Chapter 6
Recommendations for 'The City in Need'

Man needs difficulties; they are necessary for health.
—Carl Jung.

6.1 Expected Disruptions and Unexpected Impacts

As the body first deteriorates and then reaches immunity against a disease, the city also first suffers and then becomes more resilient by the end of an outbreak event. The city may not become fully immune, but will be more experienced and prepared with a much enhanced resilience for the future. The body tolerates the disease and pain as it first struggles and then grows to become sturdier; and so does the city and how it manages to pass through the multiplicity of destructive and disruptive impacts. The city will only become stronger, if not healthier. It will then regain its health and full potential in a process of responsive management, improvement, and resilience enhancement.

Based on what we have covered in the previous chapters, the only way towards progress is to overcome disruptions. If the city can assess the expected disruptions in advance, then in return it can make the pathway(s) to respond more effectively to those unexpected impacts. Some of the disruptions may not be necessarily manageable at the city level but with adequate urban resilience and city management, we can help to avoid micro-level crises or failures. With our growing international trade and economies, the issues of economic management can only be partially accomplished at the city level. Hence, the main contribution of the city would be to reduce the impacts and vulnerabilities that are likely to increase the adversities of the communities. The example of a comprehensive framework, or scenario-based assessment of the outbreak progression, enable us to better realise the expected and unexpected issues of the outbreak. Undeniably, disruptions are expected; even if some may try to delay the impacts and buy out more time to reach early containment. Hence, realising the realities is something that we have addressed, and as we have shown in the example

of the previous chapter. In most cases, unexpected factors are the actual impacts on multiple systems and sectors and various stakeholders.

As the outbreak progressed within China, in the region, and at the global scale, the multiplicity of disruptions were just piling up. The world was no longer only at the status of a global health emergency, it was (and will be) facing a major economic crisis. By the time it was officially declared a pandemic, the impacts were already global. From shortages of many products to health care emergencies, from travels bans to cancellation of major events, and from lockdown of a city to lockdown of countries and regions. The impacts dictate: changes in lifestyles and the socio-economic values of the cities, changes in mobility and the interconnectivity of the regions, fluidity of new regulations and facing the emergencies in various countries, and the momentous impacts on international trade and relations, as well as the public health of the globe. The situation pushed the meetings of the Group of 7 (G7), an intergovernmental economic organisation, to become virtual. It overshadowed the 2020 Olympics events in Tokyo, which was eventually postponed on 24 March 2020. It put a halt on many operations and trades at multiple levels. It led to lockdown measures of many provinces. It turned vibrant cities into instantaneous ghost towns. It made atrocious impacts on highly infected communities. It crumbled the lives of many families. And it took so many lives. It simply felt like a moment of pause.

This book has so far covered a wide range of knowledge regarding the issues of outbreak events and how cities should cope in such unexpected situations. It then provided comprehensive thinking on methods of preparedness through urban resilience, as well as approaches of responsiveness through city management. This was later elaborated by realising the realities, capturing the progress, and facing the disruptions. In this concluding chapter, we first delve into matters of progress and how we should move from vulnerability to containment and then recovery. These discussions will be followed by a set of 10 recommendations for the city in need before we conclude with the final remarks of the book.

6.2 Preparing the City in the Outbreak Events

So far, we have covered what needs to happen in terms of preparedness and respon-siveness in multiple phases of the outbreak progression. Here, we address how such preparation progresses at different levels as the city becomes closer to recovery. This requires a step-by-step but progressive approach to ensure the city is prepared, it can respond effectively and reflectively, and it can ultimately manage the situation (Cheshmehzangi 2020a). To reach the recovery, the city has to be able to control the outbreak, especially if there are cases of sustained transmission or the growing number of cases in clusters and multiple locations. In doing so, such control helps to avoid a probable shift from the case of an emergency to the case of a crisis; a shift that everyone would like to avoid at all costs. To avoid any possible discordances and incongruities, the city has to respond through its capacity of resilience and its ultimate powers of management. Such responsiveness has proven to be the most effective tool

in facing the outbreak events. The whole process is then narrated in three levels of: (1) from vulnerability to resilience, (2) from resilience to management, and (3) from management to containment and then recovery.

At first, it is evident that vulnerabilities are the immediate bottleneck to progress, and hence, the main objective ought to be in line with the advancements towards resilience enhancement. Nevertheless, as we learned through the earlier chapters that resilience alone is not effective. It only becomes effective with an adequate level of city management across multiple levels and multiple sectors. Thus, at the second point of progress, the integration of resilience planning in city management methods is crucial to ensure the stability of the city, operationalisation of urban systems, as well as assessment and management of risks. At last, the progress is for city management to achieve containment and then recovery.

6.2.1   From Vulnerability to Resilience

If the city has no preparedness, there are signs of more vulnerabilities in multiple sectors that could ultimately affect larger groups of stakeholders, and specifically the general public. There are also certain context-specific vulnerabilities that need to be identified and addressed as early as possible. Some examples of these vulnerabilities include, socio-cultural factors, education levels, institutional arrangements, geographical conditions, interconnectedness and mobility patterns, etc. Also, as there was an earlier case of transnational transmission from a conference held in Singapore, we noted the level of severity of the disease transmission. This case can be regarded as one of the early trackable cases from one location to multiple countries. Later on, the situation was reflected as a matter of urgency. It was through the highlights of the co-chair of Singapore's Task Force on the coronavirus (MoH website 2020) that countries with open economies were recognised to be at higher risk:

> We are vulnerable, but we have to everything that we can do contain that spread of the virus…We are mindful that we are indeed an open economy, we are an international travel hub…We are putting information in a very transparent manner and we continue to work with all health authorities overseas.

This multi-ministerial task force was established only two days after the official announcement of the outbreak in Wuhan. This immediate response represents an example of reflectiveness through early identification of vulnerabilities and responding to them without significant delays. This task force was established to: "*ramp up precautionary measures*", "*expand on border controls*" (including also land and sea checkpoints), "*direct a whole-government response to the outbreak*", and "*step up Singapore's overall preventive posture*" (ibid).

Apart from these top-down managerial factors and monitory measures, the vulnerabilities of critical infrastructures (Monstadt and Schmidt 2019), urban systems (Cheshmehzangi 2020a), and the society are major factors for resilience consideration, as well as for the important factor of resilience enhancement. From

various viewpoints, the examples of societal vulnerabilities such as social matters (Fraser 2003), spatio-temporal dynamics of the population (Shafqat Akanda et al. 2013; Nieddu et al. 2017), socio-economic factors (Bacallao et al. 2014), and even from the consideration of gender (Rancourt 2013), and specific systems (Fraser et al. 2005), are all important to how the city can reduce its vulnerabilities. Such considerations should also be utilised for further assessment of multiple factors, inclusive of economic risk and institutional limitations (Parkins and MacKendrick 2007), those that are related to potential poorer compliance with advised health-protective behaviours and wrong perceptions (Schemann et al. 2013). Consequently, through a collection of scholarly work, Ali and Keil (2011) put together a range of methods to understand "*global cities, networks, and governance in a post-national era of public health regulations and neo-liberalisation of state services*". Thus, the interconnectivity and networks are considered as important factors to identify vulnerabilities and then to enhance resilience. Of these factors, the roles of people and the network of people play their fundamental parts in how governance could eventually succeed. In many cases, people mistakenly find refuge in social media and other sources of misinformation, not knowing there are hidden traps to increase their anxiety and reduce their awareness. As discussed before, the lack of awareness leads to an eventual lack of compliance with precautionary measures and could turn into more disruptions in the overall management of the outbreak and its full containment. To sum, the resilience building should be heavily relied on governance, through interdisciplinary methods, integrative approaches, and participatory opportunities (Cheshmehzangi and Dawodu 2018). In doing so, the city's resilience becomes all-inclusive and reflective of the conditions of the outbreak.

6.2.2 From Resilience to Management

As part of the overall preparedness, the most crucial step is to integrate resilience planning into city management. In order to increase government accountability and effective responsiveness, we should utilise an adequate number of guidelines, assessment, and management considerations—in other words, resilience-based city management. In different urban studies, there are signs of resilience and management together, from the perspective of urban change (Zapata Campos and Zapata 2012), planning and climate change (Jabareen 2013), public-private-people partnership processes (Marana et al. 2018), multiple stakeholder involvement (Gimenez et al. 2017), urban eco-system services (McPhearson et al. 2014), risk assessment of various kind (Coafee 2016; Pyrko et al. 2017), urban sustainability matters (Girard 2011; Chelleri et al 2015), city infrastructures (Ng and Xu 2015; Reiner and McElvaney 2017), etc. The two complement each other, which is also evident from the studies of cities and their enhancement (Cheshmehzangi 2016). This approach of combined resilience and management is also applied to studies of flood resilience (Liao 2012; Batica et al.

2013), multi-stakeholder networks for building city resilience (Gimenez et al. 2017; Spaans and Waterhout 2017; Gimenez et al. 2018), disaster management (Brogt et al. 2015), risk city resilience trajectories (Jabareen 2015), and how they could be integrated into urban systems (Chelleri 2012; Cheshmehzangi 2020a). Such measures feed into adaptive thinking approaches, for the overarching ideas of adaptive planning (Alterman 1988; Kato and Ahern 2008; Rosenthal and Brechwald 2013; van Veelen 2016), adaptive governance (Folke et al. 2005; Brunner and Lynch 2010; Termeer et al. 2010; Bronen and Chapin 2013; Seeliger and Turok 2014; Green et al. 2016; Karpouzoglou et al. 2016; Hong and Lee 2018), or adapting/adaptive city (Verebes 2013; Errigo 2018), which have roots in social sciences or social studies (Trist 1976) and are meant to address the uncertainties in planning (Kato and Ahern 2008; Rauws and de Roo 2016). In other studies, this approach is used to guide transformations (Rauws 2017), some through integrated adaptive planning (Jim et al. 2015; Hudec 2017), institutional design (de Roo 2015), and policy development (Peck 2012).

Furthermore, the adaptive approach, particularly from a resilience-based management perspective, can lead to the development of an action plan. This is regarded as an essential factor for the integration or transference of resilience thinking to city management. In doing so, the city has to address any matters of resilience planning and conduct comprehensive sets of risk assessment and risk management. This requires adaptive measures that lead to the development of new and temporary policies, regulations, and guidelines (see Chap. 4). Some may appear simple but would be effective. For instance, on the contrary to our usual sustainable measures, it is important to allow for more private transportation use during the outbreak, and perhaps provide parking fee exemption to encourage private car use rather than public transportation. This is a simple adaptive measure but it certainly helps to reduce the transmission through our often-crowded public transportation. In our highlights on resilience thinking, we urge for the city-level outbreak action plan, which should be informative and reflective through regular updates. This is no longer just the readiness of the city against the outbreak, but should indeed represent feasible and practical planning for the purpose of multi-sectoral city management. As discussed throughout the book, this city-level approach requires to be all-inclusive in order to address any vulnerabilities, shortages, deficiencies, and possible impacts on the city and its communities. In summary, the management should be similar to a larger scale incident management, which includes preparedness, mitigation, response, and recovery (EMSA 2014; CHA 2015; Banach et al. 2017). These are recognised for the basics of comprehensive planning, in order to cover prevention measures, risk reduction plan, and the required activities and actions for the case of a health emergency. In doing so, the city can strengthen its responsiveness through resilience-based management.

6.2.3   From Management to Containment…and then Recovery

In this level, the city should prove its robustness and should indeed accentuate how it can progress successfully. This is a critical stage in which all the efforts are eventually paid off. If successful, the city would manage to reach containment before finding its path to recovery. The cities that succeed to reach early containment are the ones either well prepared for the event, or not affected significantly by the disease outbreak. In the former group, they have learnt from their experiences and have developed a robust action plan. And in the latter group, which occurs more often, the city would still require to have an action plan. Hence, the ultimate goal of any city that faces the threats of a health emergency would be to reach early containment. The earlier this occurs the lower the impacts on the communities. Indubitably, an early containment enables the city to manage the adversities that may cause significant effects on public health, socio-economic factors, and primary operations. The early containment should be regarded as a prevention stage, where later transmission and transition phases could be avoided.

Consequently, to govern the city in need, one has to understand the conditions and reflect on those promptly. This is certainly more than just the issues of social cohesion and economic factors (Keil and Ali 2007), and embraces an array of factors that require all-inclusive governance and support. The process of management to containment requires active surveillance (Nash et al. 2001) or syndromic surveillance (Heffernan et al. 2004), and a combination of safety procedures with careful control and monitory measures (Cheshmehzangi 2020a). As expressed before, the city needs to develop scenario-based approaches and regulatory approaches to management (Chamberlain et al. 2017; Weiss et al. 2017), which should be all-inclusive, reflective and adaptive. Incontrovertibly, the city has to create an emergency-based ecosystem of management. In addition, the utilisation of any possible techniques should not be circumvented. In the existing examples of a scenario-based approach to support containment and prevention strategies, we highlight only a few, such as the use of disease-spread simulation models with artificial intelligence (Tsui et al. 2013), the provision and exercise of mock models and practices (Henderson et al. 2001), the use of the random-effects model for comparisons of the disease spread (Garrett et al. 2006), a range of continuous analytical methods and preventive practices (Onowhakpor et al. 2018), the multiple methods of tracking and profiling the disease spread (Obhubunwo et al. 2016), detection analysis of individuals, clusters and transmissions (Wallenstein 1980), network analysis of the disease (Ali and Keil 2006, 2011), etc. In all these cases, we see examples of high level analytical and assessment approaches to detect, monitor, and control the spread of the disease. These are essential for the overall city management, the ultimate containment of the disease outbreak, and towards recovery.

Furthermore, throughout the process, it is vital to have people as the priority to reach containment and recovery. In their study on 'how to vaccinate a city against panic', Glass and Schoch-Spana (2002, p. 217) provide their suggestions in the

form of five guidelines to integrate the public into planning processes, including: "*(1) treat the public as a capable ally in the response to an epidemic, (2) enlist civic organisations in practical public health activities, (3) participate the need for home-based patient care and infection control, (4) invest in public outreach and communication strategies, and (5) ensure that planning reflects the values and priorities of affected populations*". In reality, we can verify that people are part of governance. They are not only meant to receive updates and communication from the governments but are proactive actors towards containment and recovery. As discussed before, the methods we utilise to reach containment ought to develop in integrative ways that are multi-sectoral, multi-spatial, and multi-objective. These should involve a larger group of stakeholders, and particularly the general public. In summary, the step-by-step process to containment and then recovery should be taken accurately and with the highest level of attentiveness (i.e. both care and caution). In doing so, managing the city would succeed to reach containment and then recovery.

6.3 '10 Recommendations' for the City in Need

In this section, we reflect on all the lessons learned from current practices, literature review, and the experience of the recent COVID-19 outbreak. In doing so, we summarise a list of 10 recommendations (Fig. 6.1), which could be utilised as the general guide for saving the city in need during the future outbreak events. Intentionally, these recommendations are proposed as general points so that we can easily utilise and implement them for any city that suffers from a disruptive outbreak event at any time. This list serves as the summary of practical guidelines, which also resembles the main aim of the book; i.e. to enhance the city's resilience, and to optimise the city's management. These recommendations are not meant to be paradigms, but they should get regularly updated to remain adaptive and reflective of the realities of the outbreak and the context. In the least effective way, if not anything more, the following recommendations ought to support the city's immediate action plan against the adversities of the outbreak.

(1) *Temporary utilisation of places and facilities*

In order to minimise the impacts on public health services and facilities, especially if they are limited in numbers and/or with limited workforces, it is recommended to separate the treatment operations from other operations. A possible approach is to temporary utilise places and facilities that are either redundant, or are not linked to primary parts of the city. The examples of this recommendation include assembly of temporary structures and units in designated areas, utilisation of large scale open areas with access to medical and emergency services, utilisation of redundant but safe areas/buildings that include basic facilities, and utilisation of buildings with large open spaces for treatment (Cheshmehzangi 2020b). In all cases, any use of such facilities should be carefully monitored and controlled in terms of access, usage,
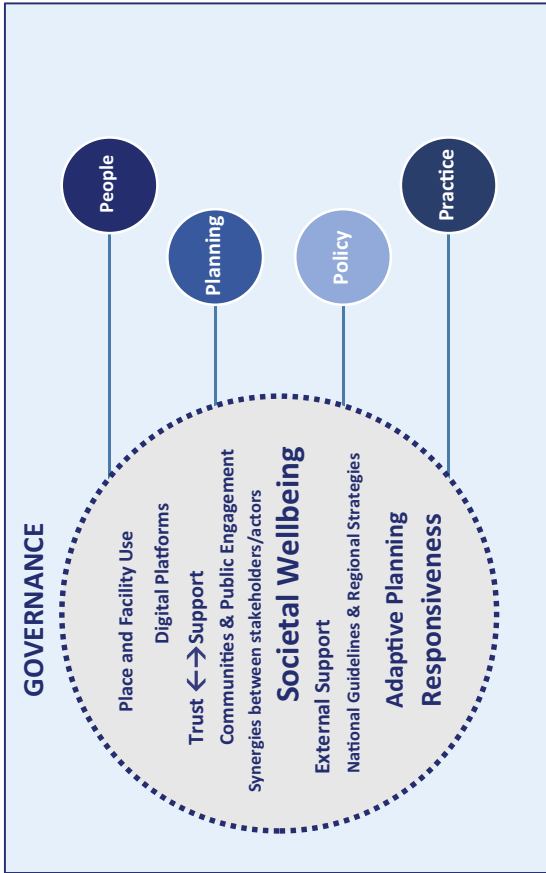
Fig. 6.1 Summary of 10 recommendations supporting governance from four perspectives of people, planning, policy and practice. *Source* Author's own

allocation of zones, operations, deliveries, necessary supply provisions, and regular disinfection procedures. The safety of workforces must remain as the priority, and the overflow of patients (infected cases and potential cases) should be monitored throughout all operations. Partly associated with this recommendation, it is also suggested to have designated spaces for emergency equipment and storage in all healthcare services and facilities. This provision is aimed to help early preparedness and maintain the safety of healthcare workforces and units.

(2) *Digital Platforms for multiple uses*

In the age of digital technologies, it is simply wrong if we are unable to use our available and non-imaginary digital platforms in the time of need. Digital platforms can come in different forms and can offer a variety of support. They can be recognised as innovative assets for us to reduce the impact of disruptions, to maintain the healthiness of city operations, and to implement adaptive measures for any planning and management. Some examples of digital techniques are, the use of artificial intelligence in the detection and monitory procedures, data-driven approaches to health monitory assessment and risk assessment, integrated information-based models for risk management, etc. Moreover, we can use digital tools extensively for various uses. Some are already commonly used in various locations, such as digital payment methods, online or distance learning (DL) education systems, online shopping, online postal services, online banking, home-based work, online meetings, online trade, e-commerce, etc. Also, the example of official multi-functional digital platforms (as shown in Chap. 5) would be beneficial to ease many operations such as dissemination of updates, provision of guidelines, education, training, etc. Altogether, digital platforms are useful to build up the resilience of certain operations and to help with better practices of control and monitory. The use of digital technologies is certainly widespread and also more effective in medical and treatment procedures. Also, at multiple levels and as part of the operations of many urban systems, such technologies can be utilised to achieve smart-resilient approaches for city management.

(3) *Maintaining trust to generate support*

Throughout the book, the involvement of people in various procedures is highlighted as effective methods for the development of all-inclusive approaches and the ultimate development of trust. The role of people needs to be sustained as the priority and actors of decision-making processes. This would help to maintain trust between the government and people, and generate support from the communities. The possible methods of achieving this trust and ensuing support are through transparency in data and information share, official means of communication, clear and supportive announcements and updates, the involvement of community representatives in task forces or specific groups involved in contingency plans, action plans or strategic plans, empowerment of community-level support, and attention to vulnerable groups and communities (including elderly, jobless and low-income groups,

single parents, people with mobility difficulties, people with high-risk health conditions, etc.). Alongside these, we recommend having a more responsive approach to a variety of factors, such as community-level safety and security, provision of support to local businesses as well as small and medium enterprises/companies, maintenance of primary services and amenities, monitory of potential disorders or associated crime, and societal well-being. The latter, if prioritised, then has to be reflected on public health services, provision of social services, and the support that will be required to address any vulnerabilities of the society. Lastly, the reliability and responsibility of the government should be maintained and respected through a healthy mutual process of support.

(4) *Empowering the communities through public engagement*

Under the overarching factors of the previous recommendation, the empowerment of communities through healthy public engagement approaches is meant to enhance the power and competence of the society (Cheshmehzangi and Dawodu 2018). If regarded as the priority for societal wellbeing matters, then community empowerment should be reflected in effective participatory approaches. According to Cheshmehzangi and Dawodu (ibid, pp. 173–177), the best practices for public engagement are expected to provide or consider the followings: power and competence, the by-products of partnership, early participation, education and empowerment, stakeholder analysis, perspectives and context, integration of top-down and bottom-up approaches, institutional support, and participatory plan. While the provision of all may not be achievable in the case of the outbreak, it is recommended to prioritise participatory plans of various kinds, such as the involvement of community representatives, enhancement of community-level safety and security, and the provision of community-level amenities/services. It is also highly recommended to enhance community education and provide opportunities for necessary training. Of all, institutional support is extremely essential to develop an effective public engagement in various ways, including also media and news dissemination.

(5) *Breaking the barriers between multiple actors and stakeholders*

The city includes many urban systems, many sectors, and many actors and stakeholders. In the whole process of outbreak progression, we see the multiplicity of impacts and hence, we suggest a multi-sectoral approach that brings together a larger group of stakeholders. The many examples of country-level and city-level task force groups or control and prevention teams represent a team of diverse stakeholders. They usually operate to address the assessment and management of risks and threats and work in line with governmental strategies and context-specific requirements. Their primary role is also to feed directly to decision-making procedures made at a higher level of governance. This set-up is mainly developed to ensure the inclusiveness of decision-making procedures and to maintain healthy communications with multiple sectors or actors (inclusive of communities or community representatives). During the outbreak, the city management should create synergies between its operational and administrative units, increase its accountability, enhance public-private

partnerships, and develop a chance for more interactive opportunities of management and support. In doing so, the management should remain top-down but with the continuous objective-driven involvement of key stakeholders and actors. Therefore, all duties should be clear and any overlapping duties should be made redundant. By breaking the barriers through such an approach, we can simply strengthen the overall preparedness plan of resilience thinking.

(6) *Reducing fear, anxiety, and panic in the society*

It is essential to maintain the socio-economic stability of the city. The roles of government and governance should be clear as they are the representatives of both preparedness and responsiveness. The dissemination of information or updates should be formal yet reassuring, reflecting on educating society and making them more resilient. To reduce the fear in society, the city has to maintain its necessary support through our four dimensions of operations, institutions, services, and supplies. The city should address any vulnerabilities through a robust prioritisation plan, and reduce the possible uncertainties that may create more anxiety. In this regard, we have to take an educational approach to avoid any misinformation, and we have to sustain communication on all measures to ensure the society is aware and in full compliance with the procedures. According to the guidelines of Glass and Schoch-Spana (2002, p. 219) on vaccinating the city against panic, extracted steps for implementation should be for the general public to "*recognise that panic is rare and preventable*", which should be disseminated positively and constructively to the general public. The role of public policy is ever important to ensure public information is released timely and is accurate with adequate instructions of protective measures. The approach should also include methods that go "*beyond the hospital for mass-casualty care*" such as plans for home-based patient care and infection control, development of community-wide response to deal with mass casualties, involve alternative care providers, and use micro-level measures to detect and identify patients, provide information and therapies, and provide access to treatment for all (ibid). Lastly, it is recommended to provide accurate information, which is recognised to be as important as providing medicine (ibid), including: *"(1) plan a health communication strategy that empowers the general public, (2) produce multi-lingual and culturally relevant health information, (3) educate the educators; make use of local spokespersons to disseminate information, and (4) be timely and forthcoming with information about the limited of what is known*". In sum, to support the city overcoming its immediate shocks, we have to create participatory decision making processes to ensure the general public is fully on board, fully informed, and fully prepared against any adversities.

(7) *Welcome external support with careful monitory*

This recommendation may seem unacceptable for many city authorities, but it is an essential matter that should be taken into consideration in the time of need. In the current epoch of extended trades and communications, the city may struggle to survive on its own for a long time. Therefore, it has to work closely with externalities that are essential to its operations, institutions, services, and supplies. Hence, it is important to maintain the supply and demand of the society and keep up the relations

to external bodies outside the city boundaries. If necessary, external support should be demanded as early as possible to avoid any eventual shortages or deficiencies in the containment and recovery processes. Through possible external support, the city has to address the needs of the society, such as supplies and services for medical needs (medicine, medical products/facilities, medical units, medical guides, etc.), supply chain needs, emergency units and workforces (i.e. in the case of high-level emergency or crisis), primary assets for services and operations, economic support to cover some of the losses, and the provision of any other primary products. This support, if needed and if taken, should be monitored carefully for safety checks, careful allocation, and proper use. The city authorities should realise the fact that the cityness of the city only exists in the larger network of cities and communities.

(8) *Maintain support from national guidelines and regional strategies*

Associated with the previous recommendation, it is recommended for the city to maintain support from national guidelines and regional strategies. At the regional level, the city needs to strategically maintain the safety and delivery of some of its primary amenities and supplies, such as food, water, energy, as well as regional productions that are important for the city and its communities. At the national level, the city has to follow the new and provisional guidelines—and some in the form of new regulations, new policies, and action plans, and then adapt and localise them to the needs of the city. This should be done in a reflective approach to ensure mandatory measures are in place and advisory notifications/suggestions are considered through a high level of multiple assessments. Through the regional strategies (i.e. at the possible level of province, state, county, or equivalent), the city should develop a set of emergency planning as well as prevention and safety measures. Through the national guidelines, the city has to evaluate and adapt general recommendations (or regulations) in the local context. The procedures should be kept formal and effective, and if needed, they should be taken forward at the multi-level governance. It is highly recommended to stop the potential competing effects of urban competitiveness with neighbouring rivals, and instead, focus more on regional-level support, regional production chains, and regionally implemented control measures. More importantly, it is at the local and regional level that essential strategies could be successfully implemented.

(9) *Consideration of adaptive planning*

By taking into account certain adaptive measures, it is recommended for the city to develop adaptive planning from the inception of the outbreak event, or as early as possible. This means that the relevant strategies developed for the action plan should be adaptable. Hence, they should follow the progress of the outbreak in a reflective approach. The conditions and characteristics of the outbreak in each phase should be assessed carefully as they should continuously be used for any potential alterations, amendments, and readjustments. It is critical that throughout the outbreak progression, we continue in a procedural way to ensure adaptability is part of the strategic planning and decision-making processes. In doing so, the city authorities could reflect on the realities of the city and its communities, such as the actual

resilience of the community, recognition of vulnerable groups/sectors/communities, conditions of the health system, socio-economic factors of the city, etc. We also need to do an adequate investigation of the disease itself, and how it may affect the daily operations of the city, how it influences the societal wellbeing, and ultimately what support or measures are then required to reduce those impacts and vulnerabilities. We have to evaluate the speed and mode of the disease transmission and adapt or develop new measures for further implementation. These should be phased properly, addressed reflectively, and developed comprehensively.

(10) ***Avoid prolonged stages of the outbreak progression***

As we recommend to respond to the outbreak progression procedurally, it is also recommended to avoid prolonged stages all through. Based on our earlier explanations, we identified six distinct phases of the outbreak progression, namely (1) identification, (2) response and containment, (3) transmission, (4) transition, (5) recovery, and (6) post-recovery (see Chap. 2, Sect. 2.2). During the course of outbreak progression, time is very crucial. In each phase, we recommend having a set of action plans, which could accurately address the specific issues of each stage. Any unintended delays could have adverse impacts on the effectiveness of our response to the outbreak conditions and progression. In the identification phase, we suggest to speed up investigation and research through the right channels. In the case of an outbreak, the government should be informed in the earliest possible time, and with the considerate use of scientific research and the experts' guidelines. In the response and containment phase, actions should be reflective and the relevant city authorities must provide immediate guidelines and precautionary measures. The society should be informed clearly and detailed guidelines should be provided. In the transmission phase, detection of cases, sustained transmissions, pattern(s) of spread, infected clusters, and affected communities should all be the priority. In this phase, mobility should be minimised and primary services/amenities should be protected. In the transition phase, potential risks and threats should be identified and managed with high-level control and monitory measures. Any reversing patterns should be identified and addressed immediately. In the recovery phase, the city may require more time to first contain the outbreak and then have gradual progress to recovery. It is also feasible to skip transmission and transition phases, which is recognised as a successful approach directly from containment to full recovery. In the final phase of post-recovery, the city requires time to heal and the society needs more support to recover. In all phases, we stress the importance of the position of people while we highly recommend avoiding prolonged stages. In doing so, the city authorities can prove to be responsive, reflective, and all-inclusive in saving the city in need. The exception cases are for intentional and well-planned delays in containment processes of response and containment phase and recovery phase. In both phases, we anticipate more planning and attempts to contain the disease outbreak.

6.4 For the City in Need

Apart from a set of practical guidelines on urban resilience and city management for the future outbreak events and their inevitable disruptions, this book also aimed to shed light on some of the realities. It highlighted the many deficiencies and flaws of our institutions, as well as the issues of many governments and societies. It also questioned the governance of multiple levels, and it interrogated some of our wrongly developed structures of political, social, and economic systems. The post-pandemic era of this recent COVID-19 outbreak must bring substantial readjustments, if not changes, to our systems. We have to reflect more cautiously and more responsibly on the realities and address them with better preparedness and responsiveness plans. We have to rethink our never-ending patterns of economic growth, and address the societal needs that are more essential for much healthier societies and more resilient communities. After all, as the highly-respected Mahatma Gandhi puts it well in his famous quote: "*The world has enough for everyone's need, but not enough for everyone's greed*". Hence, we have to truly understand how we have to restructure our societies more comprehensively, more inclusively, and more competently.

With the globe at a temporary halt, we have to realise how fragmented we have become with so many disputes and inequalities between nations, regions, races, communities, neighbours, etc. With so many scenes of ghost towns across the globe, we have to question the over-commercialisation of our cities. We have to question the specific globalisation trends that made us relying on false media and disconnect us from the realities, science, and excellent education. With many effective global initiatives and agenda in place, such as the sustainable development goals (SDGs), we have to understand that implementation alone is not enough, and we have to achieve what is the best for our societies. With so many entertainment industries facing temporary closures, this should become a moment to realise how much of our so-called normal lives have turned into some sort of entertainment and consumer-based activities, and perhaps often more than what we really need. With so many social disorders, we have to reflect on our education systems and realise what has gone wrong that has weakened the general public knowledge and attitudes of our societies. With so many inactions, we have to realise that when a man's act of worship is more important than the care he must have for his fellow citizens, then we may just be at the fall of humanity itself. With so many fictions against facts, we have to realise how vulnerable we can be that one disease outbreak could even bring the biggest economies to their knees. It could then put us all in a global economic crisis. With so many deficiencies in our capabilities and capacities in global health, we have to see huge paradigm shifts in our healthcare services and systems.

Furthermore, we have to learn from those successful examples, such as those persistent management models that were led by China, Singapore, South Korea, etc. (e.g. through the examples of early webinars and events that were specifically arranged to create a knowledge-share platform between countries/regions, and more). We have to realise that the inactions are not necessarily based on the failures of democracies, but are based on how effective the society plays their part in a collective

structure and how robust the governments play their parts in taking the lead. Then we have to realise the issues of misconduct and those that could have made us much stronger in our eventual preparedness and responsiveness plans. We have to remember that for some countries, the deployment of armies across the globe to make wars and kill other people appeared to be much easier than saving their own people inside their country boundaries during the disease outbreak. These failures have to be remembered, and we have to reflect on these realities with an open mind. This should help us to increase our awareness, willingness, and resilience. Finally, how could it be that in the name of humanity, many could not implement stronger measures? But then how could they, in the name of humanity, prioritise the economy against people's health and wellbeing? Undeniably, wellbeing comes with the economic values, but shouldn't they be dealt with through our stronger institutions to start with? Hence, the post-pandemic era ought to include many changes, and it will be more thought-provoking.

To sum, what we have left is a range of questions regarding the multiplicity of actions and inactions. What pragmatic or innovative reactions are the ones identified to be the most impactful in achieving early recovery of full containment? At the city level, how safety and security can be maintained during the outbreak progression? And to what extent of multiple sectors, can safety and security be maintained? In facing the longer degree of lost time and lost activities, the city's recovery phase may get postponed. It then becomes a major challenge to restart the operations, to get back to normalisation, and to minimise the impacts. The city and its communities may suffer from decline and lack of businesses and the afterward economic crisis. It will become a challenge to bring back the businesses on their feet and have the workforces back to gradual operations. While the city struggles to maintain the supply side of the economy, it has to keep the security and safety of its multiple stakeholders. But how exactly can the city cope with the extending list of measures that are put in place during the pandemic event? And how will it cope in a prolonged event that puts pressure on the resilience of communities, public health, economy, businesses, services, industries, etc.? With the many failures we experienced this time, will we be able to restructure our social and political systems? Will we be able to define and refine our economic systems? And will be able to strengthen the sense of global governance in the time of need? And if we are able to achieve any of these matters, or at least, reflect on them more prudently and more thoughtfully, what would be the new normals? And how would they play out to replace some of our outdated and perhaps unsustainable business-as-usual practices? In the continuing events, there are many uneventful instants, many dynamic moments, and many who are no longer with us. We witnessed many devoid of actions and compliance, we noticed growing insecurity and unfairness, and we came to the recognition of many attempts towards recovery and stability. Some temporary provisions may become permanent, and some may simply cut the automation $\rightarrow$ unemployment $\rightarrow$ endless economic growth $\rightarrow$ global unsustainability knot!

If there is anything that could be done to help the city and make it any safer, nobody should hesitate by all means. If we all believe in this principle, then we could have a much stronger society. In facing the disease outbreak, the city needs

the support of all stakeholders, particularly the government and society. Hence, we certainly need to acquire resilience both individually and collectively. It is evident that through the experiences of the recent outbreak, the government and society are simply the driving forces of resilience enhancement and city management. The recent COVID-19 outbreak scrutinises many issues related to our health systems, our global economy, our people, our resilience, our management, our mistrust, our international relations, and our behaviours. It also sheds light on many negative factors, such as our acts of racism, our neglect, our irresponsible behaviours, our acts of misinformation, our misjudgement, our lack of knowledge, our vulnerable societies, our weak infrastructures, our delicate cities, and our fragile relations. All of sudden, all these together felt like a major test of humanity. It then brought some key questions that how resilient are we? How prepared are we? How could we respond more promptly? And will this be the right time to revisit our beliefs?

At first, China was an easy target to receive the blames, but as time progressed, it was evident that China responded more effectively than ever; and also perhaps better than the others. The disease could have started anywhere else, as in many previous events; but the way we ought to respond to the situation should not make any difference to what is required in the best possible way. Many communities suffered throughout these few months, and many will continue to deal with the adversities for some time. China and many other countries went through some unprecedented situations, but none may be similar to what Wuhan and its people experienced.

For the majority, life became so static all the sudden and time became meaningless. But for those who suffered directly, lost their loved ones, or fought the disease at the frontline, life was never more dynamic. We learned how to remain individual, we learned how to care about the others, and we learned the ups and downs of disruptions. All these changed our lifestyles, and we had to adapt ourselves to the ever-changing conditions on a daily basis. For many, this became a living nightmare, for many it was time for anxiety and fear, and for the majority, it was just an unprecedented experience. In this process, we lost many of our social values, and then we remembered that we are more individual than social. This outbreak changed our perceptions and made us realise how vulnerable and how fragile everything is; and how weak(er) we could become if the outbreak was more severe than what we experienced this time. Despite all these, we have to reflect on the realities around us, and then evolve intellectually to become more resilient.

At the time when social distancing became a norm, we realised the lack of adaptability in our presumed cultural and social needs. We realised what has become a normal lifestyle is simply not sustainable. We realised what we often can do is overlooked by our actions and inactions. We also realised that organising our social and political systems are ever important. And in these realisations, we hopefully became aware of our unsustainable patterns of production and consumption. After all, with or without us, life will go on!

At the time this book is completing, China has passed through its peak of the outbreak under the shadow of future waves of the outbreak, several other countries are upsettingly struggling in different regions, the number of cases is increasing rapidly in Europe, South America, Southeast Asia, North America, and the Middle

East, there are major worries about poorer or more vulnerable nations of the global south, the spread is continuing globally with many travel bans and restrictions, many cities and regions are under full lockdown, many borders are closed, there are signs of longer-term economic crisis, and the race for vaccine development is ongoing. It is important to note that many of these issues could have been averted or curtailed if we acted more promptly and much robustly. Also, these could have been evaded with better resilience and management. Clearly, there were also signs of many earlier neglect and inactions. By the time this book is published, we hope we have passed through some of these adversities and remember how to be well prepared and how to respond more effectively next time. This book should be available as a general guide, and should reflect on some of the realities we experienced this time. In the future, it is very likely for us to have more outbreak events and it is likely that we have to reflect on these days more thoroughly and thoughtfully. The city will survive and we have to remain as resilient as we can. We may need to face similar situations in the future, and once again, we have to find the right ways to save the city in need.

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