Urban sustainability in Europe — opportunities in challenging times

# Urban sustainability in Europe – opportunities for challenging times

The COVID-19 pandemic is likely to influence Europe's transition towards more environmentally sustainable urbanisation patterns for years to come. European cities have been at the forefront of the crisis from the very beginning, not only bearing the worst impacts but also becoming key actors in advocating for a green and just recovery. This briefing provides an initial overview of how the ongoing pandemic is reshaping urban life and discusses some of the key opportunities for achieving urban environmental sustainability in the aftermath of the crisis.

# Key messages

- Cities are facing a triple crisis in the wake of the pandemic: tackling the health impacts of COVID-19; dealing with the climate and ecological emergency; and addressing social and economic inequality.
- Despite these challenges, cities have the potential to become a major driving force for a green and just recovery in Europe — provided that they are actively involved in the decision-making process from the beginning.
- Although it is too early to know what the longer-term legacy of the pandemic will be for urban environmental sustainability, it is clear the unprecedented EUR 1.8 trillion stimulus package agreed by the EU will reshape cities in fundamental ways.
- Infrastructure investment will play an important role in stimulating urban economic activity after the crisis, creating an opportunity to align the recovery with climate, environmental and social equity agendas in cities. This will need to be accompanied by better integration of policy sectors and actions to maximise co-benefits.
- Key opportunities for a green and just recovery are found in the following sectors: rethinking urban mobility and land use; retrofitting the urban building stock; enhancing the role of green infrastructure and nature-based solutions; and transforming urban food systems and the circular economy.

The COVID-19 pandemic is a challenge of unprecedented proportions and cities are on the frontline of managing the crisis. There is still considerable uncertainty about the longer-term impacts of the crisis on cities. However, a growing agenda of issues that will have to be tackled in the months and years ahead is emerging. All of the following will have an impact on environmental sustainability transitions in cities:

- what a green recovery looks like for different types of cities
- new requirements for the design of the public realm and green spaces and how this links to urban adaptation

- opportunities and challenges presented by new forms of mobility and wider questions of urban accessibility
- changes in urban functions, e.g. homes becoming the hub of day-to-day life and office buildings being converted to housing
- the impact on local business and service providers, e.g. reduced inner-city footfall
- the role of technology and digital futures in a just transition;
- urban and regional production and value chains and their links to the circular economy
- consideration of new forms of urban decision-making.

This short briefing is unable to cover all of these important themes in detail. Instead it provides a brief overview of some of the main impacts that the pandemic has had on urban environmental sustainability and then summarises the key opportunities to align the recovery with the urgent transition towards more sustainable cities.

There is a growing movement of cities in Europe actively committing to a green recovery from the crisis — supported by initiatives at the EU level such as the European Green Deal, the urban agenda for the EU and the new EU cohesion policy. The EU's ambition to achieve climate neutrality by 2050 and its European Green Deal flagship initiative must stay on track. However, the profound societal and economic changes brought about by the crisis need to be recognised. Likewise, we need to ensure an inclusive recovery that recognises that the pandemic has further exacerbated existing inequalities within individual cities and between cities.

While current efforts are rightly focused on tackling the immediate challenges of the pandemic, it is important to swiftly put in place approaches to recovery that are aligned with wider sustainability objectives. This will require active participation and full commitment at all levels of government.

A central part of these approaches will be ensuring that local governments can play an active role in the recovery planning process at EU and national levels. Funding will also be urgently needed, e.g. by earmarking part of the Recovery and Resilience Fund directly for local governments. The economic fallout from COVID-19 has put local governments in a precarious situation in which increased expenditure and reduced revenues have led to major budget shortfalls that could jeopardise existing sustainability initiatives.

## Impact of COVID-19 responses on urban environmental sustainability

For all European citizens, the pandemic has resulted in abrupt changes in daily routines that have had far-reaching consequences for cities and the wider sustainability of urban systems. Although the longer-term impacts require further investigation and will differ from one city to another, there are

certain patterns that already serve as an important basis for debate and discussion. Figure 1 presents some examples of the key opportunities and challenges that COVID-19 presents for urban environmental sustainability in the immediate term (pandemic response phase) and in the longer term (recovery planning phase).

## Figure 1. Examples of challenges and opportunities for urban environmental sustainability as a result of COVID-19

| 👍 OPPORTUNITIES | |
|---|---|
| **Immediate-term pandemic response** | **Longer-term Covid-19 recovery planning** |
| ■ Increase in walking and cycling, facilitated by temporary changes in transport infrastructure (e.g. widening pavements, pop-up bike lanes) and a reduction in car traffic<br>■ Improved air quality and reduced noise pollution due to less car traffic and reduced economic activity<br>■ Reduced greenhouse gas emissions due to less car traffic and reduced economic activity<br>■ Benefits for human health due to less air and noise pollution<br>■ Introducing Covid-19 safety protocols to encourage use of public transport and avoid a rapid increase in the use of cars<br>■ Increased use of open and green space in cities and increased familiarisation with and attachment to local neighbourhoods<br>■ Increase in domestic (household) and community interest in growing food<br>■ Increased interest in local, small-scale provision/self-sufficiency in certain goods and services, including food<br>■ Reduced generation of commercial and industrial waste due to lockdown and reduced economic activity<br>■ Increased urban biodiversity as lockdown encouraged wildlife to return to cities | ■ Permanent reallocation of road space to walking and cycling and improved green and blue infrastructure<br>■ Widespread adoption of 15-minute city concepts and promotion of mixed-use developments to ensure all urban residents have access to essential services within walking distance<br>■ Permanent improvements in air quality and health benefits due to increased use of active transport modes (e.g. cycling, walking) in cities<br>■ Shift to homeworking/flexible working/virtualisation reduces congestion and rush hour traffic and enables rethinking of transport infrastructure<br>■ Underused office space may be converted to affordable housing<br>■ Increased support for community food-growing initiatives and local production/local independent retail businesses<br>■ Increased recognition of importance of urban green and open space and of building with nature to prioritise 'nature-based solutions' such as parks, green roofs, green walls, blue infrastructure and permeable pavements<br>■ Focus on green job creation to reanimate economy (e.g. retrofitting for improved energy efficiency)<br>■ Green recovery plans, including funding, could support a range of urban sustainability objectives (e.g. clean energy, energy efficiency, transport, environmental quality, health) |

| ☹ CHALLENGES | |
|---|---|
| **Immediate-term pandemic response** | **Longer-term Covid-19 recovery planning** |
| ■ Increased car use due to fear of using public transport as economic activity recovers | ■ Far-reaching economic consequences including significantly reduced city budgets, exacerbating existing inequalities and undermining progress on sustainability objectives |
| ■ Reduced oil prices negatively affecting recycling companies, and increased risk that more plastics will be incinerated or landfilled | ■ Shift away from using public transport (either towards cars or active travel) leading to underfunding of public transport infrastructure |
| ■ Increased volumes of solid waste, including unrecyclable waste such as personal protective equipment, disposable masks and gloves and single use plastics from takeaway food | ■ Hollowing out of inner cities due to less demand for office space with knock-on effects for ancillary businesses |
| ■ Solar energy installations postponed or cancelled by homeowners. | ■ E-commerce replacing in-person retail, leading to an increase in urban freight movement and threatening viability of local town centres and high streets |
| ■ Shortages of food in supermarkets due to reliance on long and complex supply chains and just-in-time delivery | ■ Increase in urban sprawl and suburbanisation due to demand for larger homes with gardens and remote working leading to retail businesses relocating out of cities |
| ■ Lower-income households unable to afford local, organic and more seasonal food | ■ Increase in inequality as wealthier residents leave inner cities for greener more spacious suburbs, shifting tax revenue out of cities and reducing investment in most deprived areas |
| ■ Greater risk of Covid-19 linked to urban living conditions (e.g. exposure to air pollution, crowded living conditions) | |
| ■ Those with lowest household incomes less able to work from home and at increased risk of being infected or deprived of an income during lockdown | |
| ■ Pressure on urban green spaces due to increased human activity | |

## Key opportunities for a green and just recovery in cities

As the COVID-19 pandemic continues to unfold and health concerns remain paramount, cities are already taking the first steps towards recovery and leading calls for a green and just recovery. The aim is to enable cities to rebuild their economies, address complex social justice issues and tackle the climate and ecological crisis at the same time.

The following four areas offer particularly promising avenues for confronting this triple crisis in cities. Although they are presented as separate issues here, recent EEA work on urban sustainability highlights the critical interdependencies between the different urban sectors and systems and the importance of taking an integrated approach that recognises the important nexuses between various urban interventions and the associated policy outcomes.

## Rethinking urban mobility and land use

The pandemic allowed policy experiments to be undertaken at a previously unconceivable scale and demonstrated that mobility behaviour in cities is a lot more fluid than perhaps previously assumed. Over the past year, European cities have already created more than 1 400 km of new cycle lanes, traffic-calming measures and car-free streets.

There is an opportunity to build on this momentum by encouraging a modal shift and permanently reallocating road space to walking and cycling — and more green space —thereby avoiding a return to car-dominated cities with high levels of dangerous air pollution and congestion. This will require new regulatory interventions that deter car use and encourage the uptake of public transport and active travel. Public transport will remain the backbone of urban mobility and will need special attention, given the major revenue losses that threaten the long-term viability of entire public transport systems.

The pandemic also highlighted the importance of ensuring more equitable access to key services. Although most of the ideas and policy measures underpinning the 15-minute city are not new, the pandemic has clearly increased interest in the concept as a way to improve liveability, reduce carbon emissions and rebuild and future-proof urban communities. If cities are to embrace this model of urban proximity, we will need to reconsider how public and active transport is currently planned. There is a need to move away from radial transport to provide cycling networks that connect residential areas to the urban core and ensure better connections within and between the different areas.

### The core principles of the 15-minute city

- Residents in every neighbourhood have easy access to goods and services, particularly groceries, fresh food and health care.
- Every neighbourhood has a variety of housing types, of different sizes and levels of affordability, to accommodate many types of households and enable more people to live closer to where they work.
- Residents of every neighbourhood can breathe clean air, free from harmful air pollutants, and there are green spaces for everyone to enjoy.
- More people can work close to home or remotely, thanks to the presence of smaller-scale offices, shops and hospitality outlets, and co-working spaces.

Source: C40 Climate Leadership Group, 2020, 'How to build back better with a 15-minute city' .

## Retrofitting the urban building stock

There is a major opportunity for cities to invest in retrofitting their ageing building stock. This can play a central role in supporting the European Green Deal ambition of achieving carbon neutrality by 2050 and meeting the goals of the new renovation wave strategy. Collectively, buildings in the EU are responsible for 40% of total energy consumption and 36% of greenhouse gas emissions.

Building retrofits have considerable co-benefits beyond reducing carbon emissions, including reduced operating costs and more comfortable and healthier buildings for residents. Retrofitting also has significant job generation potential, which can help to restart the economy. For example, Lille has announced a EUR 66 million COVID-19 recovery plan, pledging EUR 35 million over the next 3 years for renovating 3 000 social housing units, more than 3 600 private homes and 600 student residences.

Beyond green building retrofits, there will also be opportunities for cities to think creatively about repurposing buildings for alternative uses. A drastic reduction in tourist numbers has accelerated

plans in some cities, such as Lisbon and Venice, to convert inner-city tourist accommodation to affordable housing. Given that the demand for city centre office space may never fully recover, some cities are exploring the potential for converting commercial buildings into housing or other uses. This will require leadership from the public sector and careful planning to ensure an appropriate mix of urban functions and land use and to update regulatory, zoning and taxation policy to enable this shift.

The pandemic has certainly underscored the importance of designing more flexible and modular buildings. Such buildings can be easily adapted to new uses without having to be torn down and rebuilt from scratch. This supports the EU's ambition to increase the use of circular economy principles in building design.

## Enhancing the role of green infrastructure and nature-based solutions

Urban green infrastructure provides multiple ecosystem services, supports climate change adaptation and plays a key role in improving people's mental and physical well-being. Perhaps one of the most enduring legacies of the pandemic will be the renewed appreciation of high-quality public green spaces in cities and the importance of healthy local environments, where air, water, soil and other natural resources are protected and nurtured while also increasing cities' resilience to the effects of climate change.

The ability of nature-based solutions to significantly improve local air quality is particularly relevant, given that evidence now suggests that prolonged exposure to poor air quality exacerbated the health impacts of COVID-19. As cities start designing and implementing pathways for recovery from the pandemic, nature-based solutions can provide sustainable, cost-effective, win-win solutions that create economic opportunities, employment and multiple public health and well-being benefits and have a transformative impact on urban ecosystems.

Recent EEA work has also highlighted how investments in green infrastructure can help cities adapt to a rapidly changing climate and to the increasingly extreme weather events they have to confront as a result.

In planning such interventions, cities will have to consider the equitable distribution of urban greening policies, and ensure that those urban communities that currently have the least access to high-quality public and green spaces are prioritised. It is also important to ensure that urban greening policies are clearly linked to wider issues related to inequities in urban planning and development processes (e.g. uneven access to other urban services such as transport). Linking urban green space policies with other policy objectives, such as an expansion in urban food production, can be an important way of building greater resilience and ensuring that the co-benefits of interventions are maximised.

## Urban food systems and the circular economy

Food security is critical to urban environmental sustainability, and the pandemic has highlighted the

importance of having a robust and resilient food system that can withstand sudden crises. The Commission's farm to fork strategy seeks to develop a fair, healthy and environmentally friendly food system. Initiatives such as the Milan Urban Food Policy Pact and the FAO urban food agenda have created platforms for cities to actively shape more sustainable, inclusive and resilient food systems.

The pandemic has given a boost to initiatives embracing the value of growing local, organic and more seasonal food in and around urban areas. For example, Paris is expanding its 'Parisculteurs' programme to support local urban farms, and it is explicitly linking access to locally grown food to its 15-minute city model. In Valencia, the local green belt has become an immediate and direct source of fresh food for the city. In addition to increasing the availability of healthy produce, urban agriculture also reduces transport distances and the associated carbon emissions and has considerable climate adaptation, ecological, social and health co-benefits.

Local food production can also disrupt linear food systems and support cities' efforts to move towards a more circular consumption model. This may be especially the case where cities also tackle other food system issues such as food sourcing, designing and marketing healthier products, and dealing with food waste. Policies to promote local food production will need to consider its affordability for lower-income households, which often lack access to sufficient healthy food and fresh produce. A successful rethinking of urban food systems will therefore require coordinated policy and action across a complex nexus of sectors, including urban agriculture, spatial planning and social policy.

## Unlocking the potential of cities to become drivers of a green and just recovery

The early 2020s are likely to be a key turning point. The fiscal recovery packages and infrastructure investments being rolled out by city and national governments and the EU have the potential either to further entrench fossil fuel-intensive and ecologically damaging economic systems and 'business as usual' urbanisation patterns or to accelerate progress towards a zero-carbon, more inclusive future for Europe's cities. New EEA research explores some of the drivers and barriers that European cities face in accelerating their transition to more environmentally sustainable patterns.

### Resilient and just cities through nature, environment and climate

By investing in recovery measures that prioritise zero-carbon transport, energy-efficient buildings, green and blue infrastructure, more space for nature and more resource-efficient urban living, cities can increase their resilience to future crises and ensure a just transition for all of their residents. To be truly inclusive, recovery planning needs to understand and address existing social inequalities within local communities and ensure that the needs of all, including the most vulnerable, are met. Initiatives such as the Committee of the Regions' 'Green Deal Going Local' will be pivotal in placing cities at the centre of the European Green Deal.

## Publications

### Transforming societies through local governance

Cities have been at the forefront of responding to the pandemic, and there is growing recognition that European cities can be powerful agents of change in driving a sustainable recovery. The pandemic has also highlighted the importance of both horizontal and vertical coordination of governance and the complex interlinkages between geographies, systems and policy areas. The European Urban Initiative is a new instrument to strengthen integrated and participatory approaches to sustainable urban development and to provide a stronger link to relevant EU policies and, in particular, cohesion policy investments. EU recovery funding presents a significant opportunity for cities, but only if local governments and local citizens are properly consulted in the planning and execution of recovery initiatives.

### Cities — coping, changing and learning

Co-creating solutions with cities and their networks will be essential in ensuring that transformative actions can be scaled up. Networks and institutions such as Urbact, the Urban Innovative Actions, the Green City Accord, the Covenant of Mayors, ICLEI (Local Governments for Sustainability), Eurocities, CEMR (Council of European Municipalities and Regions) and others will play a key role in supporting cities on this journey. Opportunities for peer-to-peer learning will remain central to enabling cities to share challenges and lessons learnt in their recovery from the crisis. The Horizon Europe research programme will play a major role in driving innovation in cities with its ambitious goal of creating 100 climate-neutral cities by 2030.

One important legacy of the crisis is likely to be the realisation that behaviours, institutions and even infrastructure can be changed a lot faster than we may have previously assumed. European cities are not as ‘locked in’ to certain ways of doing things as previously thought. If necessary, cities can radically transform how they operate and how we live within them. This has important implications for the ambitions that cities put forward to enable the transformational systems change that will be needed to tackle the climate and ecological crisis in the years to come.

## More information/Further reading

Overview of EEA knowledge on Urban sustainability

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