



People's livelihood and cities - building back greener

Background

The Foresight Briefs are published by the United Nations Environment Programme to highlight a hotspot of environmental change, feature an emerging science topic, or discuss a contemporary environmental issue. The public is provided with the opportunity to find out what is happening to their changing environment and the consequences of everyday choices, and to think about future directions for policy. The 26th edition of UNEP's Foresight Brief explains the 'build back better' strategy in the context of urban livelihoods - a strategy, that has to mean 'building back greener'.

Abstract

The livelihoods of urban residents are shaped by the complex relationship between environmental, social and economic issues affecting inhabitants of urban areas. There is a need for a global reset after the COVID-19 pandemic, which disrupted urban livelihoods, access to services and socioeconomic opportunities and widened inequalities. This requires all stakeholders to clearly see the relationship between environmental, social and economic justice and a forward-looking policy to 'building back better' — and greener. Such a strategy requires putting human rights and sustainability at the heart of urban decision-making across the world. It also needs to tackle other important global trends and challenges, such as answering demographic changes, clever use of data and technology, overcoming different forms of inequalities and leading to a re-birth of high quality public services.

Convergence of social and environmental justice

The ongoing COVID-19 crisis continues to disrupt urban life across the globe and is likely to have severe long-term impacts for urban quality of life. Over 90% of COVID-19 cases in its initial phase were recorded in urban areas (United Nations 2020a). The reality of lockdowns showed what makes urban life unique and attractive. From one day to the next, the usage of its built environment and public spaces transformed, as well as leisure and recreational opportunities within city limits and the shape of local economies and urban budgets. The unique local production and consumption patterns ground to a halt as well. At the beginning of the pandemic, with transport systems and local economies disrupted, media reports showcased the drop of air pollution in cities across the globe (IQAir 2020), as well as instances in which nature regained a foothold in urban surroundings, i.e. in the Gulf of Venice (Brunton 2020).

The scale and complexity of cities themselves was both a blessing and a curse. A blessing when neighborhood self-help initiatives emerged that aided people from vulnerable social groups, such as the elderly. A curse, as the pandemic exposed the downsides of a globalized economy, working on a just-in-time basis, as well as negative effects of urban inequality, such as overcrowding in poorer neighborhood and high levels of essential workers made them more prone towards infection spikes. Risk to food supplies or disrupted supply chains were some of the issues that were observed and hotly debated in 2020. All of these issues added to a long list of issues already affecting urban quality of life, such as environmental pollution, technological change,



Photo credit: Belen Desmaison

inequality, the quality of public service, job markets and the like.

The need for comprehensive urban crisis management and long-term resilience became visible in its social, economic and environmental aspects. Limited access to green spaces close to home became an important factor in maintaining overall health and - later - more safe, physically distanced social interactions (Pouso *et al.* 2020). While people with higher incomes could often either access their own private greenspaces or leave the cities altogether, marginalized groups living in more deprived and polluted districts experienced highly limited access to high-quality public spaces. At the same time, these groups are more exposed to infection, as the character of their employment made it impossible for them to resolve to remote work (UN-Habitat 2021a).

Moreover, people living in informal settlements have reduced access to basic services, including water and sanitation, accelerating disease transmission. In some regions of the world the challenge is especially steep as according to UN Data 2.3 billion people across the globe - 29% of the global population - lack basic hygiene facilities. In case of schools in the LDC (Least Developed Countries) 40% do not have hand washing facilities (United Nations 2021a).

Urban responses to COVID-19 developed by leaders, think-tanks and international institutions, including the UN system, emphasized the need to 'build back better/greener' after the pandemic. Such a package – similar to what was proposed in response to the global economic crisis of 2007-2008 - often involves integrating environmentally friendly solutions, including measures to fight climate change (UNEP 2020a). Integrating social, economic and environmental justice, i.e. related to pay and working conditions of essential workers, became an important trend in public discourse on cities, as was the need to shift urban economies to become sustainable local economies rooted in green jobs (International Labour Organization 2021). For example, the *C40 Mayors' Agenda for a Green and Just Recovery* presented 10 principles, in which issues of climate action intersected with a desire for more equity, green jobs creation and public investment (C40 Cities Network, 2020).

Such sentiments also guide the narrative of the UN and its agendas, analyzing the impact of the pandemic from the perspective of Sustainable Development Goals and human rights. The United Nations presented a policy brief analyzing the effects of COVID-19 for cities, putting emphasis on the need for action towards tackling inequalities, strengthening capacities of local actors and pursuing an inclusive and green economic recovery (United Nations 2020b). Issues such as more robust social protection systems, expanding safe and sustainable housing, energy and mobility options, promoting gender equality, circular economy, nature-based solutions or coherent multi-level governance were

highlighted as equally important policy priorities, as access to essential services (ie. healthcare, education) and inclusive green public spaces for all leads to building a work in which no one is left behind (UN-Habitat 2021a).

For a quality-of-life economy

Business activity is a vital part of city life. Working and networking opportunities are among main reasons why people decide to switch from rural to urban and suburban areas. Urban social and economic development thrives on such an influx, driving entrepreneurship and innovation. New inhabitants mean new possibilities, bringing new skills to the local community. New inhabitants, when not discriminated against, can become an opportunity for development of urban areas they make their new home. This trend, according to forecasts (United Nations 2020a), is likely to continue. Urbanization will remain the main source of global growth which means continuous rise of economic output concentration in urban areas – both an opportunity and a challenge (United Nations Human Settlements Programme [UN-Habitat] 2020a).

Business activity is impossible without nature - the resources and services it gives us and that sustain our existence. It is also highly dependent on the society and its wellbeing, achieved by fulfilling basic human rights with regards to health, education, housing, social protection and living in a healthy environment. A need for stable and climate risk-resilient environment can be shown in the example of Bangladesh. Natural disasters in 2016 cost this country 1.72 percent of its GDP. While the number of fatalities related to natural disasters seems to be dropping the costs for the economy remain high, ranging between the 0.1 to 0.5% of GDP globally (UNEP 2019a).

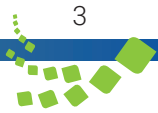
This threat is particularly real for local urban economies for which natural disasters and extreme weather events mean measurable economic loss. Five hundred and

seventy cities, inhabited by over 800 million people in total, are under threat by the climate change-related 0.5 metre sea-level rise by 2050 (Zurich 2021). Worsening environmental conditions pose new and unprecedented health risks for communities, which are also a burden for the local economy. Tackling worsening air quality, reducing water contamination and providing sustainable and healthy housing and clean and affordable energy need to remain the focus of public authorities in order to both improve the quality of life and establish a stable and attractive business environment. The COVID-19 pandemic presents a unique window of opportunity to tackle these challenges by refocusing on investments in public health and other public services, as well as stimulating investments in the green economy.

Post-pandemic change in cities can go both ways. The renewed appreciation of non-motorised transport inspired local governments in over 350 cities around the world to increase space for walking and cycling. If, in the wake of the pandemic, individual car-based transport is prioritized however, this would only intensify congestion, air pollution and greenhouse gas emissions. This example highlights the choice between a sustainable, just and equitable 'build back better' scenario, and a return to 'business as usual' or even trying to play economic catch-up regardless of growing environmental challenges, wanting to make up for opportunities lost during the pandemic. Businesses operating in urban areas will become increasingly aware of the need to implement sustainability in their business models. A very good example comes from the financial sector, which is becoming a part of a global shift to financing green investments. According to UN data climate finance increased by 10% from 2015-2016 to 2017-2018, reaching an annual average of 48.7 billion US dollars (United Nations 2021a).



Photo credit: Belen Desmaison



Toward an urban industrial policy

Historical evidence points out to the rise of industry as one of the sources of development of cities, regions and countries. It provided opportunities for urbanisation, as well as labour mobilizations whose pressure led to the rise in working conditions and creation of decently paid jobs (Hochfeld et al. 2010). Deindustrialisation in the Global North - both due to globalization and shifts in value chains, as well as due to system change in the case of Central and Eastern Europe - left behind communities struggling to a different degree to cope with the altered reality. At the same time the process came with a mixed bag in countries to which production has been offshored, where labour violations and insufficient regulations limit the scope of positive outcomes for local communities.

This struggle, exacerbated by effects of economic crises, is widely seen as a source of social and political tensions that often have a territorial dimension to them (European Strategy and Policy Analysis System 2019). Such tensions often lead to questioning the whole international order and may be further aggravated by challenges, such as automation or the need for far reaching climate action. Even before the pandemic the topic of 'robots taking over our jobs' and 'the end of work' has been widely discussed in opinion circles in the Global North. COVID-19 added the issue of trust towards science and technology to the list of policy challenges, along with the rise of vaccine disinformation or skepticism towards 5G rollout. All of these tensions find fertile ground in conditions of local and regional inequalities. A threat to further loss of industrial capacities gives space for pursuing more adversarial international politics, ie. in the form of trade tensions.

At the same time, cities in the Global South struggle with their specific set of urban issues. On the one hand they often lack proper industrial capacity, which may become a huge challenge in countries with high birth rates that need to create jobs for a young and growing population (Altenburg and Rodrik 2017). Countries in this group,

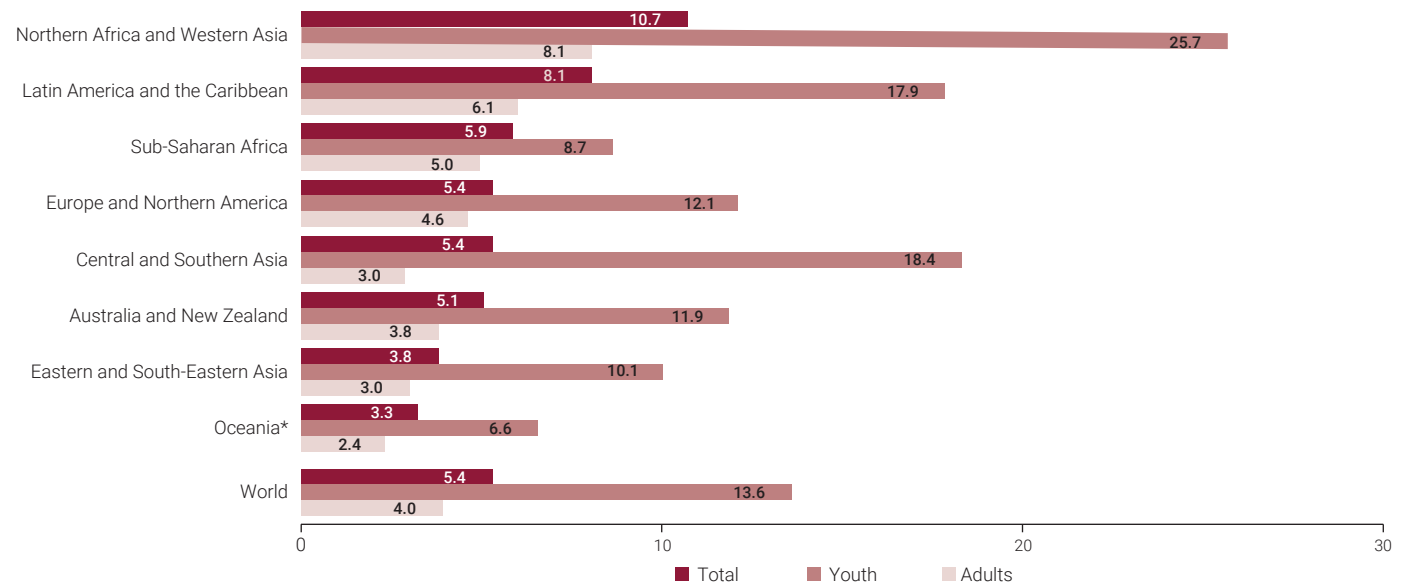
while still having underdeveloped production capacities in certain sectors, also need to focus on new types of capacity building, such as promoting green jobs or technological development in order to avoid yet another type of global inequality - in access to sustainable solutions and new technologies - to occur.

On the other hand, their position in global supply and value chains risk environmental damage, threatening urban livelihoods. Examples of such challenges include imports of plastic waste and e-waste from high income countries, often processed using methods hazardous to human health (Myers 2020; Platform for Accelerating the Circular Economy [PACE] and World Economic Forum 2019). While some countries (e.g. China and some ASEAN members) decided to curb such import

as they rise along the value chain, the overall quest to create domestic green and inclusive industries will be a challenge for years to come.

Developments in data science, rise of sharing economy practices, falling costs of renewables and decentralized options for energy generation are some trends that are clear business opportunities. With support from the EU, UN-Habitat is, for example, working on a project that supports entrepreneurs wanting to develop electric mobility solutions in collaboration with city authorities. These solutions include public bike sharing schemes, small freight delivery and public transport systems. Emerging industrial policy, particularly in rapidly urbanizing areas of the world should enable such city-industry collaboration (SOLUTIONSplus 2021).

Unemployment youth and adults 2019 (percentage)



* Excluding Australia and New Zealand

Figure 1:
The scale of challenge in creating decent working opportunities – especially for the global youth – remains immense.
Source: United Nations (2020c)

Greening production patterns as an element of sustainable cities

As the shift towards climate neutrality goals gathers pace, the need to reinvent industry in a sustainable fashion becomes especially important for cities and regions across the world that are currently mostly driven by fossil fuels. Technical and scientific knowledge should be used for implementing innovations in production processes. At the same time their implementation leads to further challenges – from creating coherent ways of recycling solar photovoltaic panels and wind turbines, through avoiding negative side-effects from the rise of ‘sharing economy’ practices (for example drivers offering car rides while not having social security, or apartment rental leading to unavailability of affordable housing), up to using big data in a way that improves quality of life but does not hinder privacy or leads to marginalization of public participation in shaping urban policy direction.

Industry will necessarily be an important part of a green transition – including in urban areas. Development of affordable and accessible hydrogen produced from renewable energy sources in energy-intensive sectors is necessary for raising renewable energy capacities (ie. steel production - H2 Green Steel, 2021). A 90% greenhouse gas emission reduction from urban buildings, materials, transport and waste using technically can already be achieved using feasible, widely available mitigation measures by 2050 (United Nations Human Settlements Programme 2020b). Circular economy practices can offer employment in both old crafts such as shoe or clothes repair, as well as extending life of products that would otherwise end up in e-waste.

Post-pandemic recovery will involve challenges towards the future of work in cities across the globe that already are in a state of flux due to issues such as automation, risks from overextended supply changes or trade tensions putting easy access towards resources, such as rare earth minerals. COVID-19 spurred an increased interest in restoring production back to the Global



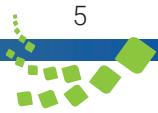
Photo credit: Shutterstock.com

North - at least in sectors deemed strategic, such as food production and processing or medical supplies (Fortunato 2020). In other cases, the rise of urban mining with recovery of materials locally or technologies from electric mobility to 3D printing may mean renewed push towards local, innovative solutions - especially if they will be met with regulatory support, financial (e.g. preferential taxation) and non-financial incentives. The question of whether or not such trends will occur and will generate enough decent jobs remains unanswered, however, as issues such as automation and its exact influence on local job markets, different sectors and regions of the world remains open. Research, such as the methodology on circular jobs in cities currently being developed by UNEP, Circle Economy and ICLEI, may provide some answers that can become a useful tool for national, regional and local decision-makers across the globe.

Other challenges include spatial competition - industrial activities that would benefit from reusing old industrial sites and their infrastructure may have to compete with ideas of repurposing them to office, residential or green spaces (Cities of Making 2018). Negative connotations with industrial activities that may be seen as ‘dirty’ and

polluting may also hinder deindustrialization efforts or force such investments to peripheral greenfields, accelerating the conversion of natural habitat and requiring significant infrastructural investments for increased worker mobility that may lead to increased air pollution levels if no clean public transport options are offered.

Such efforts in high income countries may also be a challenge for lower income ones if national or regional consumer capacity does not offset the losses from exporting industrial products. Investing in green economic transformation, as it is labour-intensive, may achieve a double goal of improving living conditions in urban spaces as well as offering meaningful employment for rising urban populations. Investments in energy-efficiency in buildings, mass public and non-motorised transit or increasing off-grid and micro-grid renewable energy capacity rooted in renewables have a largely localized character both in terms of their social and environmental effects, as well as green job creation potential (Eaton and Sheng 2019). Compact urban planning will be key to creating this urban mix, ensuring no-one and no place is left behind.



Climate action that leaves no-one and no place behind

As cities are places generating 80% of global GDP - as well as more than 70% of greenhouse gas emissions (World Bank 2020) - they are also spaces in which inequalities clearly manifest themselves. Such inequalities may become a problem for a whole city (in case it was e.g. a centre of coal mining or steel production that employed the dominant part of the local population and was later terminated) or its districts. Various 'rust belts' can be spotted on economic maps of Europe or North America, but also in less obvious places, such as in South Africa's Johannesburg. Cities form their integral parts. The same city can have a dynamic start-up scene and note higher than national average unemployment levels like in Berlin (Statista 2020) or a large part of the population having problems with paying their rent, as in the case of London (Cosh and Gleeson 2020).

Examples of urban inequalities include poorer health and education outcomes, unfavorable housing conditions (24% of urban population lived in slums in 2018 (United Nations 2020)), as well as pockets of unemployment. In lower-income countries, the rise of informal settlements presents an additional challenge towards guaranteeing their inhabitants access to basic public services - from stable water and electricity supply to access to public transport options. Low incomes and poor housing conditions may result in a vicious spiral, in which they both add to environmental problems and further decrease the quality of life. Such an example includes air pollution, which leads to 7.3 million premature deaths globally, of which 4.3 million come from household air pollution, largely due to cooking or heating with dirty fuels (BreatheLife 2016).

At the same time, social inequalities often intersect with the quality of the local environment. Examples include larger exposition to air pollution in London (BreatheLife 2019) or lower access to high quality green infrastructure in informal settlements. According to UN data, only half

of the world's urban population had convenient access to public transport within a 500–1000-meter distance in 2019, and just 47% of the population live within 400-meter walking distance to open public spaces - both important measures of urban livelihood (United Nations 2020b). These measures don't refer to the quality of these services and spaces, which are often excluding, especially for vulnerable groups such as children, women, people with disabilities and the elderly. Investing in the green economy, public services and nature-based solutions is therefore not only an environmental/climate issue, but also an issue of justice.

The climate crisis also intersects with questions of equality and assessment of previously made policy decisions, such as dismantling public transport capacities or deregulation/privatizing parts of public systems such as water or heating that led to price rises. A just transition is not possible if inhabitants do not have a real choice in pursuing patterns of living that are more environmentally friendly. In case of Poland a wide-scale shift back from individual car transport to public transit will not be possible if up to one third of inhabitants of the country may experience 'transport exclusion' with limited or no access to mass transportation options (Dulak and Jakubowski 2018).

Tackling the joint problem of air pollution and greenhouse gas emissions from inefficient heating systems in homes will also be harder without tackling the problem of energy poverty by local and national authorities as people from the group experiencing this problem — as many as 12.2% of Poles —(Ziółkowska *et al.* 2018) may be ready for eco-friendly changes - but not necessarily ones that will lead them to bear additional costs and therefore an end in a larger burden on their home budgets. While exact priority challenges can differ from city to city it is clear that without a robust investment and public support net for tackling such changes the possibility of fixing social and environmental injustices at the same time will be lost.

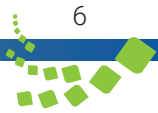


Wall built in the capital of Peru – Lima – separating more affluent parts of the city from areas dominated by informal housing.
Source: ARTE TV (2017)

Policy Implications

The COVID-19 crisis can be yet another argument for proponents of a 'business as usual' approach to stick to the economic status quo and slow the shift towards sustainability, arguing for prioritizing economic growth by sustaining carbon and energy intensive industries and production practices. Strong urban governance, enabled by creating a coherent national regulatory framework, is required to avoid such a turnaround, laying out the ground for formalising labour, for instance in the mobility and waste sectors, ensuring social safeguards for employees, setting standards for health and safety, as well as reducing environmental stress by creating compact cities (Habitat III 2019).

An international effort in mobilizing financial resources to make such a sustainable shift happen need to gather pace. A distinct urban focus of at least part of such efforts should be pursued as 90% of the growth of global urbanization levels will be fueled by developments in Asia and Africa (United Nations 2018). The Global South already hosts the majority of megacities above 10 million inhabitants, which will require increasing their management capacities, supporting a more harmonious interaction with their surroundings and creating



opportunities for better, cross-sectoral cooperation for sustainability by harnessing better policy cooperation within the cities and with their surroundings, as well as economic actors operating in the area. Urban sprawl needs to be curbed. In the past two decades, most cities in the world have reduced in density. Urban sprawl usually entails increased congestion, car dominance, dispersal and segregation by use and economic class, leading to exacerbation of inequalities, as well as difficulties in the provision and accessing of essential services including water supply, sanitation, transport, energy and waste management. This forfeits the advantages compact urban agglomerations have to offer in terms of economies of scale and resource-efficiency (United Nations Human Settlements Programme 2017). Urban sprawl also puts pressure on ecosystems, increasing the risks of conflict with nature – a cause of zoonotic diseases such as COVID-19.

Five key elements of sustainable neighbourhoods should be adhered to:

- appropriate densities,
- inclusive and adequate complete streets,
- land use mix,
- social mix
- limiting big-scale specialisation through zoning.

These principles need to be supported by three ‘enabling components’: an adequate local and national legal and policy framework, inclusive and participatory urban design and financial mechanisms and sufficient investments – all tailored to the local context. The New Urban Agenda captures these components in detail, offering a guiding framework for their successful implementation.

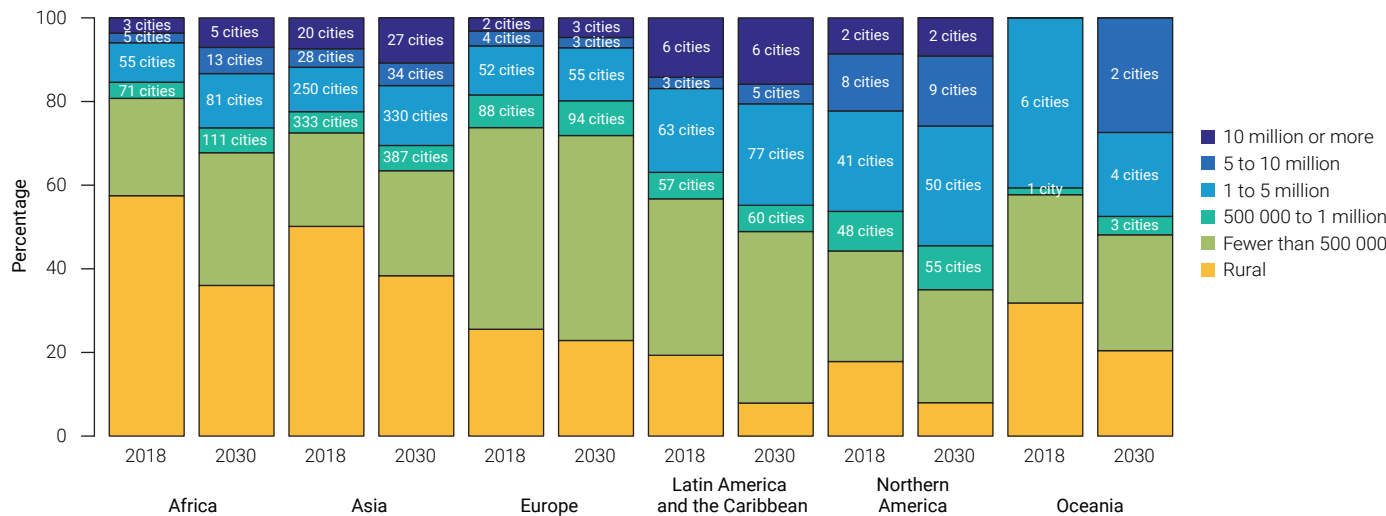
Resource management for better urban living

Sustainability should be at the heart of any post-COVID policy mix (UN-Habitat 2021a). The linear economy pattern that is built on a ‘take-make-waste’ approach (European Commission 2015) cannot be continued for three main reasons: shrinking availability of resources, amount of energy consumed during the production process, as well as environmental pollution due to dominant production and consumption patterns. Concentration of population and consumption in cities places them at the very centre of the circular economy challenge. This is especially relevant as cities today account for about 75% of the world’s energy consumption, and are responsible for over 70% of global greenhouse gas emissions (UN Habitat 2021b).

Rapid urbanization requires implementation of policies that will allow an absolute decoupling of energy and resource use from further development in order for it to become truly sustainable. If planned and managed well, cities can become cross-sectoral, trans-dimensional and highly efficient systems of energy and resource exchange, embedding not only their immediate surroundings, but also wider regional interconnectedness. Cities can promote a shift in focus towards circularity in the built environment by implementing material passports for resources used in their construction or energy use requirements for buildings, incorporated in updated national building codes that promote sustainable form and occupancy as well as technology. Along with local production of energy and energy recuperation (i.e. from server farms or industrial activities), such steps are a sign of pursuing a coherent decarbonisation strategy, allowing them to reach their climate neutrality ambitions.

To support the abandoning of the model of linear economy in cities, the Ellen MacArthur Foundation notes that cities spend up to 20% of their budgets on waste management, 75% of solid waste are discarded consumer goods and 80% of it is utilized in an inefficient manner (Ellen MacArthur Foundation 2019). Cities lagging behind with technology and social innovation in the field of waste

Population distribution by size class of settlement* and region, 2018 and 2030



* The population of cities with fewer than 500,000 inhabitants is estimated by taking the difference between the total urban population and the population in cities with 500,000 inhabitants or more. The number of cities with fewer than 500,000 inhabitants is not estimated.

Figure 2: In 2030 urban population will constitute a majority of people inhabiting each of the permanently settled continents. Cities themselves will also grow in size.
Source: United Nations (2018)

management will potentially miss out on opportunities, such as sustainable jobs creation for the local economy or benefits from research and development of circular economy practices.

Policies of closing the loop are also capable of delivering solutions to socio-environmental challenges, such as empowering women and low-income communities, especially in the Global South. Urban farming not only provides empowerment, sense of security and the development of community for the impoverished, but also a healthier lifestyle and contact with nature and soil within the boundaries of cities (Slater 2010). It additionally serves as high-quality space for public interaction, developing interests and passions. New strategies and approaches are also developed, such as the doughnut economy model, in which cities or countries are called upon to create a coherent set of policies, thanks to which human needs are satisfied without breaching the ecosystem boundaries of the planet. (Doughnut Economics Action Lab *et al.* 2020)). Such an approach has already translated into a strategy for Amsterdam and is a subject of interest in several local, regional and national authorities.

Boosting city resilience by fostering seasonal and local production and urban farming also provides support for the local-regional economy and creating value chains within the city and its immediate surroundings, along with opportunities for local job creation. As the current pandemic proves, cities of the future will want to extend

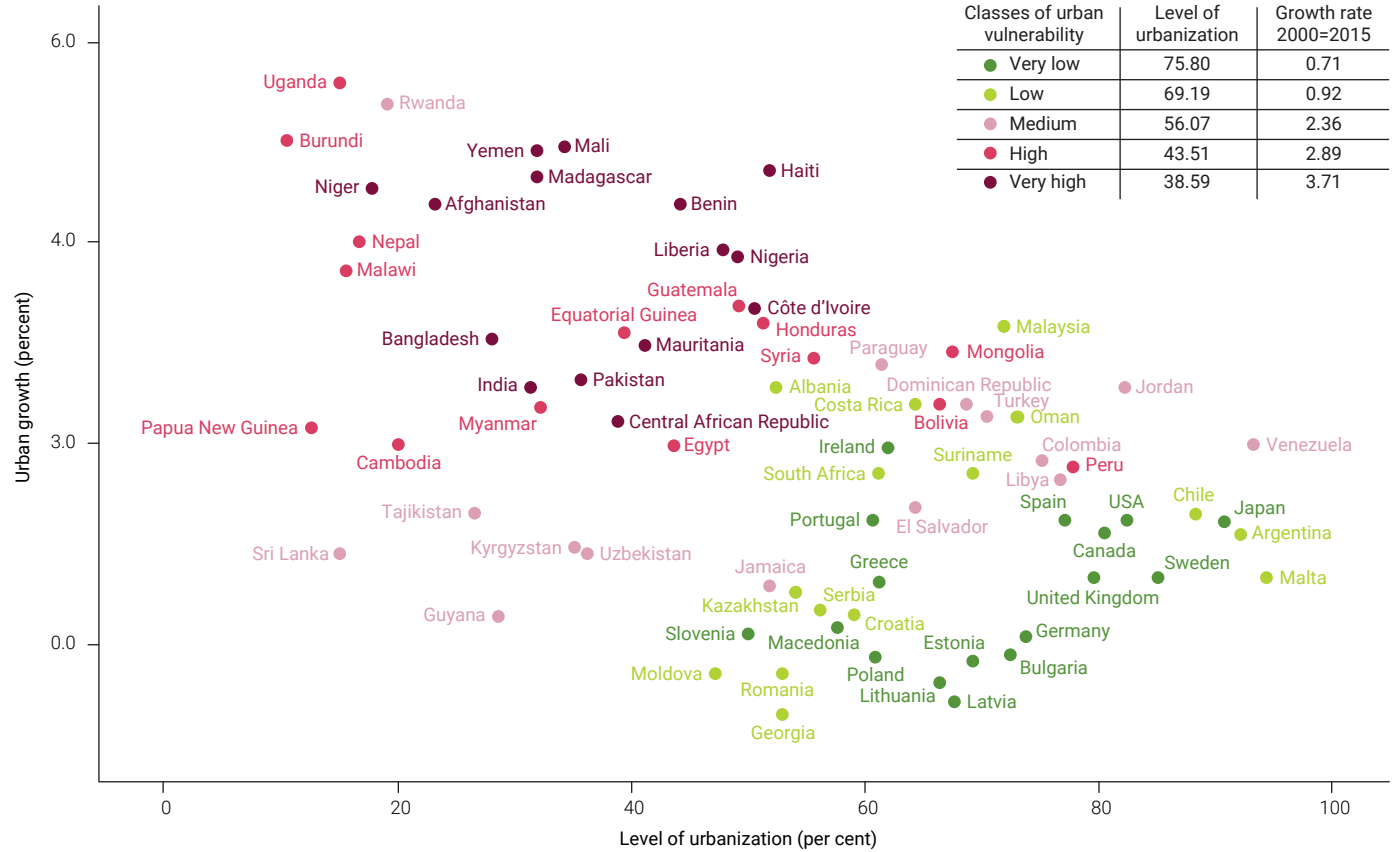


Figure 3: Interactions between urban growth, urbanization levels and vulnerability of cities on national levels. Source: UNEP (2019b)

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