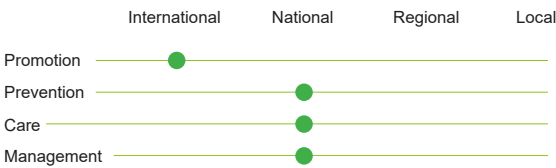


Smaller subdivisions of large urban areas could be endowed with enough facilities and tertiary premises (health, education, commerce and offices) to be considered self sufficient. This would help to **reduce mobility needs** and would shift modal transport split in favor of walking trips.

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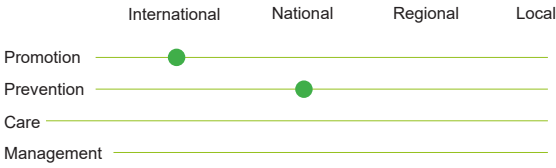
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27 Self-consumption policy



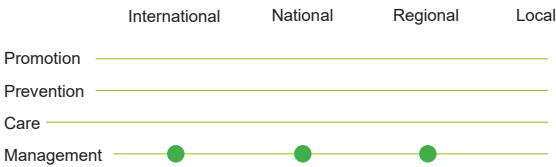
Self-consumption policy.

28 Marketing and pricing of unhealthy commodities



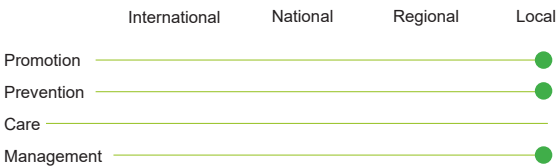
Marketing, pricing and availability of unhealthy commodities.

29 Glocal perspective



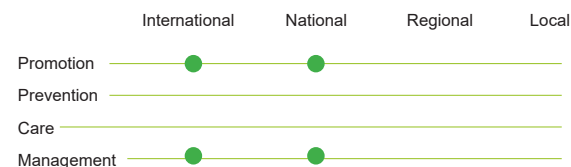
Strong coordination with regional, national and international level (glocal perspective).

30 Low emission areas



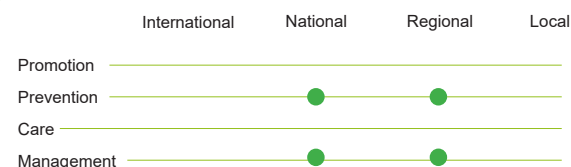
Low emission areas (air quality).

31 Minimize air emissions



Policies that minimize air emissions through clean fuel use (electric vehicles), use of public transport and/or non-vehicular transport solutions.

32 Prevent untreated waste disposal



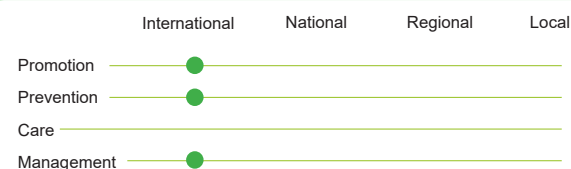
Discharge standards to prevent untreated waste disposal.

33 Use of public spaces for activity and healthy habits



Proportion of use of public spaces and non-motorized transport to promote activity and healthy habits (mental and physical).

34 Events on Health and Environment



Congresses and conferences on Health and Environment.

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Charge against promotion of a unhealthy environments.

Mixed collaboration systems.

Healthy lifestyles and better green areas.

Evaluation of the economic impact in terms of society/health.

Citizen engagement and empowerment.

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Q2. How would you suggest to make private sector get involved in the promotion of health through regulations and programs?

1 The private sector needs to have a 'charge' made against them, for future predicted health care costs, if they make unhealthy environments. For example, if they build housing along way from facilities that people need to access on a daily basis.

2 Through mixed collaboration systems.

3 Incentives and coordination are necessary to create commitment.

4 The private sector could favor the development of automated support and support systems (social robots) for dependent people (neurodegenerative diseases, dementias) in public spaces, as well as favoring healthy lifestyles.

5 Public health policies focused on disease prevention, through the promotion of healthy lifestyles based on strengthening green areas.

6 To make it financially attractive. The private sector is driven (necessarily by profit) - so regulations etc must consider how to evaluate fuller costs to society/health in order to encourage healthier developments.

7 Empowering consumers.

8 Provision of information; participatory approaches.

9 Private sector should be excluded from all discussion of unhealthy commodities (as per framework convention on tobacco control article 5.3).

10 Invest in activities related to healthy lifestyles and leisure activities and non-polluted.

Health Impact Assessment.

11 The HIA suggested above would require the private sector to invest in healthy design and also co-create the design of urban developments with local communities as the **HIA requires strong consultation to scope and identify health impact of new urban developments** (housing, mix developments, retail, commercial, any schemes relevant to schools, leisure, green infrastructure, hot food takeaways...)

Consumption patterns and urban typology.

12 Analysis of the relation that can be between consumption patterns (goods, services, offered by private sector) and super-block spaces (Barcelona), relation between the ones that are well-shadowed and oriented and safe ones against those that aren't. Nowadays there is a higher volume of consumption patterns that can be monitorized and it is possible to study if the effect of consuming more in better spaces than worse ones.

Pilot programs.

13 Making visible the positive outcomes of those regulations and programs through pilot programs.

14 The requirement to undertake **impact assessments** (such as health impact assessments) and develop **key health strategies** (such as having an active transport strategy) during the Planning process would require the private sector to consider these at the outset of any capital build project. The inclusion of these documents within the Planning application process would also embed and condition these requirements to the project, irrespective of who the delivery agent is.

Health and well-being in project design.

15 Reflect **health and wellbeing in project designs**, approaches and Corporate Social Responsibility. And contribute funding as part of planning permission.

16 As a complementary stakeholder and controlling profit-biased dynamics.

17 Providing a **clear and standardized regulatory framework**, promoting third party assessment and evaluations that help them to implement recommendations to develop or transform environment in a way that is compatible and aligned with their business core.

Advisory body.

18 Advisory body.

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Education.

Plaguicides.

Education and awareness about pets.

Healthy housing.

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19 **Knowledge transfer** arrangements are a good way to develop conversations and action around bridging private sector needs and policy/regulatory development. Regulatory adherence should be as streamlined as possible; in some instances the creation of regulations do not take into consideration the burden that can be placed on those who have to implement them and report back performance against key performance indicators. From a programme standpoint, I assume you are referring more to voluntary activities that would encourage stakeholders in the private sectors to encourage health promotion through a range of initiatives. In this regard, behaviour change is often essential to increase uptake of these type of programmes and environmental/social/health behaviour change science is important for creating programmes that can achieve the intended aims. There also has to be funding to support these initiatives and evaluation of them integrated from the design phase.

20 As a complementary stakeholder and controlling profit-biased dynamics.

21 **Education** of the issue, **policies and actions**. Invitations to collaborate in tackling the issue.

22 Development and application of plaguicides. Vets at clinics: education and awareness about zoonosis.

23 Through an effective implementation, **strengthening the monitoring processes**, increasing control and inspection processes.

24 Healthy housing conditions should be mandatory for renting sector.

25 Product development, corporate social responsibility, accessibility of company offices.

26 Health is not only a public issue. There are several private sectors that, either directly or indirectly, are related to this area. In order to involve the private sector, it is necessary to emphasize what are the business opportunities associated with health promotion measures through urban planning and design. Examples of these possibilities are evident in the technology sector, for example, but there are great opportunities in the provision of services and care, an untapped market in many countries that do not yet consider the autonomy of the elderly and disabled as a matter of health.

27 It is needed a change on the private sector perspective so they can understand that community health benefits the ensemble of social interests. A healthy and conscious population of its responsibilities supports private sector. Change and transformation of the private sector and introduction of ODS 2030 in their bussiness agendas.

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Skill-up and participation of health care providers.

Mixed collaboration systems.

Mandatory policies.

Preventive measures.

Health care centers connected with other entities to promote healthy activities.

Checklist and certifications.

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Q3. How do you think that health care could be integrated in urban decision-making processes and policies?

1 Urban decision-making processes and policies do ultimately have a huge impact on people's health. So all health care providers should seek to ensure that there are healthier populations through getting involved more with the placed in which their client populations live. They need to skill-up and participate in consultations on planning and transport investments and processes. Not just offer services to people once they become ill or are vulnerable to become ill.

2 Through mixed collaboration systems.

3 HIA should be a requirement.

4 Making it mandatory in e.g. town planning policies and decisions. To enforce those policies in reality. TO give local communities more say in decision making (and more aware of the health implications of different iterations/alternatives of development). TO enforce measuring of health implications of urban design proposals - to inform evidence-based decision making.

5 Via EU Directives

6 Cross-cutting decision making at national and community levels.

7 HIA supports preventive measures, ie investing into urban design that promotes healthy behaviour, walking, cycling, access to green infrastructure. New models of care (ie urban infrastructure could be included in the assessment criteria for HIA).

8 By the connection of health care center and the other entities (associations, institutions, organizations...) that promote or provide healthy activities.

9 Including an assessment of healthcare implications of every new development. Checklist and certifications to evaluate key issues.

Health Impact Assessment.

Evaluation of health implications from initial design to medium-long term.

Health and care needs data.

Common goals and stretching coordination actions.

National policy + local authority + stakeholder engagement.

Multidisciplinary teams.

17 It could be incorporated in 2 ways: i) All Planning Departments and their Planning Officers should be trained in Health Impact Assessment processes and therefore irrespective of whether an HIA is required for a planning application, they are able to (and encouraged) to consider the application in light of its health impact; ii) planning policy review to include HIA's into projects of a certain threshold (no. of units) or type (development of care home or school for example).

18 Evaluation, from initial design and through to medium-long term follow up of health implications. These evaluations need to balance the need for locally-relevant outcomes (and how those are 'measured') with broader national and international public policy-related outcomes (e.g. health metrics, health indicators). In doing so, the information gathered can provide important local context but also help to build the evidence base more broadly. I would also encourage the publication of project design protocols so that stakeholders can see what is "out there" in terms of projects in development or currently underway. It then becomes easy to follow the progress of initiatives from protocol to summary findings and synthesize findings across disciplines. For example, planners would be interested in particular evaluation data from a project while social scientists would likely be interested in a different set of data. These are often published in very different outlets but having a single protocol can help to identify evidence for the entire project.

19 Use of health and care needs data - demographics and mapping, reflect in infrastructure funding plans and decisions, and considerations in policy.

20 Defining and implementing common goals and stretching coordination actions with social, sport, environmental, mobility, etc local resources. Primary health care is a priority partner. However, we should be aware that the health care system is not the main social determinant in urban health. Therefore, the 2 proposal (see above), more related to Community Health actions, then Health care.

21 Through national policy and local authority plans-stakeholder engagement, lobbying and workshops to promote the benefits/ issues.

22 Multidisciplinary teams with expertise in urban development, health, social care, economy... that share knowledge and together build regulatory frames and solutions.

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Place for animals in cities.

Health standards in regulations.

23 Advisory body.

24 Taking into account not only human presence but also animals while designing cities.

25 Incorporating health standards in regulations. An example could be incorporating minimum thermal habitability conditions in Spanish Technical Code, besides energy consumption and demand thresholds.

26 Screening and mainstreaming into other pillars of action.

27 Health is a cross-cutting issue. This poses a challenge for its integration in areas that, in the first instance, seem unrelated. Integrating health in urban decision-making makes starts from including in the dialogue of urban policies and planning the representatives of the health area, as well as the affected population. It is necessary to know the needs of people and, at the same time, the impact that urban planning and policies have on the areas of health and care.

28 Through a new "social contract" in which the elements on community public health are put in value. Actions from associations and social groups can support to implement and strengthen institutional initiatives. Bidirectionality is needed. It is important to count with local groups and communities to know their needs and necessities. Institutional actions shall break the tendency of passive expertise-citizen.

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M2. MULTI-CRITERIA TOOLS

Q1.a. Could you give any examples of tools and/or system of indicators that would favour the encouragement, analysis and evaluation of healthy environments?

TOOLS

Current/in place

1 Spectrum Appraisal

Any **holistic sustainability and health participatory tools** such as Spectrum Appraisal.

2 WHO airQ+*

This tool enables local authorities to **estimate health impacts based on local pollution data**.

3 HEAT tool

WHO tool to assess the **health impacts and costs of urban transport choices**.

4 Satisfaction surveys

Satisfaction surveys.

5 Mobility surveys

Mobility surveys.

6 Life expectancy

Life expectancy.

7 DPSEEA Framework

DPSEEA Framework provided it is used systemically.

[Ref. 1.a]. Barton, H. and Grant, M. (2008) Testing time for sustainability and health: Striving for inclusiveness rationality in project appraisal. *The Journal for the Royal Society for the Promotion of Health*, 128 (3). pp. 130-139. ISSN 1466-4240 Available from: <http://eprints.uwe.ac.uk/8055>



[Ref. 1.b]. The WHO Urban Health Initiative website carries links to some superb and validated tools. WHO Urban Health Initiative Available from: <https://www.who.int/sustainable-development/cities/about/en/>

[Ref. 2]. AirQ+: software tool for health risk assessment of air pollution. Available from: <http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/activities/airq-software-tool-for-health-risk-assessment-of-air-pollution>

[Ref. 3]. HEAT tool software tool for health risk assessment of air pollution. Available from: https://www.who.int/gho/health_equity/assessment_toolkit/en/

[Ref. 7]. Morris, G., Beck, S., Hanlon, P., Robertson, R. (2006). Getting strategic about the environment and health. *Public Health*, 120: 889-907 Available from: <https://doi.org/10.1016/j.puhe.2006.05.022>

[Ref. 9]. Social Life Cycle Assessment Available from: <https://www.lifecycleinitiative.org/starting-life-cycle-thinking/life-cycle-approaches/social-lca/>

[Ref. 11]. Healthy Streets Tools. London. Available from: <https://www.london.gov.uk/what-we-do/health/transport-and-health/healthy-streets>

[Ref. 12]. Building with nature benchmark Available from: <https://www.buildingwithnature.org.uk/about>

[Ref. 13]. CRESH Center for Research on Environment, Society and Health Available from: <https://cresh.org.uk/webmap/>

[Ref. 14]. Place standard tool. Available from: <https://www.placestandard.sco/>

[Ref. 15]. OS Greenspace Map Available from: <https://getoutside.ordnancesurvey.co.uk/greenspaces/>

8 Health Impact Assessments*

HIA to assess the health implications of development a priori. Principals and tools. Healthy urban development Unit rapid tool.

9 Social Life Cycle Assessment

Social and socioeconomics LCA: Social Life Cycle Assessment.

10 Water course and groundwater management

Water course and groundwater management systems.

11 Healthy Streets

Prioritising walking, cycling and public transport to create a healthy city.

12 Building with nature benchmark

Building with nature standards and accreditation.

13 Online community mapping resources

Freely available online community mapping resources designed to empower local communities to address unhealthy environments.

14 Place standard tool

How Good Is Our Place? The Place Standard tool provides a simple framework to structure conversations about place. It allows you to think about the physical elements of a place (for example its buildings, spaces, and transport links) as well as the social aspects (for example whether people feel they have a say in decision making).

15 OS Greenspace Map

The new free Greenspace layer in OS Maps is the easiest way to discover greenspaces across Britain.

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[Ref. 17]. Marmot Review report - Fair Society, Healthy Lives. The Marmot Review into health inequalities in England was published on 11 February 2010. It proposes an evidence based strategy to address the social determinants of health, the conditions in which people are born, grow, live, work and age and which can lead to health inequalities. Available from: <https://www.local.gov.uk/marmot-review-report-fair-society-healthy-lives>

[Ref. 18]. Cuaderno salud y desarrollo urbano sostenible. Guía práctica para el análisis del efecto en la salud de iniciativas locales de urbanismo. Available from: <http://bit.ly/1qR6QTK>

[Ref. 19]. Programa Ciudades Emergentes y Sostenibles Available from: <https://www.iadb.org/es/desarrollo-urbano-y-vivienda/programa-ciudades-emergentes-y-sostenibles>

[Ref. 20]. PayStats offers anonymous statistics of millions of transactions that have been realized with BBVA cards and any other bank in TPVs BBVA to create a virtual map that enable to analyze consumption habits of a given area. Available from: <https://www.bbvaapimarket.com/products/paystats>

[Ref. 21]. Bongiorno C. et al. (2019). Comparing bicycling and pedestrian mobility: Patterns of non-motorized human mobility in Greater Boston. Available from: https://interscity.org/assets/journal_of_transport_geography_2019.pdf

[Ref. 22]. Mortality and disease map by municipalities. Available from: https://elpais.com/elpais/2020/02/05/ciencia/1580906716_232241.html

17 The Marmot Review

Implications for Spatial Planning: identifies the following elements with significant impact on health and inequities: environmental pollution, transport, natural spaces, public open spaces, alimentation, housing, community participation, social isolation.

18 Effects on health of local urban initiatives*

Practical guide for analysis of the effects on health of local urban initiatives and municipal vulnerability to climate change.

19 Emerging and Sustainable Cities Program

Initiative ICED (Ciudades Emergentes y Sostenibles/Emerging and sustainable cities) has been implemented by IADB/BID in different cities in Latin America and Caribbean that were exposed to disfunctionalities and dynamics that were characteristic from modern urban mega polis deteriorating life quality of inhabitants and that, because of this big size, it is not possible neither effective implement politics that improve these indicators. Focusing on a future that will be affected by Climate Change, an homogeneous and rapid methodology for all these medium-size cities has enable a diagnosis, evaluation and implementation proposals for transformation in a very rapid way, with a big acceptance by all the agents and with a real affectivity in environments where it was difficult the implementation of urban and public policies.

20 Diversity of commerces in an area

Tools to measure how diverse are commerces in an area to get affordable fresh food, vegetables and fruits, etc. through digital data (google places, bank card payments, etc.)

21 Metrics on mobility patterns

Metrics on mobility patterns through mobile devices geolocation.

22 Monitoring diseases and mortality causes

Monitoring diseases and mortality causes with high spatial resolution through healthcare databases.

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[Ref. 23.a]. Basic Psychological Need Satisfaction, and Frustration Scales. Available from: <https://selfdeterminationtheory.org/basic-psychological-needs-scale/>

[Ref. 23.b]. Subjective well-being. Australian Centre on Quality of Life. Available from: <http://www.acqol.com.au/instruments#measures>

[Ref. 25]. HUDU Healthy Urban Planning checklist. Available from: <https://www.healthyrbandevelopment.nhs.uk/wp-content/uploads/2017/05/Healthy-Urban-Planning-Checklist-3rd-edition-April-2017.pdf>

[Ref. 26]. The Salford Social Value Alliance is a partnership between the private, public and voluntary community and social enterprise sector aimed at producing more Social Value in Salford. Available from: <http://www.socialvalueuk.org/a-social-value-approach-in-salford/>

[Ref. 28]. The Accessible Information Standard, formally known as DCB1605 Accessible Information, is made up of a Specification and Implementation Guidance. Available from: <https://www.england.nhs.uk/ourwork/accessibleinfo/>

[Ref. 30]. Valencian Community recommendations. Available from: <https://www.micof.es/bd/archivos/archivo8947.pdf>

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23 Psychological and subjective well-being*

Psychological well-being (e.g. Deci & Ryan's basic psychological needs, subjective vitality).

24 Impact assessments

Impact assessments (range of statutory ones relevant to UK - Strategic Environmental Assessment, Environmental Impact Assessment and Health Impact Assessment).

25 Healthy environments checklists and guidances

Local planning for healthy environments checklist or guidance (i.e. London HUDU and various local authorities).

26 Social Value approach

Embedding social and health outcomes using Social Value approach.

27 Community health teams in urban neighbourhoods

Community health teams working in urban neighbourhoods (health risks+health assets diagnosis+alliances with community networks and other professional on the field).

28 Accessibility Indicator System

Promote accessibility assessments methods for master planning projects, infrastructure and buildings, such as AIS standards. The Accessibility Indicator System provides criteria to design or evaluate existing environments.

29 Sustainability assessments methods*

Promote sustainability assessments methods for master planning projects, infrastructure and buildings, such as Leed, Breeam, Verde, Well... Also promote ISO standards in the mentioned areas

30 Eliminating mosquitoes from stagnant water

Eliminating mosquitoes nesting points (stagnant water).

[Ref. 31.a]. ASHRAE 55-2013
Available from: <https://www.ashrae.org/technical-resources/bookstore/standard-55-thermal-environmental-conditions-for-human-occupancy>

[Ref. 31.b]. EN 15251:2007
Available from: <https://www.une.org/encuentra-tu-norma/busca-tu-norma/norma?c=N0041732>

[Ref. 32]. Street Systems
Available from: <https://streets.systems/>

31 Adaptive thermal standards*

ASHRAE 55-2013 Adaptive thermal standard. Regarding buildings indoor temperature enables fixing thermal thresholds for occupants that gathers their capacity to adapt to different temperature ranges. This tool enables designing health environments from the thermal perspective. EN 15251:2007 A similar standard to previous one. This is the European Standard for adaptive thermal comfort. Regarding buildings indoor temperature enables fixing thermal thresholds for occupants that gathers their capacity to adapt to different temperature ranges. This tool enables designing health environments from the thermal perspective.

32 Automated capture of mobility

Automated capture of mobility types is now possible. Companies such as Street Systems in Newcastle enable to augment streets or public spaces with ability to sense shifts in mobility patters, which can help to assess the success of any interventions. <https://streets.systems>

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1 Longitudinal studies

Longitudinal studies would allow empirically checking the positive effects of healthy environments (for example, green areas) on the health and quality of life of the population, especially, fragile and dependent people.

2 Qualitative studies

Qualitative studies would allow an understanding of the relationship between healthy spaces and user perception, as well as an approach to understand their behaviors and prejudices.

3 Environmental sensors

The use of ambient sensors (thermal, light, sound, air pollution) could help assess the quality of the environments in different public spaces (Sanchez-Gonzalez y Cortes, 2016).

4 Air quality measurements

Air quality measurement. Locally conducted can inform local communities of health impacts/threats.

5 Multicriteria methodology

Multicriteria methodology.

6 Objective assessment vs subjective perceptions

The objective assessment of environmental quality (and its health potential) is often quite different to user's subjective perceptions of them. Therefore what is "well-designed" can vary depending on discipline and user audience.

7 Cross sectional and cross institutional actions*

Cross sectional and cross institutional (interlevel) actions (lobbying based in epidemiological information about inequities in health in the city: eg. differences in expectancy in life between rich and poor neighbourhoods; advising local authorities in urban planning with a health and equity perspective..)

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[Ref. 10.a]. Dado D. et al. Detection of zoonotic intestinal parasites in public parks of Spain. Potential epidemiological role of microsporidia. *Zoonoses Public Health*. 2012 Feb;59(1):23-8. Available from: 10.1111/j.1863-2378.2011.01411.x. Epub 2011 May 12. PubMed PMID: 21824364.

[Ref. 10.b]. Simonato G. et al. Contamination of Italian parks with canine helminth eggs and health risk perception of the public. *Prev Vet Med*. 2019 Nov 15;172:104788. Available from: 10.1016/j.prevetmed.2019.104788. Epub 2019 Oct 5. PubMed PMID: 31627164.

[Ref. 10.c]. Duncan KT et al. Prevalence of intestinal parasites in fecal samples and estimation of parasite contamination from dog parks in central Oklahoma. *Vet Parasitol Reg Stud Reports*. 2020 Jan;19:100362. Epub 2019 Dec 6. PubMed PMID: 32057390. Available from: 10.1016/j.vprsr.2019.100362.

[Ref. 10.d]. Ferreira A. et al. Urban Dog Parks as Sources of Canine Parasites: Contamination Rates and Pet Owner Behaviours in Lisbon, Portugal. *J Environ Public Health*. 2017;2017:5984086. Epub 2017 Aug 30. PubMed PMID: 28947905; PubMed Central PMCID: PMC5602491. Available from: 10.1155/2017/5984086.

[Ref. 10.e]. Smith AF et al. Urban park-related risks for *Giardia* spp. infection in dogs. *Epidemiol Infect*. 2015 Nov;143(15): 3277-91. Epub 2015 Apr 13. PubMed PMID: 25865261. Available from: 10.1017/S0950268815000400.

[Ref. 10.f]. Zanzani SA et al. Canine fecal contamination in a metropolitan area (Milan, north-western Italy): prevalence of intestinal parasites and evaluation of health risks. *ScientificWorldJournal*. 2014; 2014:132361. Epub 2014 Nov 17. PubMed PMID: 25478583; PubMed Central PMCID: PMC4248419. Available from: 10.1155/2014/132361.

[Ref. 15]. Street Systems Available from: <https://streetsystems/>

8 Pollution analyse

Pollution analyse.

9 Ecological education

Ecological education.

10 Parasites detection

Parasites detection in ground, soil, park sand.

11 Time-interrupted series design

Time-interrupted series design.

12 Natural experiments design

Natural experiments design.

13 Pedestrian and bike-share ride management

Pedestrian and bike share ride management systems.

14 Water course and groundwater management

Water course and groundwater management systems.

15 Specialised tools to capture accessibility challenges

Various tools and techniques are not available to enable, for instance, those with mobility and access challenges to discover and discuss their daily mobility and where there are challenges to navigate places they like to go. In simple workshops, Google Maps and Street View provides for virtual tours and can elicit problematic areas. Specialised tools to capture accessibility challenges are in development but not widely available. One of them is the WheelyMap system. This example captures problematic surface conditions automatically from a wheelchair. One day, such systems could give local officials better feedback on the accessibility of public spaces beyond traditional accessibility surveys.

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16 Monitoring and evaluation tools for accessibility

There are few known examples of urban projects that establish tools that allow the control and monitoring of the impact of investments and improvements in the conditions of usability and accessibility of urban environments. In the field of universal accessibility, at Aceplan Accesibilidad we have been working projects that include the development of monitoring and evaluation tools. These tools start with the development of assessment mechanisms that make it possible to define a baseline, covering urban design, mobility and participatory data. In any case, I am unaware of the existence of mechanisms that include specific data from healthcare systems in the evaluation and control of urban environments.

17 Specific tools adapted to culture and traditions

There are specific tools based on culture and traditions to prevent infections. For example, in a study with gypsy population for VIH transmission, it was clear that this population already used some preventive cultural tools as a "communitary" answer developed because of vital, economic and social conditions of vulnerability.

Q1.b. Could you give any examples of tools and/or system of indicators that would favour the encouragement, analysis and evaluation of healthy environments?

SYSTEM OF INDICATORS

Current/in place

[Ref.1] SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
Available from: <https://unstats.un.org/sdgs/report/2016/goal-11/>

[Ref.2] WHO Healthy Cities Indicators.
Available from: <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/who-european-healthy-cities-network>

[Ref.5] Eurostat indicators.
Available from: <https://ec.europa.eu/eurostat/web/sdi/indicators>

[Ref.6] Global Reference List of 100 Core Health Indicators, 2015.
Available from: <https://www.who.int/healthinfo/indicators/2015/en/>

1 Sustainable Development Goal 11

SDG11 is a good place to start and interpreting the indicators through a health lens.

2 WHO Healthy Cities Indicators

Who Healthy Cities Indicators (used by Healthy Cities Networks since 1990s). World Health Organization Healthy Cities Project.

3 Health & Well-Being accreditation schemes*

Health & well-being - BREEAM is a tool with some indicators of wellbeing embedded into its measurement for a new building. National and local accreditation schemes for projects (national - Building for Life, Home Quality Mark and BREEAM, local - Livewell Essex, Design Charter West Midlands).

4 International WELL Building Institute

International WELL Building Institute. Another building-level health measurement toolkit.

5 Eurostat

Eurostat indicators.

6 100 Core Health Indicators WHO

Global Reference List of 100 Core Health Indicators, 2015 (WHO). A standard set of 100 indicators prioritized by the global community to provide concise information on the health situation and trends, including responses at national and global levels. It will be reviewed and updated periodically as global and country priorities evolve and measurement methods improve.

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[Ref.8] CDC HRQOL-14 Quality-of-Life 14-Item
Available from: https://www.cdc.gov/hrqol/hrqol14_measure.htm

[Ref.10] Botello B. et al. (2013) Methodology for health assets mapping in a community. Gac Sanit vol.27 no.2 Barcelona mar./abr. 2013
Available from: <http://dx.doi.org/10.1016/j.gaceta.2012.05.006>

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7 Quality-of-Life 14-Item Measure

Centers for Disease Control and Prevention Health-Related Quality-of-Life 14-Item Measure (CDC HRQOL-14)

8 Healthy Days Measure

Centers for Disease Control and Prevention Health-Related Quality-of-Life 14-Item Measure (CDC HRQOL-14). The standard 4-item set of Healthy Days core questions (CDC HRQOL- 4) has been in the State-based Behavioral Risk Factor Surveillance System (BRFSS) since 1993 (see BRFSS website). From 2000 to 2012, the CDC HRQOL- 4 has been in the National Health and Nutrition Examination Survey (NHANES) for persons aged 12 and older. Since 2003, the CDC HRQOL- 4 has been in the Medicare Health Outcome Survey (HOS)- a measure in the National Commission for Quality Assurance's (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS). Standard Activity Limitation and Healthy Days Symptoms modules have also been available since January 1995. When used together, these measures comprise the full CDC HRQOL-14 Measure.

9 Map of resources for health and conviviality

Map of resources for health and conviviality. They are an ensemble of methodologies to identify local, regional and national resources that are located in the territory and that they allow to create a map of those that are working as active nodes for improvement or prevention in terms of health. In Spain there are examples of the implementation of active maps in different contexts. Within the development of a regional strategy for community health engagement in Asturias (Spain), and connected to the Health Observatory, we carried out a methodology to initiate the mapping of health assets at a local level. This methodology begins with a description of the most formal resources and of the pre-existing community activities, together with a characterization of the most informal, personal and symbolic health resources. We introduce our tools, grouped for the development of mapping, and explain their connection with the theoretical models of salutogenesis, asset model and community development.

10 Standards and ratios of green and recreation areas*

Standards and ratios of green areas and facilities to play sports. Area of walking and recreation parks per capita.

11 Standards and ratios for public transport alternatives

Standards and ratios of enough public transport alternatives and frequencies to avoid a car-based lifestyle.

12 Climographs

Climographs to determine how many hours a year temperature remains within comfort thresholds to carry out open air activities such as walking, playing children's games and sports.

13 Sustainable Development Goals

Sustainable Development Goals (though too general for local applications).

14 Public Health Outcomes Framework

Public Health Outcomes Framework (England only from Public Health England). The framework focuses on the two high level outcomes we want to achieve across the public health system and beyond: 1) Increased healthy life expectancy; 2) Reduced differences in life expectancy and healthy life expectancy between communities. These outcomes reflect the focus we wish to take, not only on how long we live – our life expectancy, but on how well we live – our healthy life expectancy. Our focus is also on reducing differences between people and communities from different backgrounds.

15 Accessibility Indicator System Standard

AIS 1/2018 is the Accessibility Indicator System Standard to evaluate the built environment (new construction or refurbishment).

16 Habitability and health factors and impact

In case we consider different factors and their impact on occupants health, it might be interesting the document we produced for last CONAMA, within the Working Group 'Habitability and health'. Any battery of indicators should be assessed at the three levels proposed in that document: urban, building and occupants' scale.

17 Accessibility of Transport

Given the direct relationship between universal accessibility and healthy environments, it is pertinent to consider the indicators of universal accessibility in urban planning as indicators that can support the analysis and evaluation of healthy environments. In the transport area, the Methodology for Describing the Accessibility of Transport in Europe (MEDIATE) is a primary example.

[Ref.14] Public Health Outcomes Framework
Available from: <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>

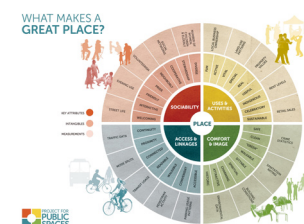
[Ref.15] Accessibility Indicator System Standard
Available from: <http://www.allaboutais.com/index.php/en/standards/standards-of-ais>

[Ref.16] Working Group 'Habitability and health' from CONAMA.
Available from: http://www.conama.org/conama/download/files/conama2018/GTs%202018/5_final.pdf

[Ref. 17] Universal accessibility indicators. MEDIATE methodology.
Available from: <https://www.age-platform.eu/project/mediate-methodology-describing-accessibility-transport-europe>

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[Ref.20] The Place Diagram.
Available from: <https://www.pps.org/article/grplacefeat>

[Ref.21] Technical assistance for accessibility passenger transport services in Turkey project.
Available from: <https://www.turksat.com.tr/en/haberler/technical-assistance-project-accessibility-passenger-transport-services-turkey-introductory>

18 Scenarios and indicators

It has been applied to more than 250 Basque municipalities with respect to four chains of impacts with effects on health, such as heat waves, droughts, maritime and river flooding. Based on the climate change scenarios prepared for the Basque Country, a selection of relevant indicators of threat, exposure, vulnerability (sensitivity and capacity) and adaptation have been made to assess the risk. The result is detailed information for each municipality, with georeferenced cartography and data sheets on specific risks that represent a base information for updating emergency plans, territorial planning or climate change plans implemented at local level.

19 Agenda 2030 Sustainable Development of Basque Country

Within the framework of Udalsarea 2030, the Basque Network of Municipalities towards Sustainability, which coordinates and drives the Agenda 2030 for the Sustainable Development of Basque municipalities and promotes the implementation of action plans, has developed a guide - based on the healthy urban development checklist of the Department of Health of Australia. Nine health conditioning factors have been analysed: urban public spaces, mobility, environment, housing, food, safety and protection, social cohesion, employment, physical activity and basic equipment.

20 Place-making framework

The place making framework from the Project for Public Places could provide a useful framework to consider different aspects that provide for a place that can cater for greater engagement and active life styles by pro-active well-considered design interventions.

21 Urban and long distance transport accessibility

In the urban transport area, Aceplan Accesibilidad have been working in the project "Technical assistance for accessibility of passenger transport services in Turkey" (EuropeAid/137899/IH/SER/TR), which included, among many other tasks, the development of a set of indicators on urban and long distance transport accessibility.

[Ref.22] Person-Environment Inclusion in the city of Cusco, Peru. Available from: <https://www.youtube.com/watch?v=-threZ7MAAk>

22 Person Environment Inclusion Pilot Project

IAcceptan Accesibilidad has developed the pilot project "Person-Environment Inclusion in the city of Cusco, Peru" (2016), as part of the Inter-American Development Bank program "Emerging and Sustainable Cities". This pilot project included the elaboration of a set of "Person-Environment Inclusion Indicators". These set of indicators form a basic picture of the city regarding its urban pedestrian mobility and security, universal accessibility and street usability status.

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[Ref.1] Environmental health inequalities in Europe. Second assessment report. Available from: <https://apps.who.int/iris/bitstream/handle/10665/325176/9789289054157-eng.pdf?sequence=1&isAllowed=y>

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Suggestions/potential

1 WHO environmental health inequality indicators

WHO environmental health inequality report indicators could be applied to identify unequal distributions of environmental risks in local settings. Often, there is only average data but no indication of distribution patterns.

2 Multi-criteria indicators

Multi-criteria indicators.

3 Attributes of physical-built environment

The attributes of the physical-built environment (security, accessibility, etc.) are key to understanding the functionality of the user's relationship with the environment (Sanchez-Gonzalez y Cortes, 2016).

4 Usability of the user with the environment

The functions of the social environment (stimulation, etc.) are key to understanding how the usability of the user with the environment (Sanchez-Gonzalez y Cortes, 2016).

5 Prevalence of diseases

Prevalence of diseases (respiratory, cardiovascular, cancer, dementias).

6 Indicators on health and population

Affected population, affected determinants of health, aspects of the initiatives with potential positive and negative effects, potential results on health.

7 Expectancy in life differences

Differences in expectancy in life between rich and poor neighbourhoods.

8 Specific indicators for specific goals

Specific indicators for specific goals (e.g. number of people who died alone in their homes).

9 Waste management

Waste management.

10 Identification of parasites

Collecting sand, soil and ground random samples and identification of parasites.

11 Epidemiology maps of distribution of mosquitoes

Development of an epidemiology maps of distribution of tiger mosquito and identify critical points. Analyse possibility to introduce insectivore birds.

12 Daily levels of air pollution*

Daily levels of air pollution. PM, NOx, SOx levels.

13 Daily traffic density

Daily traffic density.

14 Waste water analysis

Sum parameters in environmental analysis: Total Oxygen Demand, Chemical Oxygen Demand, algae concentrations.

15 Health reports on key indicators

Health reports from clinics on key indicators associated diabetes, obesity or high blood pressure.

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Local qualitative information and local health trends assessments.

Environmental data, socioeconomic and lifestyles by districts and smaller areas related with health.

Perception data.

Non communicable diseases data.

Data about households conditions.

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Q2. According to your own field of expertise, what types of data are most important in assessing urban health problems?

1 Local health trends and needs assessments combined with local qualitative information from people in the community.

2 Environmental data that can be stratified by city districts and social or demographic variables.

3 Use and perception data to understand how citizens use and perceive urban conditions.

4 Relationship between trips on foot and by car.

5 Data on exposure.

6 Prevalence of neurodegenerative diseases and dementias.

7 Non Communicable Diseases data would be most useful - but in proactive Communicable Diseases data is more widely used and acted upon.

8 Data related to the households conditions.

9 Public health data on locality, also GIS and street syntax to identify gaps in the urban environment.

10 Longitudinal geographical data relating to the health-related resources available in local communities.

11 Analysis in small areas of principal death causes, diseases and lifestyles related with health, related with socioeconomic and environmental factors.

Data about households conditions.

12 Health issues data with high time and space resolution.

13 My personal strengths and interests lie with quantitative measures to provided some consistency & generalisability across contexts, settings, etc. and facilitates to use of modelling, for example. However, I also realise that these can be quite limiting in regards to determining the underlying, often very nuanced reasons for the data that can only be ascertained from more qualitative methods of data collection. I would support mixed methods for that reason.

14 Data available and used by public agencies, NHS.

15 Social variables, geolocalized health outcomes.

16 Mapping of illness/social deprivation/environmental pollution etc.

17 It is not only about raw data, but processed data that matches big data from environment (characteristics of current or projected environment) and big data from final users (characteristics concerning capabilities or special need and their potential evolution).

18 Air and water quality.

19 Epidemiologic studies of zoonosis.

20 Climate risks, Mobility, Environment (waste, water, aire), housing, food, safety and protection, social cohesion, employment, physical activity , basic equipment...

21 Wheather/microclimatic data (temperature-humidity), air pollution, noise.

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Processed data.

Epidemiologic studies.

Microclimatic data.

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22 Air pollution, noise and, of course, health data.

23 Urban environment health (air, soil and water pollution) and citizen behavioral preferences.

24 Regarding universal accessibility (UA), there are at least three types of relevant data to be assessed: (1) data on the current situation of urban design accessibility, covering UA elements and identifying accessible pedestrian routes and transport infrastructures; (2) specific data on the mobility patterns of the UA target groups (persons with disabilities, elderly, people with functional limitations...); (3) the impact of urban environment over the health of the UA target groups, assessed through participatory processes.

25 It is important to know preventive mechanisms that community culture puts already in place for the development of institutional policies with vulnerable groups and populations.

Public health data
+ spatial planning
metrics.

Regulation private
vehicles and improving
public transport.

Place Standard Tool

Q3. Could you give any example of integration of public health data (e.g. chronic disease rates, injuries, distribution and accessibility of services; data available from healthcare services) into urban planning processes?

- 1 Public health 'data' also need to include spatial planning metrics, such as percentage of population within 5 minute walking distance of good public transport, or within 10 minutes of food growing opportunities. The public health data you provide as examples is too restrictive.
- 2 Reducing air pollution in cities by regulating private vehicles and improving public transport (notably in London, Milan, Singapore and Stockholm).
- 3 There is relevant research on morbidity and mortality from respiratory diseases in relation to the level of contamination in different cities of the world (eg, Madrid, Barcelona). However, these studies have had little practical effect on the urban planning of these cities.
- 4 The experience in Latin America has shown me the poor effectiveness of these evaluations.
- 5 Injuries from car accidents - are used to make urban planning and design decisions. Unhealthy eating related issues are (in London) affecting the planning decisions for junk food restaurants..
- 6 An HIA report would require those conducting the HIA to identify health profile/health data of the locality beforeNo, because accomplishing health goals are not among current direct requirements on urban planning in the geographies where I have developed my career. Indirect links between health goals and urban planning are the rations on green areas respect to residential surface standards, but this link is insufficient from my point of view.e answering how their new development would support health. The HIA is for some London Borough a requirement in the development management process validation list, so developers cannot refuse to conduct an HIA.
- 7 Place standard tool <https://www.placestandard.scot/>
- 8 Health plans in Madrid municipality that have into account epidemiologic information.

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- 9 No, because accomplishing health goals are not among current direct requirements on urban planning in the geographies where I have developed my career. Indirect links between health goals and urban planning are the rations on green areas respect to residential surface standards, but this link is insufficient from my point of view.
- 10 Really good example of a project with clearly communicated design, evaluation, and integration of a range of inter-related outcome measures. In particular, there is some interesting published work around disability adjusted life years and the public health impact of that (in cost).
- 11 Use of the Strategic Health Asset Planning and Evaluation (SHAPE) tool.
- 12 Introducing database overmortality and social privation index by small areas (census tracts) in Madrid. Community Health Council Centres information system to identify ZIP (zonas de intervención preferente=Preference Intervention Zones). Also individual social variables (education level, working status, etc). Using this area indicators for territorial redistribution of Budget with a equity perspective.
- 13 Local authority mapping/GIS-unlikely to be publicly available.
- 14 If we know the incidence of certain diseases or the existence of special needs, standards can be defined, for example, if it is identified that the population has health problems that affect their motor or vision abilities, cities and buildings can be designed in such a way that they these needs for example spaces suitable for wheelchair users.
- 15 Health care distribution.
- 16 Local and regional adaptation plans to climate change (Valencia, Murcia, Sevilla, San Sebastián, ...). Health and environmental plans.

Q4. Could you provide any example of impact evaluation of health promotion programs/projects?

[Ref. 1]. De Leeuw, E., Green, G., Tsouros, A., Dyakova, M., Farrington, J., Faskunger, J., Grant, M., Ison, E., Jackisch, J., Lafond, L.J. and Lease, H., 2015. Healthy Cities Phase V evaluation: further synthesizing realism. Health promotion international, 30(suppl_1), pp.i118-i125.

1 A whole special issue developed to the evaluation of WHO Healthy Cities in Europe, including development and justification of an appropriate methodology to use in the complex and open system of an urban settlement. The cities in 2.8 have completed studies on the impacts of congestion charges

2 The Word Health Organisation provide good examples of HPPs.

3 Evaluation of the law anti-tobacco and reduction to passive exposition, decrease of mortality by traffic accidents relating to measures of intervention.

4 Health Impact Assessments undertaken (Barton Healthy New Town etc) or health as part of Environmental Impact Assessments undertaken (various according to IEMA database).

5 Evaluation of programmes and projects of Madrid's "Estrategia Barrios saludables" and Plan "Madrid Ciudad de los Cuidados" (2015-2019).

6 ARS Foundation has promoted the assessment of the accessibility of the built space, the digital environment and products through the implementation of AIS standards since 2012, this has allowed the private sector to be mobilized, carrying out thousands of certifications in accordance with the aforementioned standards and resulting in that the evaluated companies have included in their business plans measures and budget to improve their buildings, web pages...

7 How NHS initiatives have performed such as the '5-a-day' and 'couch to 5K'.

8 Prevention and combating occupational stress.

9 Campaign for control an important leishmaniosis outbreak in Madrid. Also an awareness campaign was run with citizens and leaflets with information about transmissor mosquito.

10 SOPHIE project aims to generate new evidence on the impact of structural policies on health inequalities, and to develop innovative methodologies for the evaluation of these policies in Europe.

[Ref. 9]. *Leishmaniasis outbreak in Fuenlabrada and other municipalities of Madrid. Rol of rabbit and hare reservoirs.* Available from: <http://www.madrid.org/bvirtual/BVCM017962.pdf>

[Ref. 10]. *SOPHIE* is a research project funded from the European Community's Seventh Framework Programme. Available from: <http://www.sophie-project.eu/index.htm>

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[Ref. 12]. Dissemination Report Mainstreaming Inclusive Design and Universal Mobility in Lima Accessibility in the Urban Environment of the Metropolitan Stations. Available from: <http://pubdocs.worldbank.org/en/313731557506858912/Dissemination-Report-Mainstreaming-Inclusive-Design-and-Universal-Mobility-in-Lima-Accessibility-in-the-Urban-Environment-of-the-Metropolitan-Stations.pdf>

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11 Transmission on infectious diseases in slums (limited).

12 In 2014 Aceplan Accesibilidad has developed a World Bank project on the improvement of universal accessibility in the urban environment of BT stations in Lima, Peru. Although health promotion was not one of the main objectives of the project, this is always an inherent goal to projects that seek to improve life quality and autonomy for persons with functional limitations.

M3. ACTIONS & EXPERIENCES

Q1. Could you give any examples of actions, experiences and best practices that would favour healthy environments?

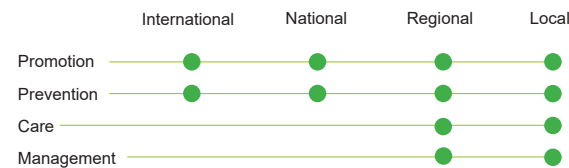
Current/in place

1 Treatment of urban solid waste*



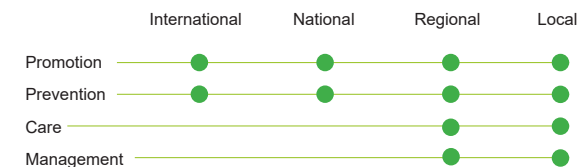
Recycling of waste. Program for treatment of urban solid waste. Flanders, Belgium.

2 Water consumption control



Water consumption control plans.

3 Bike lane network*



Program for the extension of the bike lanes network (Barcelona). Improving the safety for cyclists - particularly segregation of cycle lanes (eg Bristol Cycling city). It increased numbers of cyclists significantly - increases active travel, reduces car use etc.

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4 Reduction of speed limit



Reducing the speed limit in Bristol to 20mph. Reduced serious accidents, air pollution, noise pollution, safer for other road users etc.

5 Sustainable travel for new developments



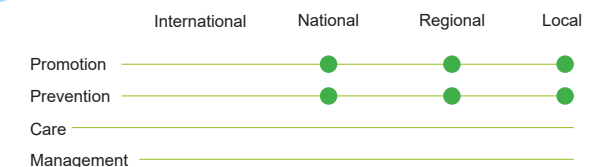
Promoting congress and training on these subjects.

6 Open space provision in new developments



Requirement within NPPF for open space provision in new residential development including SANGS.

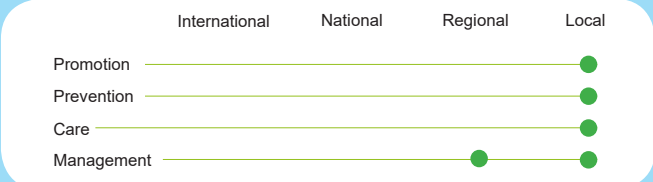
7 Playing fields in schools



Sport England statutory objection to lost playing fields in schools.

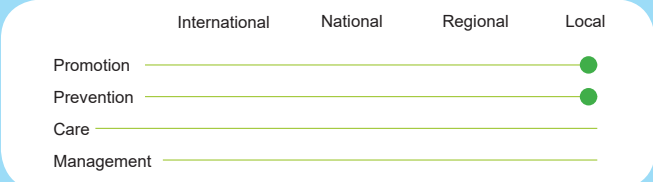
[Ref. 8]. Green Infrastructure and Housing Development.
Available at: <https://ecosystemsknowledge.net/sites/default/files/wp-content/uploads/Green%20infrastructure%20and%20housing%20report%202016.pdf>

8 Green infrastructure



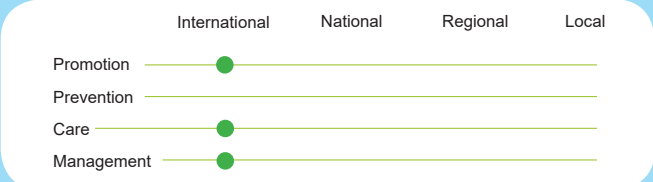
Zaragoza green infrastructure.

9 Improvement of quality public realm



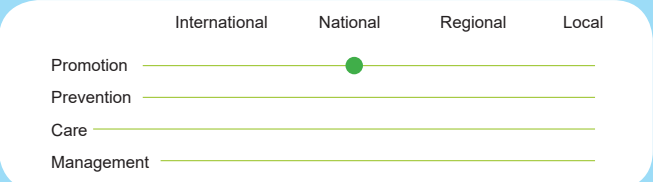
Improved quality of public realm to increase social sustainability.
Widespread examples throughout most city centres.

10 Atlas of Energy Poverty Initiatives in Europe



"Atlas of Energy Poverty Initiatives in Europe, State-by-state Review"
Ecoserveis.

11 Express rehabilitation for vulnerable housing



Considered a Good Practice in the National Strategy against Energy Poverty 2019-2024.

[Ref. 10]. Urban Regeneration Projects.
Available at: <https://www.ecoserveis.net/en/atlasof-energy-poverty-initiatives-in-europe-state-by-state-review/>

[Ref. 14]. Express rehabilitation for vulnerable housing
Available at: <https://www.fundacionnaturgy.org/publicacion/re-habilitacion-expres-hogares-vulnerables-soluciones-coste/>

[Ref. 12]. Urban Regeneration Projects.
Available at: <https://www.mitma.es/arquitectura-vivienda-y-suelo/urbanismo-y-politica-de-suelo/observatorio-de-la-vulnerabilidad-urbana/informe-formulas-innovadoras-gestion-financiacion-actuaciones-regeneracion-barrios>

12 Housing energy retrofitting



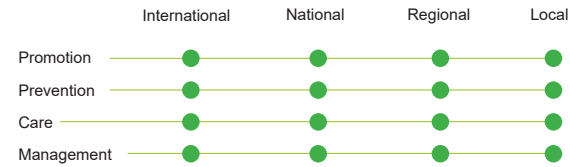
Some of these successful projects of urban regeneration were analysed in the document: Informe sobre Fórmulas innovadoras de Gestión y Financiación en actuaciones de Regeneración de Barrios.

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Suggestions/potential

1 Congress and training on urban health



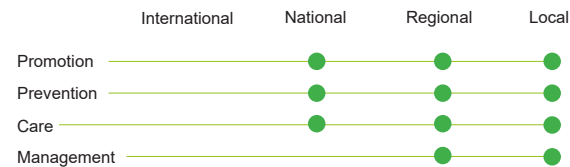
Promoting congress and training on these subjects.

2 Healthy food for children programs in schools



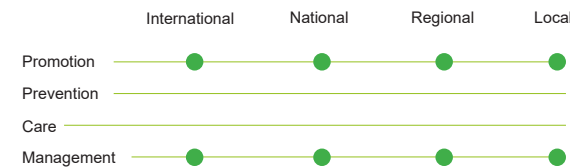
Healthy food for children programs in schools are a great measure with real impact.

3 Health Impact Assessments



Requirements to use Health Impact Assessments (ie Wales legal duty on public bodies).

4 Promoting R+D+I projects addressing urban health



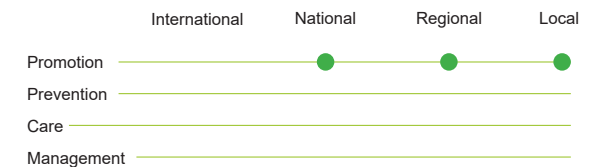
Promoting R+D+I projects to address these issues.

5 Promoting R+D+I projects addressing urban health



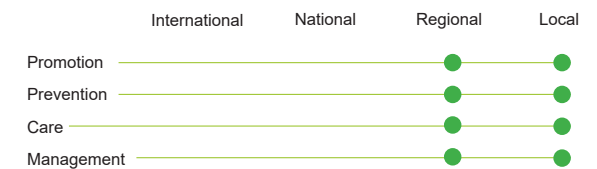
Promoting R+D+I projects to address these issues.

6 Sustainable travel for new developments



Promotion of sustainable travel for new development through the planning system.

7 Healthy urban design



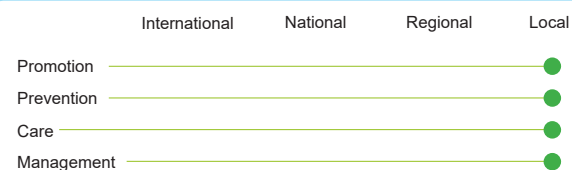
Urban nature (blue and green), active transport options, climate-sensitive planning and building, sustainable public transport, public utilities to provide sustainable energy choices, social tariffs for public services that may not be affordable for the poor, distribution of public services across the city to avoid long distances.

[Ref. 2]. PERSEO program. Spanish Government. Ministry of Health and Consumption. Available from: http://www.aecosan.msssi.gob.es/AECOSAN/docs/documentos/nutricion/educanaos/profesores_alimentacion_saludable.pdf

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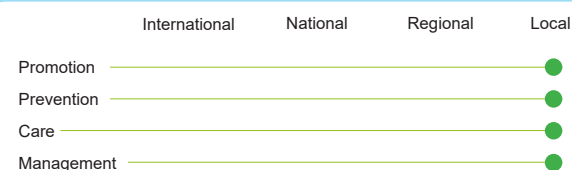
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8 Promotion of healthy food and active mobility



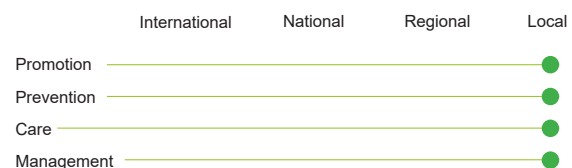
Madrid's ALAS Programme (Alimentación, Actividad física y salud). Promoting healthy food and active mobility. Preventing Diabetes and Obesity: combining population and high risk approaches.

9 Health planners



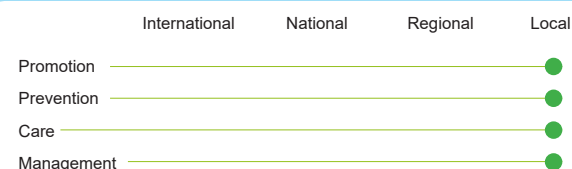
Dedicated personnel in local government working across planning, health and transport teams. Health planners or healthy environments officers.

10 Schoolyards and surrounding environments



Pilot project of improvement of scholar environment. Participatory definition of schoolyards reforms as important spaces for health promotion, coeducation, diversity integration, etc.

11 Clear policies on healthy environments



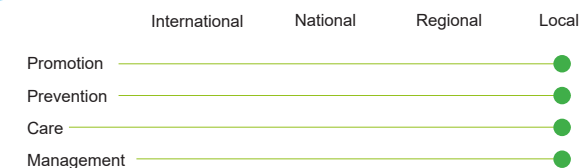
Local authorities with clear published local policies and guidance on healthy environments.

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[Ref. 10]. Pilkington, P., Grant, M. and Burgess, S. (2011) Developing capacity and capability in health impact assessment across the South West of England. Project Journal of the Department of Planning and Architecture, 3. pp. 27-29. ISSN 2042-7654 Available from: <http://eprints.uwe.ac.uk/15634>

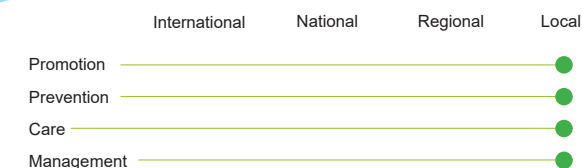
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12 Regional training in spatial HIA



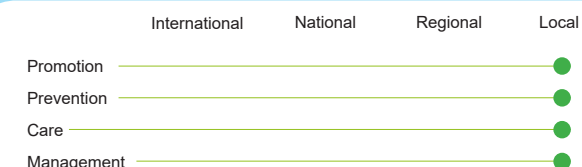
Regional training in spatial health impact assessment always seems to have an impact on culture. especially where part of a long term programme.

13 Loneliness prevention pilot project



Loneliness prevention pilot project (proyecto piloto de prevención de la soledad no deseada): support a community network to prevent loneliness and to identify and help lonely people in a neighbourhood).

14 One-month audit of planning applications

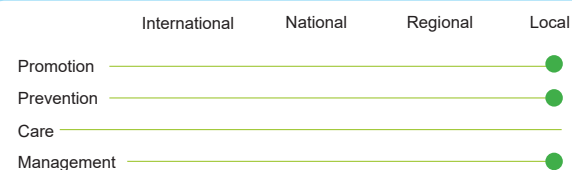


The audit of planning applications for one month that may have a health impact lead to a big shift in the local authority - they then put in place a triage system for undertaking appropriate health impact appraisal of applications.

[Ref. 14.a]. Grant, M., Raffle, A. and Hewitt, S. (2011) Health triage in development management. Project: Journal of the Department of Planning and Architecture, 3. pp. 24-26. ISSN 2042-7654 Available from: <http://eprints.uwe.ac.uk/15231>

[Ref. 14.b]. The Bristol Health and Planning Protocol-First year evaluation L Carmichael, M Grant, S Hewitt, Bristol City Council Available from: <https://uwe-repository.worktribe.com/output/929287/the-bristol-health-and-planning-protocol-first-year-evaluation>

13 Public bicycle system*



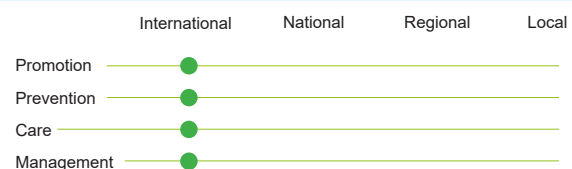
It is common sense that public bicycle systems have a double health benefit: on its direct users, and on the rest of citizens, as they replace trips made by other means (generally more intense in pollution and carbon emissions). Unfortunately I have not found any paper that quantify and confirm those effects.

14 Ecological residential areas



Ecological residential areas.

15 Reducing the emission of CO₂



Reducing the emission of CO₂.

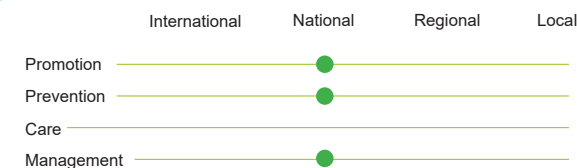
16 Playgrounds for children with healthy materials



Substitution of children sand parks for others with ground of other materials.

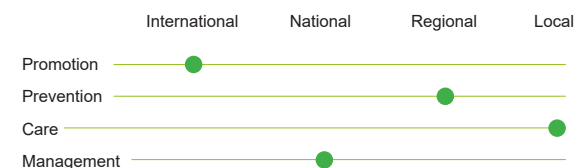
[Ref. 17]. How Iceland Got Teens to Say No to Drugs.
Available from: <https://www.theatlantic.com/health/archive/2017/01/teens-drugs-iceland/513668/>

17 Leisure alternatives for young people



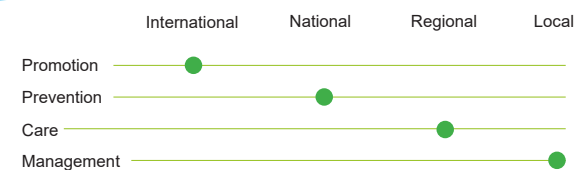
Creating leisure alternatives for young people has brought clear benefits in Iceland.

18 Energy poverty policy



Energy poverty policy and the protection of vulnerable households.

19 Sustainable mobility planning*

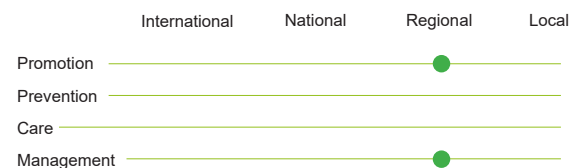


Sustainable mobility planning

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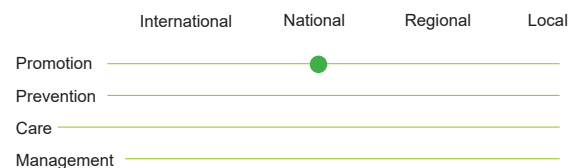
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20 Urban Regeneration Working Group



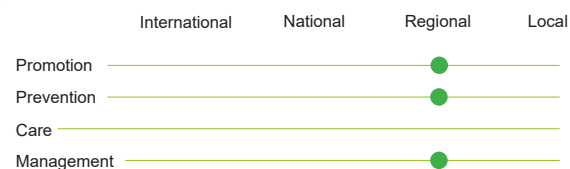
In order to follow up on the climate change mitigation and adaptation actions implemented within the framework of the Klina roadmap and the LIFE-NADAPTA project, in 2018 the Government of Navarre created the Agora Klina forum for consultation and social participation, a platform coordinated by the Directorate General for the Environment and Territorial Planning. Initially, eight working groups were set up, coordinated by the heads of the Government of Navarre, one of which was on urban regeneration and dealt with aspects such as measures for adapting to climate change to be included in the regulations and taxation of housing renovation, a model for financing renovation. Training: Call for proposals, district heating.

21 Pro-active planning in green space



In new development projects, the experience is that often trees and green space are rationalised out of plans. In some cases, existing green space is accommodated as part of what will be private garden space, therefore not of access to the public on the new built estate. Also where greenspace is made part of private property it is at risk of deterioration or removal. There should be more pro-active planning in of green space in new developments. This is easier if there is a local civic or expert group that is passionate about green space and can either help the developer make the right choices, or ease the way to retain and steward new green space in the future. The master plan for Cambourne has been mentioned as good example.

22 Pedestrianization in city centers

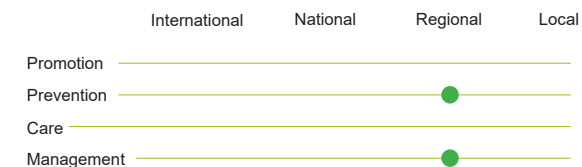


Pedestrianization of selected city centers.

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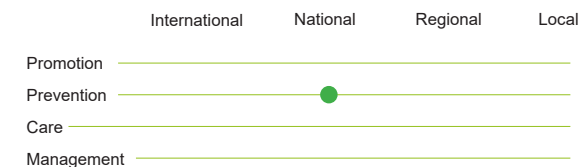
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23 Full waste collection



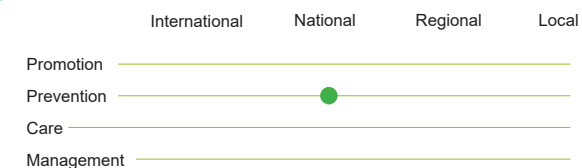
Full waste collection and treatment.

24 Minimum requirements for developers



Minimum requirements for developers in terms of local infrastructure (eg green space, affordable housing).

25 Alcohol licensing



Supporting and equipping local communities in resisting the granting of new alcohol licenses.

26 Multiple-user perspective

One thing that seems to be missing from some of the discourse (in many different disciplines) is acknowledgment that people differ in their relationships with place and what potentially that means for perception of/uptake of policies & programmes. From a social science perspective, it important to recognise this and consider how design can meet multiple user needs from a place preference perspective.

Q2. According to your experience, could you provide any best-practice on engage with multiple stakeholders and wide community, including citizens, in behaviour change and designing better environments towards healthier lifestyles?

[Ref. 1]. Report and review of the health impact assessment workshop on the Knowle West Regeneration Strategy; Wednesday 21 July 2010. Available from: <https://uwe-repository.worktribe.com/output/985555/building-health-into-our-plans-from-the-start-report-and-review-of-the-health-impact-assessment-workshop-on-the-knowle-west-regeneration-strategy-wednesday-21-july-2010>

[Ref. 2]. R.J. Lawrence (2020): Collective and creative consortia: combining knowledge, ways of knowing and praxis, Cities & Health. Available from: <https://doi.org/10.1080/23748834.2020.1711996>

[Ref. 4]. Participatory design approaches. Available from: <http://www.hands-on-bristol.co.uk/>

1 Building health into our plans from the start.

2 Ringland Project, Antwerp, Belgium.

3 Training workshops for the entire population. For example, the workshop-city (University of Granada) developed with the elderly and where urban planning proposals were formulated to favor healthy cities with the elderly.

4 Participatory design approaches work well.

5 A fuller costing of health implications of design is required. At present the costs to society and the planet are not fully costed - this needs to be redressed (rather like paying for carbon footprints does).

6 Sustainable mobility planning.

7 Citizen science approaches have been effective in developing a framework for complex and intractable issues, and potentially identifying consensus for action.

8 Implementation of Bici-mad (public electric bike service in Madrid).

9 See examples from Healthy New Towns, previous Healthy Towns, Local Delivery Pilots.

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Madrid Plan City of Care 2015-2019

Ecological and health education

Social participation processes

[Ref. 16]. Urban development and housing. Available from: <https://www.iadb.org/en/urban-development-and-housing/idb-cities-lab>

10 Plan Madrid Ciudad de los Cuidados (2015-2019).

11 An accurate identification of how each stakeholder can contribute, the closer that the contribution is to their core business the more willing they will be to contribute, change habits and report to other stakeholders.

12 Ecological education.

13 In addition of the urban changes and transformations that can be made in urban design and planning to improve health, it is necessary sanitary health for the population and raise awareness about the danger of transmission of these diseases.

14 Social participation processes for example, in climate change adaptation plans, are essential to engage civil society and ensure better outcomes.

15 Alliance Against Energy Poverty.

16 IADBs Cities Lab Urban Design

17 Taking into account the conditions of cultural background on specific etnias (such as gypsy), it is necessary to include socio-cultural facilitators to implement efficient policies for changing behaviours.

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Q3. According to your experience, how could be improved the management of costs and sharing budget between different programs to promote health?

[Ref. 1]. Report and review of the health impact assessment workshop on the Knowle West Regeneration Strategy; Wednesday 21 July 2010. Available from: <https://uwe-repository.worktribe.com/output/985555/building-health-into-our-plans-from-the-start-report-and-review-of-the-health-impact-assessment-workshop-on-the-knowle-west-regeneration-strategy-wednesday-21-july-2010>

Collaborative schemes and transversal coordination

Promotion of citizen participation

Impact on health in terms of economy

- 1 Shift from the future anticipated burden of health care costs from unhealthy new build development to the funding of healthier places.
- 2 Governance through the promotion of citizen participation in the planning and management of cities.
- 3 Collaborative scheme.
- 4 Budget management in public institutions lacks of flexibility to become shared.
- 5 Any new requirement to shape urban planning towards healthy environments should be integrated in the current normative and management framework that distributes costs and benefits in urban developments.
- 6 Greater corporate/cross-government commitment to shared objectives.
- 7 Political priority of mayors and councils + social control of council projects to assure long term sustainability.
- 8 An accurate identification of how each stakeholder contribution, accountability so each contribution has a recognized measurable economic value, identification of outputs in terms of impact and value added both for the society in general and for the stakeholders.

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- 9 An important aspect is the participation and coordination of all management areas (environment, urbanism, health, social affairs). Thus, the processes of preparing regional and local plans for adaptation to climate change have been a positive (and incipient) experience of this interdisciplinary work and coordination between different levels of public administration.
- 10 There should be a coordination body from public authorities at different levels: local, regional and national.
- 11 Clearer causality and assignation.
- 12 The budget on minor scale policies addressing specific groups of population shall be increased, instead of implementation of national campaigns that do not consider cultural and social specificity of target groups.

M4. BEST-PRACTICE

[Ref. 1.a]. <https://ringland.be/nieuws/>

<https://curieuzeneuzen.be/>

[Ref. 1.b]. R.J. Lawrence (2020): Collective and creative consortia: combining knowledge, ways of knowing and praxis, *Cities & Health*. Available from: <https://doi.org/10.1080/23748834.2020.1711996>

[Ref. 1.c]. D. Black et al. (2018). "Moving Health Upstream in Urban Development: Reflections on the Operationalisation of a Trans-disciplinary Case Study", *Global Challenges*. Available from: <https://doi.org/10.1002/gch.2.201700103>

[Ref. 2.a]. Urban Planning in Vitoria Gasteiz. Available from: https://www.vitoria-gasteiz.org/wb021/was/contenidoAction.do?idioma=es&uid=u463ba415_145233fb570__7ef6

[Ref. 2.b]. European Green Capital. Available from: <https://ec.europa.eu/environment/europeangreencapital/winning-cities/2012-vitoria-gasteiz/>

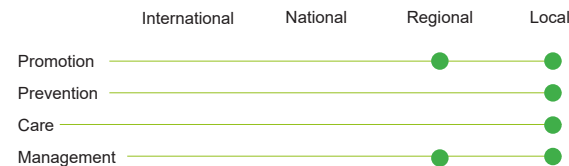
[Ref. 3]. Healthy City Strategy of Vancouver. Available from: <https://vancouver.ca/people-programs/healthy-city-strategy.aspx>

1 Ringland Project, Antwerp, Belgium



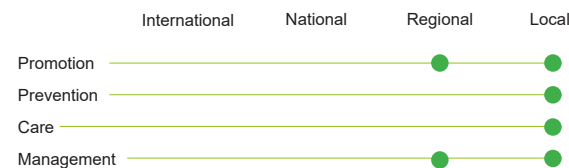
The Ringland-project is a **large-scale sustainable urban development**, focusing on a complete redesign of the highway system in the city of Antwerp, Belgium. The research underlying this complex infrastructure project has been entirely organized by local citizens in a unique and innovative **bottom-up manner**. Detailed research studies, executed by external academics and financed through crowdfunding, were subsequently presented to the government. The Ringland-project supports a new kind of social interaction between scientists, policy makers and citizens.

2 Vitoria-Gasteiz, País Vasco, Spain



The Agenda Local 21 has been put in place since 2004, creating a new system of indicators for sustainability and engaging citizens in the process of transforming the city into a more sustainable ecosystem. It has been awarded as Green Capital in 2012 (European Commission).

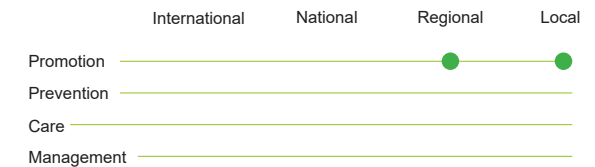
3 Vancouver



A long-term, integrated plan for healthier people, healthier places, and a healthier planet. The Healthy City Strategy is comprised of 13 long-term goals for the well-being of the City and its people, including ambitious targets to reach by 2025.

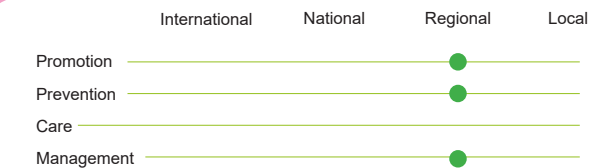
[Ref. 4]. Lineal park of Madrid Río. Available from: <http://www.parquelineal.es/descubrelo/madrid-rio/>

4 Madrid Río, Madrid, Spain



Burying high-speed road M-30 (new Madrid Río park) is a very good example, although I don't know if it has been analyzed from the point of view of its repercussions on health.

5 Basque Country Territorial Planning Guidelines



The **climatic risks of flooding, thermal stress and sea level rise** are incorporated as **conditioning factors of the physical environment**, at the same level as other conditions related to natural risks. In addition, the promotion of green infrastructure, nature-based solutions and climate change adaptation measures are encouraged as mechanisms for regenerating ecosystems and maintaining and improving territorial resilience. And priority is given to the revision of sectoral territorial plans, paying special attention to aspects related to the management of the coast, rivers, streams and hydrological plans.

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[Ref. 6]. Climate Change Adaptation Plan in San Sebastian, Basque Country, Spain
Available from: <https://www.miteco.gob.es/es/cambio-climatico/temas/impactos-vulnerabilidad-y-adaptacion/plan-nacional-adaptacion-cambio-climatico/>

6 San Sebastian Climate Change Adaptation Plan



The plan is based on a diagnosis of vulnerability and risk to climate change in which four chains of impact were analyzed: sea level rise and extreme waves, river and rain flooding and heat waves. Among the actions proposed in the adaptation plan related to urban planning and health are:

- Increasing the green and permeable surface of public squares, spaces and buildings in the city.
- Assess the possible incorporation of urban design criteria to encourage the implementation of green solutions.
- Encourage the greening of block courtyards in the Centro and Gros neighbourhoods.
- Encourage the greening of roofs and balconies of buildings.
- Limit the growth of urban areas by avoiding the artificialisation of non-urban land.
- Prepare a thermal and/or urban climate map of the city to identify critical points.
- Elaborate a protocol for preventive action in the event of heat waves
- Provide aid or subsidies to private owners or neighbourhood associations in the most heat-sensitive neighbourhoods for the improvement of housing.
- To carry out studies of thermal comfort on a micro scale that favours the design of comfortable urban spaces
- Collaborate in the collection and collection of atmospheric data to highlight the effects of urban green on the ambient temperature.
- Preparation of studies on the evolution of the high tide line on the beaches of Donostia or critical infrastructures and their interdependencies, and monitoring of vectors that transmit diseases and air pollution.

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[Ref. 7]. Healthy New Towns
Available from: <https://www.england.nhs.uk/ourwork/innovation/healthy-new-towns/>

7 Healthy New Towns, UK

The Healthy New Towns programme worked with 10 demonstrator sites across England to explore how the development of new places could create healthier and connected communities with integrated and high-quality services.

[Ref. 8]. Working to make London the healthiest global city.
Available from: <https://www.healthylondon.org/>

8 Healthy London Partnership, UK

Healthy London Partnership (HLP) was formed in 2015 when the NHS in London united together to develop and agree a shared response to the NHS Five Year Forward View and Lord Darzi's ambitious Better Health for London report. Leaders committed to working closely and sharing assets and ideas to help ensure Londoners get the high quality care they deserve, with the overarching goal of making our capital the world's healthiest global city.

The partnership focused on combining efforts at a London-level to work towards making 10 shared aspirations for London a reality. A lot has changed in the past four years. During this time London has seen new political leadership at a national and regional level, devolution of health and care powers to London in 2017, the publication of the NHS Long Term Plan, the coming together of NHS England and NHS Improvement, the emergence of the Sustainability and Transformation Partnership landscape and the departure and arrival of health and care leaders across the city.

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