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Urban Lifestyles and Consumption Patterns

Gisela Marta Oliveira[1], Diogo Guedes Vidal[1,2] and Maria Pia Ferraz[1,3]
[1]UFP Energy, Environment and Health Research Unit, Porto, Portugal
[2]CNPq Research Group "Dynamics of Neuro-musculo-Skeletal System", BAHIANA – School of Medicine and Public Health, Bahia, Brazil
[3]Health Sciences Faculty, University Fernando Pessoa, Porto, Portugal

Synonyms

Quality of life in cities; Urban sustainability

Definitions

Urban lifestyles relate to the way of living adopted in densely populated human settlements and to the conditions and the quality of life in cities. Although different in size, spatial structure, resources availability, social, cultural, and economic characteristics, all cities merge natural with built environments. However, presently and mostly in megacities, human intervention through time has faded out the natural presence to just a subtle shade. The built environment of cities is composed of buildings, communications, services, industry, commerce, and leisure infrastructures. Each city's own activities are supported by the built environment and by the complex network of synergies and dependencies with other regions, local and globally, that provide for all kinds of resources and goods that cities require, generating the city metabolism. All these interconnections and linkages within the city and to the outside induce urban citizens to adopt certain city lifestyles. Urban lifestyles may be abridged by the following characteristics: a general acceleration of life with long working times, rushing hours in traffic jams, and strictly well-defined weekday routines with lack of time for quietness and to contemplate; higher consumption levels of basic needs such as water, food, and energy than in rural areas; high consumption patterns of disposable or valuable goods driven either by fleeting trends or by superfluous needs (unconscious or indifferent); and the longing to be, simultaneously, judgmental and socially recognized by peers (even if they are strangers) through possessions and socialization habits.

Syllabus: The Attraction of Cities

Human settlements go back to the origin of civilizations and are associated to humankind cultural heritage. Primitive human settlements provided the security of living in community and services assured by an organization of defined social roles and functions. In ancient times, the establishment of important commerce routes increased the

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deployment of cities and transports that, consequently, evolved to the attractiveness of these settlements as the place to be, to hear the news, to know the novelties, and to search for entertainment as well. Consequently, cities also become the convergence place of cultural diversity and of innovation, creating employment and generating wealth. As more people moved to towns with the expectation of better social conditions and economic prosperity, cities continued to expand naturally but without planning proper infrastructures, and, most of times, growth was only limited by geographical barriers. However, until the beginning of the twentieth century, only about 10% of the world population lived in urban areas (World Health Organization and UN-Habitat 2016). During the twentieth century, the development of a fossil energy-based economy was the driving force for technological innovation that has enabled better life conditions, the improvement of health, and even the growth of life expectancy. This technological evolution was only possible by the easy and cheap access to fossil fuels: mainly to oil that is a fundamental raw material for a myriad of goods from pharmaceuticals to plastics or gasoline. However, this economic-driven progress fostered by huge advances in science and technology often neglected the negative impacts on the environment, on societal organization, and globally on human life conditions, especially affected by urban lifestyles. Sometimes, in big metropolitan areas, humans lose notion that they are also part of nature, dazzled by their own inventiveness, and being increasingly surrounded by goods created by mankind.

Nowadays, the motivation of people moving to cities is not so different from before: the pursue of job opportunities and the promise of better life conditions concerning healthcare services, education, or cultural offers. Presently, around 55% of the world population lives in urban areas, and this number is expected to rise over 68% by 2050 (United Nations 2018).

The United Nations considers urbanization as one of the twenty-first century most transformative trend (United Nations General Assembly 2017) as it is expected that the world's urban population will reach 9.8 billion people by 2050 (United Nations 2017). This new demographic reality will have such an impact on the pressure on natural resources, to respond to global population needs, that it calls for an international cooperative policy agenda able to address common problems and challenges. These global concerns are reflected on the United Nations 2030 Agenda for Sustainable Development and its 17 Goals (United Nations General Assembly 2015).

The Sustainable Development Goal 11 (SDG 11) aims that, by 2030, cities and, generally, all human settlements should become inclusive, secure, resilient, and sustainable spaces. To pursue this goal, it is necessary to reorganize societies in several dimensions mainly at their industrial, work, and economic levels and, above all, in urban lifestyles related to daily consumptions and to mobility (World Health Organization 2016b). The SDG 12 concerns to sustainable consumption and production patterns which are directly linked to urban lifestyles as cities have important environmental impacts due to wasteful consumption and intensive energy activities. Currently, around 80% of the world's economic activity takes place in metropolitan areas (UN-Habitat 2016), and, on that account, about 75% of the world's greenhouse gases (GHG) emissions occur in urban areas (National Academies of Sciences Engineering and Medicine 2016).

Sustainable development is an important issue of the modern world, not only because of the urgent need of a fair distribution of wealth and the preservation of ecosystems and essential resources, but also due to the ethical evaluation criterion of sustainability, as intergenerational solidarity, that should be contemplated in the legal-political plan as a principle aiming the common good of humanity. Sustainable development has to be constructed within liveable, fair, and viable societies thriving in social and environmental justice, in environmental awareness and sustainable economic progress (National Academies of Sciences Engineering and Medicine 2016).

Contemporary Urban Societies and Consumption

Presently, transformations occur at a very fast pace enabled by the immense possibilities of industrialization and information technologies but, mainly, through globalization: easy mobility, fast changing geopolitical conditions, and new markets. Nowadays, easy mobility and information technological devices shorten distances though globalization has changed the way of living in cosmopolitan societies and multicultural diversity is a mark of urbanity. The urban way of living originates such a complex circuit of multiple interactions that leads to the development of new lifestyles and consumption habits.

Consumption patterns are processes and habits of expenditure, purchase, and consumption that a community, group, or individual consider as adequate for fulfil their needs (Eionet – European Environment Information and Observation Network 2019; Dholakia and Fırat 2011). Economic prosperity, widening of markets, globalization, and the cultural and social transformations have changed the patterns of consumption, especially in wealthier societies (Lee et al. 2010; Minh 2015). In the light of individualism, to consume is a form of personal freedom, of individual expression, and the joy of ownership. In contemporary urban societies, the rising demand of resources is the result of consumption pattern transformations due to higher individual consumption rate to fulfill basic and new acquired needs of comfort and to follow trends. This is the portrait of a consumer society idealized by Zygmunt Bauman (2000, 2007) in the transition period from the twentieth to the twenty-first century. Urban lifestyles are shaped by the marketing creation of ephemeral and volatile needs, new or insatiable desire for acquisition that is supported on the availability, easily to choose and disposable goods. This contemporary urban consumption trend is directly related to the globalization process and to the fast technological development that rapidly turns objects of desire into obsolete ones. The present global changes comprise such complex challenges to humanity that, as discussed by Ulrich Beck, the present society may be considered a risk society (Beck 1992, 1996). Easy and cheap access to several goods and utilities conceal the depletion of natural resources that is aggravated by unconscious consumption behavior and by citizens' general indifference on resources limitations, developing the thought that everything is spare, disposable, and replaceable. Consumptions patterns of urban lifestyles are responsible for major environmental and social problems which are affected by the increasing use of energy, water, and land. The intense flow of people, services, and money has transformed cities by land use changes, through the replacement of natural landscapes by concrete and asphalt, with huge impacts in urban ecosystems. Several modern urban areas face environmental degradation, growing vulnerabilities, and inequalities among population groups, contributing to the rising of segregation and crime (UN-Habitat 2016). Thus, one of the biggest challenges of contemporary cities is the territory management that safeguards a healthy and sustainable environment through adequate urban design and planning and with the implementation of public policies at local and regional levels (World Health Organization and UN-Habitat 2016).

Economic progress and welfare driven by consumption-based lifestyles of digital information and industrially established societies have not always been translated into human development nor to better life conditions that should foster healthy, productive societies and equal opportunities to enhance human capital (Graham and White 2016). Sometimes, the hustle and bustle of urban spaces exacerbate social problems, like the prevalence of stress, anomie, and individualism, as reported by some studies (Pols 2003; Roex 2018).

Populations' life quality is a very complex problem with multifactorial dimensions such as the social and economic context of cities which are shaped by several environmental pressure factors such as air, water, or food quality (United Nations Environment Programme and World Health Organization 2016).

The consumption patterns of very high-income countries – mainly in North America, Western Europe, and Australia – have ecological footprints two to four times bigger than the global average (Newton and Meyer 2012). The highest environmental impacts of urban lifestyles and

consumptions patterns are caused by three main areas: housing, food and drink, and private transport (Bjørn et al. 2018). These consumption types are responsible for the use of about 65% of natural resources contributing to global environment degradation and climate change. The food sector alone accounts for over 30% of global energy demand and produces over 20% of world greenhouse gas emissions. Moreover, around one-third of the food produced for human consumption is wasted or lost, especially in high-income countries (Food and Agriculture Organization of the United Nations 2019).

For a long time, food production was considered beyond the sphere of competence of cities, mainly because food is normally produced outside the city. While urban populations tend to be out of touch with agricultural and the food chain production, in most of cities, food culture increasingly moves toward *fast*, processed foods, distributed by large centralized supermarket chains that are not rooted in the life of city neighborhoods. The current food production system cannot meet this growing demand of food in cities in a sustainable manner. It is now acknowledged that local authorities should actively participate in the development of sustainable food systems (Cunto et al. 2017). Food security in cities may become an issue due to the dependency of growing populations from food production, supply, and distribution chains (World Health Organization and UN-Habitat 2016).

Many consumers, especially, those with low incomes, eat too little fruit and vegetables due to its cost but also because it is any longer part of their culture and habits. These consumption behaviors have significant health impacts but can also be considered another social inequality in cities: the access to a balanced and affordable nutritious diet. In fact, healthy food with affordable cost should be available in cities, where people live and work (World Health Organization 2016b). Malnutrition results from poor diets caused, on one hand, by undernutrition and micronutrient deficiencies, and, on the other hand, by the ingestion of food in abundance, yet, heavily processed food, with high content of carbohydrates, fat, and preservatives that leads to overweight and obesity (Fears et al. 2019; World Health Organization 2016b). In Europe, since the 1990s, the average per capita calorie consumption exceeds by 36% the advised daily requirements. In high-income countries, food waste is still a concern, but several initiatives to reduce waste and programs to direct surplus production and stocks of food to the homeless and poor are increasing (Cunto et al. 2017).

One of the main consequences of urban sprawl resulting from rapid urbanization, increasing population, and their growing consumption patterns is the generation of large quantities of waste (Gutberlet 2017). The World Bank (Evans and Davies 2015) projects that, by 2025, the amount of municipal solid waste generated in cities can reach 2.2 billion tonnes and that a significant contribution to this situation may occur in middle-income countries. Urban waste is a serious issue in cities and mainly in the outskirts where, usually, most of the urban waste treatment facilities are based. Waste management and treatment have multiple effects in cities environment and resources, namely, affecting surface and underground waters quality, emitting air pollutants and greenhouse gases, causing soil contamination, aggravating floods (due to waste trapped in water drainages) and degrading landscapes, and contributing to a negative perception of cities' attractiveness. By 2050, almost 10% of the global anthropogenic greenhouse gas emissions may origin from urban waste treatment facilities (UN-Habitat 2018). During the last decade, urban populations produced municipal solid waste at a rate of 1.4–1.8 kg per capita and per day (Vergara and Tchobanoglous 2012). By 2050, if the consumption patterns continue in this course, municipal solid waste is expected to double. This projection may be aggravated by the fact that, currently, about two billion people still do not have access to regular urban waste collection (UN-Habitat 2018).

In many cities of middle- and low-income countries, due to cultural reasons and lack of capacity or technical means to deal with urban residues, less than half of the generated solid waste is collect and then piled up, from which, again, only about half is processed to minimum

acceptable environmental and health standards (Evans and Davies 2015). The increase in solid urban residues, transforming cities in huge producers of waste, concurs from two additive factors: expanding urban population and growing consumption. Disposal and proper elimination of residues, which is one of cities' biggest challenges, is a sustainability issue but also requires efficiency to handle urban metabolism by-products that may pose a threat to its citizens. Besides being an important indicator of cities' sustainability, urban waste presents public health risks, degrading the environment and promoting the proliferation of vector-borne diseases. In many parts of the globe, particularly in middle-low-income countries, open dumpsites exposed to nearby populations are at the origin of severe public health problems.

The systematic behavior of intensive use of natural resources, not only in cities but globally, is accumulating negative outcomes to the environment, through pollution, that bring in negative consequences for human health and well-being. The global problems threatening sustainable development have special importance in urban spaces because of the urban metabolism: the flow of materials and utilities feeding in the city needs and the resulting outputs from the city activities – waste and by-products – usually going out of the city boundaries. The city metabolism is deeply dependent on ecosystems and on resource utilization, especially energy.

Caused by the convergence of people and concentrating over than 80% of the world gross domestic product (GDP), cities strongly influence the world energy demand using more than 66% of worlds' primary energy (International Energy Agency 2016). Cities are energy hotspots due to intensive, direct and indirect, energy consumption that is closed linked to lifestyles, behaviors and consumption patterns. Energy is, undoubtedly, a contribution for well-being conditions. Direct forms of energy consumption provide for basic needs, such as fossil fuels for transport and electricity and natural gas for buildings (residential – households, commercial, and institutional buildings) and services. Direct energy consumption may be related to personal comfort enabling the use of an individual car for transport and heating and air conditioning buildings, but it is also a consequence of the general dissemination of technology with the correspondent growth of personal information gadgets, devices, and household appliances.

Cities' indirect energy consumption relates mainly to public services such as illumination, transports, waste treatment, energy transformation processes, industrial manufacturing, vital services infrastructures (hospitals, schools), information and communication systems, and other fundamental support services in cities such as security and civil protection as well. Per capita energy consumption is a common indicator used to compare development among countries as it reflects the country welfare conditions, the availability of resources, or the deployment level of technology. On the other hand, per capita energy consumption can also be used as a sustainability indicator associated to general consumption (Science for Environment Policy – European Commission 2015). The consistent growth of per capita energy consumption can be observed, generally, in all countries, although extreme disparities may be observed between high-income and low-income countries. However, in 2017, around 840 million people, mainly in sub-Saharan Africa, still lacked access to electricity (International Energy Agency et al. 2019). In low-income countries, the patterns of household energy use are still very basic mainly relying on biomass for cooking and on kerosene for lighting. These are high-pollutant energy sources emitting particulate matter and organic volatile compounds, degrading indoor air quality in terms that severely affects human health (IEA Directorate of Sustainability Technology and Outlooks 2016).

Energy consumption is a very important input in urban metabolism providing sustenance, goods, and services; however, energy use and consumption in general imply greenhouse gas emissions, waste generation, and water and air pollution that may translate to environment degradation. In fact, in urban areas, intensive energy use has a major impact in greenhouse gas emissions, in indoor and in outdoor pollution (World Health Organization 2016b).

During the nineteenth century and in most part of the twentieth century, emission of flue gases from biomass and fossil fuel combustion to the atmosphere was not regulated. Burning of solid (coal and biomass) or liquid fossil fuels (mainly diesel) produces particulate matter, nitrogen, and sulfur oxides, besides other pollutants such as volatile organic compounds and heavy metals in amounts that depend on the flue gases treatments after combustion. Usually, the referred pollutants are emitted to the atmosphere air as mixtures, combining several substances. Severe pollution events in cities, such as the London Big Smoke in 1952, are still target of reflection and its impacts object of study. Heavily polluted, even unbreathable, air in cities is not a new nor a poorly understood problem, yet, it persists at the twenty-first century with an increasing number of acute air pollution episodes in many cities worldwide, especially in megacities such as Los Angeles or Beijing, as countries' economies are still propelled by fossil energy (World Health Organization 2016a). Energy transformation from renewable sources continues to expand, and it is expected to reduce some pressure on oil that remains very important as raw material almost universally present in several types of industry. Nevertheless, urbanization and economic growth have been supported by heat and power from coal plants and road transportation moved by diesel. In most of the cities, the main pollutant emitter to the atmosphere is intensive road traffic due to the lack of adequate public transportation systems. Other energy-intensive infrastructures, such as airports, ports, industrial plants, or residue treatment facilities, all making cities' activities possible, are responsible for emissions of toxic substances into the atmosphere affecting urban air quality (World Health Organization 2016b).

Air pollution is a very complex problem: air moves freely in the atmosphere, and it cannot be restrained. In the atmosphere, air pollutants may be recombined to form other pollutants and may be transported over long distances, crossing political and geographical borders. Once released, the dissemination of pollutants in the atmosphere cannot be controlled by human action; air cannot be cleaned in manners that have been used successfully for the recovery of rivers or for the remediation of soils by application of cleaning treatments. Due to these inherent characteristics of free flowing air, at the current state of the art, air pollution can only be prevented by avoiding, at their sources, pollutant emission to the atmosphere and by careful planning of potential new sources of emission such as communications access (roads, highways), industrial facilities clusters, and urban centers.

Air quality in urban centers is an even more complex problem resulting from additional specific characteristics that may affect and restrict airflow by convection, such as housing barriers due to intensive vertical urbanization and deficient urban planning (very tall trees or buildings, narrow streets), poor road design, or the dearth of green spaces (World Health Organization 2016b). Among others, these causes aggravate urban air quality in terms that may threaten human health (World Health Organization 2016a, b).

The Influence of Urban Lifestyles on Disease

Human exposure to air pollutants is a very serious problem because no human being may live without breathing air, and according to WHO (World Health Organization 2018), 92% of the world population, mainly in cities, do not breathe safe air. Several years of epidemiological studies have provided evidence that human exposure to air pollutants strongly affects human health especially the most vulnerable such as children, the elderly, and other immunosuppressed groups (World Health Organization 2016a; Lelieveld et al. 2015). Risks to human health resulting from air pollution are a consequence of exposure to pollutants by combination of two parameters: toxic substances concentration levels and the duration of the exposure. In consequence, depending on individual immunity conditions, adverse health effects from exposure to air pollution may result in short-term effects such as acute symptoms or sudden illness or in long-term chronic diseases like respiratory and circulatory diseases, certain types of cancer, and metabolic disorders such as

diabetes (Prüss-Üstün et al. 2016; World Health Organization 2016a).

One of the reasons that have attracted people to cities, since immemorial times, relates not only to better job opportunities or educational facilities but to the search for better medical infrastructures and specialized healthcare services as well. In having improved services and amenities, cities offer a higher living standard for its citizens. However, urban lifestyle comes with its own share of problems. Lack of open spaces, traffic, pollution, increased cost of living, hectic, and stressful lives that urban citizens adopt are some of the negative aspects of urban life. In fact, as pointed out by a recent study (GBD 2015 Healthcare Access and Quality Collaborators 2017; GBD 2017 Causes of Death Collaborators 2018), urban life can make people susceptible to problems of obesity, infertility, depression as well as respiratory diseases.

Typically, people in cities are working longer hours and farther from home when compared to their rural counterparts. Some, the *commuters*, spend several hours per day travelling home to work and back. This accelerated working rhythm often lead people to have no time for exercise, to be sleep deprived, to eat careless, and eventually, to face burn-out conditions (Sygit et al. 2019). All these occupational factors of the urban lifestyle contribute to health problems like diabetes, hypertension, high cholesterol, obesity, arthritis, and other noncommunicable diseases (NCDs). A World Health Organization report (World Health Organization 2011) estimated that 36 million (63%) of worldwide deaths were caused by lifestyle diseases such as diabetes, cancer, heart, circulatory, and chronic respiratory disease. Unhealthy lifestyles, faulty diets, and the resultant chronic diseases (heart disease, stroke, cancer, diabetes, and respiratory infections), which are ailments of long duration and slow progression (World Health Organization 2017), will severely affect not only people's life quality but also their earnings (Bloom et al. 2011). The burden of premature deaths from NCDs continues to rise every year and leaves no country untouched though unevenly between low- and high-income countries. This is considered one of the twenty-first-century challenges as this epidemy is driven by population growth and rapid urbanization, which increases poverty and vulnerable groups, and by the globalization of health-harming products and damaging lifestyles (World Health Organization 2016b; United Nations Environment Programme and World Health Organization 2016).

Cities have not only been threatened by disease; they have also been shaped by it. The relationship between infectious diseases and urban life is very old. Once an infection has arrived in a city, proximity enables its spread: with more human beings to infect and more opportunities for vectoring and transmission exist, so, in that sense, cities are a powerhouse for microorganisms' dissemination.

In some ways, the creation of the modern city is owed firstly to plague and then to cholera, in the nineteenth century. At the time, in London, there were four main outbreaks of cholera, and, although it wasn't the deadliest disease (tuberculosis was), its brutality forced city authorities to become serious about sanitation (Vojnovic et al. 2019). Cholera helped to create the modern city because, to control its effects, it was necessary to establish many of the institutions and services of a modern city: freshwater distribution, public healthcare, sanitation, and sewerage. Cholera really forced the city to abandon an older way of thinking about health, which is almost every man for himself, and acknowledge population to take care of one another. During the twentieth century, humanity believed to see the end of infectious diseases. That seems much less likely now. The death toll of infectious diseases accounts for about 25% of deaths worldwide, including around two-thirds of all deaths of children under 5 (Holmes et al. 2017). In fact, as an unexpected consequence of the global expansion of healthcare services, an increase in mortality due to infectious diseases linked to antibiotic resistance has been observed (Institute for Health Metrics and Evaluation (IHME) 2018). Now urban life is breeding new illness fears, and health experts must tackle the threat of drug-resistant infections (Vojnovic et al. 2019). The rapid growth of cities is a serious concern for the planet's health – as is the growing number of infections which are resistant to all

available drugs (Podolsky 2018). In the 2013, the US Centers for Diseases Control and Prevention warned of the possibility to face "potentially catastrophic consequences" if drug resistance is not properly addressed (Torjesen 2013). Antimicrobial resistance is a serious global threat, a ticking time bomb for the world (Torjesen 2013; House of Commons Health and Social Care Committee 2017) and because of that, the European Commission has defined a 5-year action plan to tackle antimicrobial resistance (Watson 2017). Urban settings with overcrowded, poor ventilated spaces, areas of low hygiene and poor sanitation conditions such as public transports but especially slums, make cities particularly vulnerable to infection transmission, thus requiring special attention to urban design and infrastructure from city planners (National Academies of Sciences Engineering Medicine 2018).

Urban Sustainability

As more people are continuously moving to cities, they trend to grow in area, in number (or in clusters), and in population density. Consequently, infrastructure problems, socioeconomic asymmetries, and sustainability issues tend to evolve in scale and in complexity. However, cities continue to be attractive places to live. Easy access to diversified services, goods, and opportunities turns these places the cradle of development and innovation. With facilitated mobility means, cities concentrate people, money, energy use, industrial, commercial, leisure activities, and services which, in turn, condition environment quality. Cities' environment quality is affected by both natural resources such as vegetation, water, and soil but also by the built environment defined by the urban design that restrains space, light, and natural atmospheric airflows. Urban environment is a very important social and political issue, unanimously considered fundamental for the city's population health and well-being.

Sustainable solutions to improve environment and life quality in cities may require additional technological resources but, most importantly, require cooperative action between local authorities, central governments, industrial, economic and academic stakeholders, and, of course, citizens. Changing the course of urban population's lifestyles implies consumption pattern transformations supported by sustainable consumption and environmental awareness. This global consciousness should enable a broader scope of the consequences of the human action toward nature and thus must not only rely on governments and official institutions' willingness but should be a shared social responsibility that calls for environmental education and, consequently, the participation of informed citizens. It is of the utmost importance to empower citizens with knowledge that can create consumption behaviors adaptable to promote sustainability (European Environment Agency 2017; Science for Environment Policy – European Commission 2015).

Cross-References

- Globalization and Cities
- Healthy Cities
- Liveable City: Towards Economic, Social, Cultural, and Environmental Well-Being
- Urban Ecological Footprints
- Urbanization and Urban Growth

References

Bauman Z (2000) Liquid modernity, 2006 edn. Polity Press, Malden

Bauman Z (2007) Consuming life, 2007 edn. Polity Press, Malden

Beck U (1992) How modern is modern society? Theory Cult Soc 9(2):163–169. https://doi.org/10.1177/026327692009002011

Beck U (1996) World risk society as cosmopolitan society?:ecological questions in a framework of manufactured uncertainties. Theory Cult Soc 13 (4):1–32. https://doi.org/10.1177/026327649601300400 1

Bjørn A, Kalbar P, Nygaard SE, Kabins S, Jensen CL, Birkved M, Schmidt J, Hauschild MZ (2018) Pursuing necessary reductions in embedded GHG emissions of developed nations: will efficiency improvements and changes in consumption get us there? Glob Environ

Chang 52:314–324. https://doi.org/10.1016/j.gloenvcha.2018.08.001

Bloom DE, Cafiero ET, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, Fathima S, Feigl AB, Gaziano T, Mowafi M, Pandya A, Prettner K, Rosenberg L, Seligman B, Stein AZ, Weinstein C (2011) The global economic burden of noncommunicable diseases. World Economic Forum, Geneva

Cunto AD, Tegoni C, Sonnino R, Michel C, Lajili-Djalaï F (2017) Food in cities: study on innovation for a sustainable and healthy production, delivery, and consumption of food in cities (trans: Directorate-General for Research and Innovation). European Commission, Brussels. https://doi.org/10.2777/752723

Dholakia N, Fırat AF (2011) Consumption patterns and trends. In: Southerton D (ed) Encyclopedia of consumer culture. Sage, Thousand Oaks, pp 351–353. https://doi.org/10.4135/9781412994248

Eionet – European Environment Information and Observation Network (2019) consumption pattern. In General multilingual environmental thesaurus European Environment Agency. https://www.eionet.europa.eu/gemet/en/concept/1745. Accessed 7 Jun 2019

European Environment Agency (2017) Climate change, impacts and vulnerability in Europe 2016: An indicator-based report. EEA Report No 1/2017. Luxembourg: Publications Office of the European Union. https://doi.org/10.2800/534806

Evans W, Davies R (eds) (2015) Too global to fail: the World Bank at the intersection of national and global public policy in 2025 directions in development: environment and sustainable development. International Bank for Reconstruction and Development/The World Bank, Washington, DC. https://doi.org/10.1596/978-1-4648-0307-9

Fears R, Canales C, ter Meulen V, von Braun J (2019) Transforming food systems to deliver healthy, sustainable diets – the view from the world's science academies. Lancet Planet Health 3(4):e163–e165. https://doi.org/10.1016/S2542-5196(19)30038-5

Food and Agriculture Organization of the United Nations (2019) FAO framework for the Urban Food Agenda. FAO, Rome

GBD 2015 Healthcare Access and Quality Collaborators (2017) Healthcare access and quality index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990-2015: a novel analysis from the Global Burden of Disease Study 2015. Lancet 390(10091):231–266

GBD 2017 Causes of Death Collaborators (2018) Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet 392(10159): 1736–1788. https://doi.org/10.1016/S0140-6736(18)32203-7

Graham H, White PCL (2016) Social determinants and lifestyles: integrating environmental and public health perspectives. Public Health 141:270–278. https://doi.org/10.1016/j.puhe.2016.09.019

Gutberlet J (2017) Waste in the city: challenges and opportunities for urban agglomerations. In: Mustafa E (ed) Urban agglomeration. IntechOpen, London, pp 191–208. https://doi.org/10.5772/intechopen.72047

Holmes KK, Bertozzi S, Bloom BR, Jha P, Gelband H, DeMaria LM, Horton S (2017) Chapter 1. Major infectious diseases: key messages from disease control priorities. In: Holmes KK, Bertozzi S, Bloom BR, Jha P (eds) Major infectious diseases, vol 6. Disease control priorities, 3rd edn. The International Bank for Reconstruction and Development/The World Bank, Washington, DC, pp 1–27. https://doi.org/10.1596/978-1-4648-0524-0/ch1

House of Commons Health and Social Care Committee (2017) Antimicrobial resistance. Eleventh report of session 2017–19. U. K. House of Commons, London

IEA Directorate of Sustainability Technology and Outlooks (2016) World energy outlook special report 2016: energy and air pollution world energy outlook. International Energy Agency, Paris

Institute for Health Metrics and Evaluation (IHME) (2018) Findings from the global burden of disease study 2017. IHME, Seattle

International Energy Agency (2016) Energy technology perspectives 2016 – towards sustainable urban energy systems. Information paper. Paris

International Energy Agency, International Renewable Energy Agency, United Nations Statistics Division, World Bank, World Health Organization (2019) Tracking SDG 7: the energy progress report 2019. World Bank Group, Washington, DC

Lee M, Pant A, Ali A (2010) Does the individualist consume more? The interplay of ethics and beliefs that governs consumerism across cultures. J Bus Ethics 93 (4):567–581

Lelieveld J, Evans JS, Fnais M, Giannadaki D, Pozzer A (2015) The contribution of outdoor air pollution sources to premature mortality on a global scale. Nature 525:367. https://doi.org/10.1038/nature15371

Minh H (2015) The impacts of Individualism/collectivism on consumer decision-making styles: the case of Finnish and Vietnamese mobile phone buyers Bachelor Thesis, Turku University of Applied Sciences, Turku

National Academies of Sciences Engineering and Medicine (2016) Pathways to urban sustainability: challenges and opportunities for the United States. The National Academies Press, Washington, DC. https://doi.org/10.17226/23551

National Academies of Sciences Engineering Medicine (2018) Urbanization and slums: infectious diseases in the built environment: proceedings of a workshop. The National Academies Press, Washington, DC. https://doi.org/10.17226/25070

Newton P, Meyer D (2012) The determinants of urban resource consumption. Environ Behav 44(1):107–135. https://doi.org/10.1177/0013916510390494

Podolsky SH (2018) The evolving response to antibiotic resistance (1945–2018). Palgrave Commun 4(1):124. https://doi.org/10.1057/s41599-018-0181-x

Pols H (2003) Anomie in the metropolis: the city in American sociology and psychiatry. Osiris 18:194–211

Prüss-Üstün A, Wolf J, Corvalán CF, Bos R, Neira MP (2016) Preventing disease through healthy environments. A global assessment of the burden of disease from environmental risks. World Health Organization, Geneva

Roex KLA (2018) Anomie, shame, and resistance: the impact of the economy on suicide. PhD thesis, Universität zu Köln, Cologne

Science for Environment Policy – European Commission (2015) Indicators for sustainable cities. In-depth report 12 produced for the European Commission DG Environment by the Science Communication Unit, (UWE) Bristol. https://doi.org/10.2779/61700

Sygit KM, Sygit M, Wojtyla-Buciora P, Lubiniec O, Stelmach W, Krakowiak J (2019) Physical activity as an important element in organizing and managing the lifestyle of populations in urban and rural environments. Ann Agric Environ Med: AAEM 26(1):8–12. https://doi.org/10.26444/aaem/99177

Torjesen I (2013) Antimicrobial resistance presents an "apocalyptic" threat similar to that of climate change, CMO warns. Br Med J 346:f1597. https://doi.org/10.1136/bmj.f1597

UN-Habitat (2016) Urbanization and development: emerging futures – world cities report 2016. United Nations Human Settlements Programme, Nairobi

UN-Habitat (2018) SDG Indicator 11.6.1 training module: solid waste management in cities. United Nations Human Settlement Programme, Nairobi

United Nations (2017) World population prospects: keys findings and advanced tables – the 2017 revision world urbanization prospects. United Nations, New York

United Nations (2018) World urbanization prospects: the 2018 revision (key facts). World urbanization prospects. Population division of the United Nations Department of Economic and Social Affairs (UN DESA), Online Edition

United Nations Environment Programme, World Health Organization (2016) Healthy environment, healthy people. Thematic report ministerial policy review session: second session of the United Nations environment assembly of the United Nations environment programme. United Nations, Nairobi

United Nations General Assembly (2015) Transforming our world: the 2030 Agenda for Sustainable Development – Resolution A/RES/70/1 adopted by the UN General Assembly on 25 September 2015. United Nations, Official Document System of the United Nations

United Nations General Assembly (2017) New urban agenda – resolution A/RES/71/256 adopted by the UN General Assembly on 23 December 2016 United Nations, Official Document System of the United Nations

Vergara SE, Tchobanoglous G (2012) Municipal solid waste and the environment: a global perspective. Annu Rev Environ Resour 37(1):277–309. https://doi.org/10.1146/annurev-environ-050511-122532

Vojnovic I, Pearson AL, Asiki G, DeVerteuil G, Allen A, Craddock S, Brown T (2019) Part 1 – urban health: an introduction and overview. In: Vojnovic I, Pearson AL, Asiki G, DeVerteuil G, Allen A (eds) Handbook of global urban health, 1st edn. Routledge Taylor and Francis, New York, p 826. https://doi.org/10.4324/9781315465456

Watson R (2017) European Commission issues advice on use of antimicrobials. Br Med J 358:j3255. https://doi.org/10.1136/bmj.j3255

World Health Organization (2011) Global status report on noncommunicable diseases 2010. WHO, Geneva

World Health Organization (2016a) Ambient air pollution: a global assessment of exposure and burden of disease. WHO, Geneva

World Health Organization (2016b) Health as the pulse of the new urban agenda: United Nations conference on housing and sustainable urban development, Quito, October 2016. WHO, Geneva

World Health Organization (2017) Noncommunicable diseases progress monitor 2017. WHO, Geneva

World Health Organization (2018) Air quality and health effects: WHO resources and support. Paper presented at the First WHO Global Conference on Air Pollution and Health: Improving air quality, combatting climate change – saving lives, Geneva, Switzerland, 30 October – 1 November 2018

World Health Organization, UN-Habitat (2016) Global report on urban health: equitable healthier cities for sustainable development. WHO, Geneva