

Spatial Planning Guidelines during COVID-19



September 2020



Historically, pandemics such as the plague and Spanish flu have altered the way cities are planned leading to adaptations in building codes which are still under effect today. Many cities like Paris, New York and Rio de Janeiro have been redesigned to incorporate higher hygiene standards with improved sanitation facilities. Buildings have also been modified to include better light and ventilation. Cities are at the epi-centre of the COVID-19 pandemic which has a much higher transmission rate compared to previous pandemics. Measures to control COVID-19 transmission have included physical distancing, but this is often difficult to implement in cities founded on the principles of density, proximity and social interactions.

This current pandemic is challenging planning principles mistakenly confusing density with overcrowding as an accelerator for the spread of COVID-19. There is no evidence, however, that relates higher density with higher transmission, rather it is overcrowding and the lack of access to services that is making certain populations more vulnerable and at a higher risk of contracting the virus. The COVID-19 pandemic is reaffirming the spatial inequalities manifested in the form of slums/informal settlements. It is also exposing the latent inadequacies like insufficient public space or limited access to healthcare– even within formal and well-organized cities – that have been exacerbating problems which have become impediments to achieving good quality urban life.

Strategies guiding urban form impact health, economy and environmental sustainability and should aim to build resilience across all these dimensions. Planning processes informing regional and city plans must incorporate measures that enhance public health. By working closely with specialists and epidemiologists, pre-existing conditions directly related to urban living conditions such as air pollution and overcrowding can be overcome. Lessons learned from COVID-19 and previous pandemics should direct efforts towards creating more inclusive and resilient cities, wary of efforts to isolate, segregate and control urban life. Cities must remain open, dynamic spaces reflecting collective freedoms and expressions. Citizens should continue to exercise their rights in demanding better services and transparency from the authorities, while performing civic duties responsibly.

Listed below are guidelines for short, medium and long-term spatial planning response and recovery measures post COVID-19. The concepts are interrelated and equally relevant for social, economic and environmental sustainability on all geographic scales.

Regional Scale

- ▶ **Regional linkages connecting urban and rural areas are crucial for the flow of goods, services and people.** What sets the COVID-19 pandemic apart from previous pandemics is its rate of transmission across the globe due to our hyper-connected world of globalized markets and supply chains. Modern connectivity facilitates the flow of goods, labour and services but it has also transported the virus to different territories. Interdependencies among regions are being exposed as areas yet unaffected by the virus, are still facing disruptions in market supplies because of the impact on global trade. Regions that are heavily dependent on long distance imports or have resources and investments concentrated in a singular sector, face greater risk from economic repercussions. Mapping the flow of goods, labour and markets, and strengthening and enhancing links between cities, states and regions is an important step in building socio-economic resilience where mitigation measures can be expedited, and alternatives can be sought to minimize disruption.
- ▶ **Intermediate and tertiary cities need greater emphasis and investment to improve quality of services and economic opportunities.** The connection between mega-cities and the network of smaller cities plays an important role in the globalizing world as both a cause in the spread of infection but also in facilitating a response to it. Intermediate cities and smaller settlements are also as vulnerable to outbreaks emphasizing the necessity to invest in facilities and ensure economic development. Decentralization of services will help relieve mega-cities from meeting housing and employment needs beyond their capacities as well as providing a certain degree of self-sufficiency and autonomy to regions.
- ▶ **Robust blue and green networks make cities and regions more resilient. COVID-19 has put a spotlight on the interface between urban and natural habitats and the crossover of infections between wildlife and humans.** Preventing the encroachment and destruction of the natural environment and connecting blue and green networks can reduce the stresses on flora and fauna to allow them to flourish in their natural habitat. A holistic approach to planning should consider combining grey, green and blue infrastructure at different levels to support healthier cities and citizens. Forests, fluvial and marine systems, wetlands and parks at all scales have always been crucial for cities and regions to provide natural drainage systems, minimize heat island effects, preserve wildlife habitats and reduce air pollution. In order to sustain the inadvertent positive effects on the environment because of reduced carbon emissions during COVID-19, emphasis should be put on preserving and restoring the natural blue-green networks.

City Scale

- ▶ **Urban form and function determine the type and efficacy of response measures.** While sparsely occupied territories have been able to successfully contain the spread of COVID-19 by restricting movement and enforcing distancing measures, the longer distances traversed to access and maintain basic services have had a financial and environmental cost associated with them. Polycentric cities, with decentralized services and amenities, have the advantage to serve a larger percentage of the population in an efficient manner coupled with timely response and enforcement of measures.
- ▶ **Compact urban form with mixed land use is more sustainable and resilient.** The compact urban form of cities is currently being challenged, not only by the COVID-19 pandemic but also changes in work environments which are adapting to more remote working opportunities. Technological advancements such as self-driving electric cars have reduced the costs of distance and time and impact on the environment. A compact urban form aims to minimize distances travelled to access the services and facilities offered by the city. Activities located within easy access benefit from advantages of agglomeration and economies of scale. Encouraging mixed land use aimed at promoting the local economy has further benefits such as reduced travel time and reduced car dependency while promoting pedestrian and cycling alternatives. Multi-functional cities also attract citizens with diverse skills resulting in a healthy mix of people to cater to the diverse needs and services of the city while allowing opportunities for social interaction.
- ▶ **Planned Density with a sufficient standard of living, access to adequate basic services and open spaces are still good for the environment as well as economic and social well-being.** Density should not be mistaken with overcrowding (as witnessed in slums/informal settlements) which do not have adequate access to basic services and open space. Overcrowding can make neighbourhoods more susceptible to infection risks plus other factors like age, income, pre-existing medical conditions and the inability to distance or work remotely all require special services or additional support. Density is essential for environmental sustainability as it optimizes land, a limited resource, for the benefit of many and should be proportionate to the level of services and amenities available in each area.. Living floor area and green or open public area per person are good indicators of different qualities of density.
- ▶ **Public transport is an essential public service that must remain safe, affordable and reliable for all citizens.** While public transportation hubs are considered hot spots for virus transmission and are confined environments curbing physical distancing measures, they also provide an essential service for residents and workers. Public transport continues to be an environmentally friendly

and socially inclusive form of public service in cities. For people to opt for using public transport over private methods, it must guarantee safety and comfort whilst remaining convenient, affordable and reliable.

- ▶ **Right to housing is essential to ensure stability and dignity of urban residents.** Inadequate housing in cities leads to problems such as overcrowding, occupation of unsuitable land, poor building construction quality and also homelessness. Housing insecurity becomes an even greater challenge for vulnerable populations who are forcibly evicted or face the threat of eviction during emergencies and crises. Ensuring access to housing for all citizens provides stability, security and a sense of ownership essential for personal dignity and human rights. Cities need to make the provision of adequate and diverse housing a priority through strategies such as cross subsidies, social housing, urban regeneration and land regularization. Other policies that include social protection for the most vulnerable and the homeless in the form of security of tenure, rent control and rent stabilization are also desirable.
- ▶ **Equitable access to basic services like water, sanitation and waste disposal; social services like education, health, cultural and recreational facilities; and robust digital infrastructure is crucial for a resilient environment and social well-being.** The lack of access to fundamental services has increased the challenge of responding effectively to COVID-19 making complete lockdowns impossible to implement in many cities. Equitable access to quality basic services are the foundation of a resilient urban environment. Services such as clean water supply, sanitation, drainage and energy are essential for the economic and social development of urban areas. Special emphasis on the capacity of and access to healthcare facilities during this pandemic has underlined the importance of social infrastructure. Making cities more resilient requires better integration of planning and distribution of services, coupled with targeted public investments in order to allow residents to live a healthy and safe life.

Neighbourhood Scale

- ▶ **Mixed-use and compact neighbourhoods allow residents to meet their needs within a 15-minute walk.** Considering design at the neighbourhood level has proved to be crucial in times where lockdowns have restricted residents' movements across the city, relying instead on the amenities and services available within walking distance. Suburban neighbourhoods with big-box retail centres, malls and supermarkets complete with large parking areas, are environmentally unsustainable and socially divisive. Designing neighbourhoods to be mixed use with ample public space encourages walkability, reduces car dependency and fosters local production and consumption patterns while also strengthening social cohesion.

- ▶ **Slums and informal settlements should be transformed into resilient neighbourhoods.** Narrow, crowded, poorly ventilated and poorly sunlit homes and streets are common in slums/informal areas and increase the risk of respiratory infections and other diseases. Open sewers and poor sanitation have a direct link with the spread of disease, increasing mortality rates for particular vulnerable groups. These overcrowded conditions also make it difficult to self-isolate or keep socially distant during crises such as COVID-19. Transforming these settlements into well-designed, high density neighbourhoods through urban regeneration, public investment and cross subsidies will improve the overall health of the city and make measures such as self-isolation possible.
- ▶ **Adequate and flexible design of public spaces and streets allow residents to engage with the outdoors while maintaining social distancing and feeling physically and mentally rejuvenated.** Adequate quality public spaces must be included and equitably distributed at all scales such as local playgrounds, city scale plazas and parks, reserved greens and trails, national parks, etc. connected through a web of streets that promote walking and cycling. Guaranteeing the multi-functional, flexible use of public space and streets will reduce the spread of viruses and enable physical distancing.
- ▶ **Urban agriculture through community gardens and rooftop farming can be a stopgap solution in food deserts or in times of crises.** The COVID-19 pandemic has restricted the movement of people and goods and disrupted the import and export supply chains of food. While urban agriculture has previously been promoted, the pandemic has encouraged more people to rethink how land can be used to increase local food production. City residents should be encouraged to grow fruit and vegetables in their gardens and neighbourhoods to ensure food security, abate the proliferation of food deserts and reduce dependence on rural agriculture and international imports.

Building Scale

- ▶ **Minimum space standards for residential or other uses should be reviewed and complemented with access to some form of outdoor space.** Lessons learned from previous pandemics have encouraged housing to incorporate minimum standards of light, ventilation and sanitation, but there is still room for improvement on adequate space. Design features that enhance indoor-outdoor interaction through balconies, terraces and courtyards to allow residents their personal space while also creating a connection to the outdoors should be incorporated. Building codes need to be reviewed and adapted to different regions, and adopted by decision makers to respond to the needs of residents. Focus needs to be directed to informal settlements, ensuring residents have sufficient living areas to avoid overcrowding, with established connections to basic services such as clean water, waste and sanitation facilities.

▶ **Incentives to direct the construction sector to invest in social infrastructure and green buildings can help cities build back better.** Events like the COVID-19 pandemic have created opportunities to alter the status quo and shift to better and more sustainable approaches. Governments should incentivize the construction industry by redirecting public investments towards meeting the demands of affordable housing, complete streets and improved basic services, etc. to create an inclusive and resilient society. Green building standards and codes (such as LEED, LEED-ND, BREEAM, etc.) that have been advocated by architects and urbanists over the last few decades should be understood, adapted and implemented. Adapting homes to be energy efficient, using local materials and traditional knowledge while embracing renewable forms of energy should become the prevalent model for design and construction.

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**COVID-19
RESPONSE**

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