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RTPI Research Paper

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URBAN PLANNING AFTER COVID-19

Supporting a global sustainable recovery

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The Royal Town Planning Institute (RTPI)

RTPI champions the power of planning in creating prosperous places and vibrant communities. We have over 25,000 members in the private, public, academic and voluntary sectors across over 80 countries.

Using our expertise and research we bring evidence and thought leadership to shape planning policies and thinking, putting the profession at the heart of society's big debates. We set the standards of planning education and professional behaviour that give our members, wherever they work in the world, a unique ability to meet complex economic, social and environmental challenges.

About this paper

This paper examines how planning can contribute to the calls for a sustainable, resilient and inclusive recovery from the current health and economic crisis. It reviews the impacts of the Covid-19 pandemic across the themes of housing, urban production and consumption and travel in global cities and reflects on their implications for fostering a just, inclusive and sustainable recovery. This paper complements our ongoing work to understand how planners are responding to the challenges presented by the Covid-19 pandemic and our engagement with the COP26 summit.

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Front and back cover image

Urban mangroves in Recife. Photo credit: **Portal da Copa - Governo Federal do Brasil** on **Wikimedia Commons.**

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Foreword

Since the modern planning profession was formulated more than 100 years ago, there is no other time like now when the profession has attracted so much attention globally. Society is realising that how our living environment is planned has a direct influence on people's daily activities and their health and wellbeing.

In 2020, the RTPI launched our major campaign in the UK – Plan the World We Need. The campaign and its supporting paper brought confidence to society and illustrated a positive roadmap on how the planning profession can contribute to a sustainable, resilient, and inclusive recovery from Covid-19.

I am proud that now we have produced this globally focussed research paper - *Urban Planning after Covid-19: supporting a global sustainable recovery*. It complements our ongoing work to understand how planners are responding to the challenges presented by the Covid-19 pandemic and our engagement with COP26.

The paper reflects on the current situation, and more importantly highlights what needs to change. At this critical moment in history, planners are at the forefront to help create a better future for our society. We encourage other forces to positively engage with planning to tackle the grand challenges of our times together, through a place-based systems approach.

I am full of hope for our profession. I look forward to seeing the full potential of the planning profession to be unlocked to plan the world we need.

Dr Wei Yang FRTPI
RTPI President

October 2021

Executive Summary

The loss of lives and the economic downturn caused by the Covid-19 pandemic should be turned into an opportunity to radically rethink how we live and plan our cities and communities. Our plans need to dramatically accelerate progress to a low-carbon economy, and ambitiously aim for carbon negative communities that host higher levels of biodiversity. They need to increase resilience, decrease risks, and be fair, healthy and inclusive while creating shared prosperity. At this critical moment in time, this paper reflects on the current situation, and what needs to change to deliver on those objectives.

The introduction summarises growing calls for a green and inclusive recovery, and why planning is essential for delivering change on the ground. It explains how planning originated as a public health intervention and has since evolved into a unique approach for targeted place-based interventions. As the recovery gains pace, planning approaches based on both local and global systems-thinking will be critical for directing investment to solutions which balance economic, social and environmental objectives.

In many places, a generalised lack of joined-up planning between infrastructure, land-use and housing, and low levels of strategic planning across subnational governments, have been compounded by low investments. The world has seen the gap between successful and struggling places widen. The Covid-19 pandemic has layered new challenges onto these existing vulnerabilities, exposing weaknesses across the built environment that undermine resilience to shocks. As the climate crisis progresses, such lack of capacity and investments is expected to affect the poor and vulnerable most. It is also expected to put the sustainability of public and private investments increasingly at risk. **Chapters 1 to 3 examine the impacts of Covid-19 on communities and their built environments and consider emerging issues for reshaping cities and planning approaches across three themes:**

- **Housing, health and wellbeing:** The disproportionate impacts of Covid-19 on vulnerable groups - such as slum dwellers, ethnic minorities, older people living in deprived neighbourhoods – show that the provision of adequate, connected, low carbon and truly affordable housing is a primary objective to increase the global resilience to pandemics and prevent future loss of lives and economic shocks.

- **Economic sectors, production and consumption:** Covid-19 has caused changes in lifestyles and consumption patterns as well as changes to the economic landscape - such as the loss of employment in at-risk sectors and growth in others. These indicate that parts of the economy have the ability to adapt – e.g. teleworking, online services - making future shocks less impactful, while others – e.g. logistics, food - will need support, investments and planning.

- **Travel and urban infrastructure:** Lockdowns have highlighted spatial economic and social cleavages in cities and unequal accessibility. The adaptation of urban space to enable walking, cycling and the continuation of key activities with social distancing show that innovative transport and land use planning can reduce the demand for travel and foster community cohesion and resilience.

Observations across these strands show that, in a global economy still fragile and confronted with heightened public spending and pressing social and environmental challenges ahead, the global investments needed to decarbonise buildings and transport and make the flows of materials and energy in cities sustainable can be at risk. This can delay the progress towards emissions reduction targets and setting ambitious global biodiversity targets[1]. Recovery packages must be carefully designed and deployed.

To assist this process, governments should complement capital investment and support for individuals and businesses with the necessary resources and tools to plan effectively for an inclusive and green recovery, at a range of scales with a focus on left-behind places and communities - such as informal areas and global secondary cities and towns. They should also view local and strategic urban plans as key mechanisms for directing stimulus measures towards place-based solutions. Chapters 1 to 3 contain key priorities for a place-based recovery, across three themes:

Housing, health and wellbeing	• **Tackling place-based inequality:** Delivering affordable and adequate housing in the right locations, regenerating deprived areas and upgrading informal ones for the benefit of existing communities and vulnerable newcomers and improving access to key services, amenities and infrastructure.
Enabling a green industrial revolution:	• **Enabling a green industrial revolution:** Building on changes of consumption patterns during the pandemic, actively planning for the growth of sectors which deliver drastic and rapid emission reductions, environmental gains and jobs, while helping places adapt to shifting economic and labour markets.
Travel and urban infrastructure	• **Ensuring inclusive connectivity through low-carbon infrastructure:** Integrating temporary active travel measures into strategies which lock-in behaviour change, support integration of deprived areas and plan for the growth of public and shared transport. New infrastructure can be used as an opportunity to deliver complementary broadband, smart grids, etc. and guide sustainable land development.

[1] United Nations Environment Programme (UNEP) (2021) *First Draft of the post-2020 Global Biodiversity Framework – note by the co-chairs*. Convention on Biological Diversity/ Working Group 3, 5 July 2021. Nairobi: UNEP.

Achieving these objectives will require plans to co-ordinate actions and investments by the international community, national governments, investors, etc. It will also need a re-imagining of the purpose of planning, which goes beyond purely statutory and regulatory functions, or a narrow zonal system, to embrace systems-thinking focussing on the global implications of local materials and energy use, as well as place-based rehabilitation and sustainability.

The Conclusion will sum up emerging themes for planning and approaches that can support a holistic recovery: supporting local leadership to link the recovery to far-reaching climate action, enabling an effective and direct engagement with vulnerable communities, collaborating across geographical and sectoral boundaries, developing metrics to assess decision about the future based on sustainability and inclusivity, using data and digital technology to further inclusion.

Introduction

A health and economic crisis

The Covid-19 pandemic has caused a huge amount of suffering around world, from both the impact of the virus and the necessary measures to control its spread.

During the response to the pandemic, in many countries the role of the State in supporting the economy has become prominent with the widespread use of stimulus packages, wage subsidies and direct payments to households. These were designed to 'rescue' individuals and businesses through what was assumed to be a period of temporary disruption. These have been adjusted and expanded as the pandemic continued.

In May 2020, in Japan public spending had exceeded 20% of GDP[2]. In the UK, it is expected to exceed £ 400 billion by spring 2022[3]. Ambitious recovery packages have been announced or agreed for advanced economies, which are likely to have effects globally: the US has launched a recovery package of about $ 3 tn[4] and the EU one of over € 2 tn[5].

Despite the current generalised growth as national economies emerge from the shock of last year's restrictions, forecasts are now grappling with uncertainty about the global economic outlook. Key variables include the ability to vaccinate the global population, the length of the vaccines' effectiveness, the protection they warrant against new variants as well potential subsequent waves

[2] BBC (2020). *Coronavirus Bailouts: Which Country has the most Generous Deal?* Accessed at **https://bbc.in/3azaroY** on 12-8-2021

[3] Office for Budget Responsibility (2021). *Economic and Fiscal Outlook – March 2021*. Accessed at **https://bit.ly/3DDrv9R** on 16-9-2021.

[4] The New York Times (2021). *Biden Team prepares $3 Tn in New Spending for the Economy*. Accessed at **https://nyti.ms/3ADlFmV** on 16-9-2021.

[5] European Commission (2021). *Recovery Plan for Europe.* Accessed at **https://bit.ly/3lDzoWv** on 12-10-2021.

of infection, and the psychological impacts on behaviour.

Even if the global economic activity recovers throughout the next years, the wider impacts will be severe and will be compounded by the increasingly pressing challenges of effectively combating climate change and biodiversity loss.

Governments are approving packages that look beyond the short-term challenges of the pandemic. For example, in the UK recovery packages have targeted specific sectors, with a greater focus on value for money[6], accompanied by measures to address the deficit, including tax rises and spending cuts[7].

However, these measures present risks for future resilience if they are not geared up to support the most vulnerable. For example, in the UK, a reduction in Official Development Assistance (ODA) to eligible countries and a regressive Health and Social Care tax have been described as potentially leading to higher levels of risk in case of future shocks[8]. The following decades are likely to see further risks from extreme weather and the deterioration of ecological systems, which will disproportionately affect the most vulnerable in society. Failing to address the globally and locally unequal impacts of the pandemic and of the climate and biodiversity emergency are likely to result in an increased vulnerability going forward.

Many countries have now less than 30 years left to meet their legal requirements to reduce greenhouse gas emissions to net-zero, a target which many prominent climate scientists already assessed as insufficient in 2019[9]. A rapid transition will require structural changes to the economy and new ways of living and working.

In the aftermath of the 2008 global financial crisis, recovery measures saw massive injections of liquidity to prop up the economy, followed by a decade of austerity. In the UK, during this period, high levels of borrowing saw house prices inflate beyond average incomes, while wages stagnated and vital public services were cut[10] - a pattern similar to that of many other places around the world. This created economic and social fragility, which has undermined resilience to the current pandemic.

This recovery must be different: with no alternative but to rebuild in a way that creates a more sustainable, resilient and inclusive society. A failure to act now will defer costs to future generations and the most vulnerable, with the tangible risks of a climate and ecological breakdown to a weak economy and society becoming potentially unmanageable in scale and complexity[11].

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[6] Institute for Government (2020). *Bailout for business after coronavirus*. London: Institute for Government.

[7] Financial Times (2020). *Treasury paper sets out stark UK options to cut estimated £337bn deficit*. Accessed at **https://on.ft.com/2YLCGPb** on 12 May 2020.

[8] Overseas Development Institute (ODI) (2021). *The Three Myths Underlying the Vote on the UK's ODA Cuts*. Blog accessed at **https://bit.ly/3v9kCKu** on 20-7-2021.

[9] The Guardian (2019). *Climate crisis: 11,000 scientists warn of 'untold suffering'*. Accessed at **https://bit.ly/3p72tfr** on 12-05-2021.

[10] United Nations Human Rights Office of The High Commissioner (2018). *Statement on Visit to the United Kingdom, by Professor Philip Alston, United Nations Special Rapporteur on extreme poverty and human rights*. Geneva: OHCHR.

[11] Stern, N. (2007). *The Economics of Climate Change: The Stern Review.* Cambridge: Cambridge

Cities and the climate and ecological crisis

The UN 'Paris agreement', adopted in 2015, sets out to limit global warming to well below a 2 C temperature increase above pre-industrial levels. In 2018, a UN review of global efforts towards cutting emissions warned that efforts needed to be scaled up very ambitiously to meet that target[12]. The latest science warns that we should be aiming to keep warming below 1.5 C if we are to avoid the worst climate change impacts[13].

It is widely recognized that impacts will be unequal. Globally, man-made climate change will disproportionately affect poorer countries and more vulnerable communities. The World Bank estimates that climate change could pull over 100m people into poverty by 2030, with a rise in malaria, diarrhoea, and stunting and the effect of increased food prices projected to be responsible for most of the impacts[14].

As well as a climate emergency, we are also in the middle of an ecological emergency. These are connected and should be addressed together.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report has warned that around 1m animal and plant species are now threatened with extinction, many within decades, more than ever before in human history. Losses of intact ecosystems have occurred primarily in the tropics, home to the highest levels of biodiversity on the planet. 100m ha of tropical forest were lost from 1980 to 2000, mainly to cattle ranching in Latin America (about 42m ha) and plantations in South-East Asia (about 7.5m ha, of which 80% for palm oil)[15]. Many of these land use changes have been in response to increased consumption by more affluent and growing urban middle classes[16].

The IPBES Report also indicates that half of the targets under the SDGs related to poverty, hunger, health, water, cities, climate, sea and land wildlife are being undermined by substantial negative trends in our ecosystems. The 'Aichi' biodiversity targets, agreed the UN Convention on Biological Diversity in 2010, have also not been met a decade on[17], making the loss of biodiversity a grave developmental, economic, security and social issue.

The 2020 report on the progress on the achievement of the Sustainable Development Goals highlights that the world is not on track to meet the sustainability goals set out by SDGs 7 to 9

University Press

[12] UN Environment Programme (2018). *Emissions Gap Report*. Nairobi: UNEP

[13] Inter-governmental Panel on Climate Change (IPCC) (2021). *Sixth Assessment Report.*

[14] World Bank - Climate Change Group & Global Facility for Disaster Reduction and Recovery (2020). *Revised Estimates of the Impact of Climate Change on Extreme Poverty by 2030.* Policy Research Working Paper 9417. Washington: World Bank Group.

[15] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem (IPBES) (2019). *Global Assessment Report on Biodiversity and Ecosystem Services*. Bonn: IPBES.

[16] A. Regmi and J. Dyck (2001). *Effects of Urbanization on Global Food Demand*, in A. Regmi *Changing Structure of Global Food Consumption and Trade*. Washington: USDA.

[17] New Scientist (2020). *'Massive failure': The world has missed all its biodiversity targets.* Accessed at **https://bit.ly/3j26e1z** on 12-09-2021.

(energy, infrastructure and economic growth resulting in decent work) and SDGS 12 to 15 (sustainable consumption and production, climate action and protection of wildlife)[18]. In 2019, most countries were not set to meet their commitments under the 'Paris agreement' to reduce greenhouse gas (GHG) emissions either[19].

Cities are large contributors to GHG emissions, according to some estimates emitting more than 60% of the total. They also account for 40 to 70% of energy consumption and produce vast amounts of solid waste[20]. At the same time, hundreds of millions of urban dwellers are at risk from more severe or frequent storms, floods and heatwaves, constraints on fresh water and food supplies, and higher risks from a range of water-borne, foodborne and vector-borne diseases[21].

Besides hosting most of the global population and being nodes in the global webs of material production and consumption, cities are also hubs of cultural production and behavioural change[22]. Among the UN Sustainable Development Goals (SDGs), SDG11 Sustainable Cities and Communities is among those with most linkages with other SDGs and least trade-offs, making urban strategies and interventions a strategic avenue for fostering global sustainability[23].

The pandemic has affected the delivery of low carbon energy and infrastructure provision in low-income countries and risks considerable setbacks everywhere in the shadow of an economic recession. However, the recovery process also offers an opportunity to boost resilience to the impacts of climate change across countries and drive fair socio-economic development while addressing the climate and biodiversity crises. Radically changing how cities work, consume and produce can have positive cascading effects at a planetary scale.

However, subnational governments, who are key players in addressing these issues are chronically underfunded in many places around the world. As a result, during the pandemic, they have had different degrees of effectiveness in the response. Shortcomings have prompted debates on the withdrawal of devolved powers granted to lower tiers of government over public health measures. Italy[24] and Germany[25] have de facto re-centralised devolved powers to decide public health measures. Following the first wave of the pandemic, India's Finance Commission has

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[18] United Nations (2021). *The Sustainable Development Goals Report 2020*. New York: UNDESA

[19] Fundacion Ecologica Universal - US (FEU-US) (2019). *The Truth Behind the Climate Pledges.* Arlington: FEU-US.

[20] UN (2020). *Cities and Pollution*. Accessed at **https://bit.ly/3p2RqUc** on 11-7-2021.

[21] Inter-governmental Panel on Climate Change (IPCC) (2014). *Urban areas*. *- Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects.* In IPCC (2014). *Fifth Assessment Report*. Geneva: IPCC.

[22] Cultural production in cities was the overarching theme of the 10th session of UN-Habitat World Urban Forum addressing the delivery of the SDGs through sustainable urbanisation. UN-Habitat (2020), *Report of the 10th Session of the World Urban Forum*. Nairobi: UN-Habitat.

[23] Fonseca L. M. et al. (2020). *Mapping the Sustainable Development Goals Relationships* in Sustainability, vol 12, n. 3359.

[24] Il Sole 24 Ore (2020). *Coronavirus, Lockdown Locali: ecco some si puo decidere la chiusura di una regione*. Accessed at **https://bit.ly/3FN35wj** on 11-05-2021.

[25] Deutsche Welle – English (2020). *COVID response: What the German federal government's new powers mean*. Accessed at **https://bit.ly/3j2LhDU** on 11-05-2021.

discussed a reduction of devolved powers and a decrease of the states' budgets[26]. In Kenya, the pandemic struck at a time when the Government was delivering urban institutional reforms at city level[27]. Covid-19 might result in a trend of diverting funding and political will from devolution efforts and in arrangements that weaken the local ability to deliver a sustainable future.

The EU recovery package, Next Generation EU, is designed to support subnational governments. Within that framework, many countries, such as Germany, plan to use funds to support city governments[28]. However, in many places, including the US, key recovery funds are not directly available to sub-national governments[29]. Analyses of the global finance climate flows that are meant to operationalise the 'Paris agreement' show that those targeting climate action in cities are significantly falling short of need[30].

Cities and towns and their governments are at the forefront of current emergencies. City governments often have closer relationships with their businesses, residents, and institutions than national ones, allowing new policies to be implemented more effectively. They are also often responsible for planning functions that are key to both mobilising resources, redistributing land value uplifts and delivering inclusive place-based solutions which communities can influence, co-produce and own.

A sustainable, resilient and inclusive recovery

A growing number of people and organisations is calling on governments around the world to plan for a recovery from Covid-19 that meets long-term economic, social and environmental objectives in ways that are fair and inclusive across wealthier and poorer communities and countries. The sentiment is reflected in numerous articles, letters, declarations and resolutions, many using the catchphrase 'build back better'[31].

These voices include UN agencies, international non-governmental organisations, business leaders, economists, charities, civil society, religious groups and many others. They recognise that the challenges facing the world require strong government intervention alongside ambitious market-driven solutions, and share a sense of urgency, as the window for positive action narrows. Many contain a plea to listen to the evidence of scientists and take worst-case scenarios very seriously.

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[26] Press Information Bureau – Government of India (2021). *Recommendations of the 15th Finance Commission (February 2021) – Press Release.* Accessed **https://bit.ly/3BIVc8Y** at on 12-04-2021.

[27] World Bank Group (2021) *Urban Institutional Reforms Transform Service Delivery to Kenyans in Municipalities*. Accessed at **https://bit.ly/3oX45bs** on 12-10-2021.

[28] Organisation for Economic Co-operation and Development OECD (2020). *The territorial impact of COVID-19: Managing the crisis across levels of government.* Paris: OECD.

[29] Brookings (2020). *Federal fiscal aid to cities and states must be massive and immediate*. Blog accessed at **https://brook.gs/3mXlrlV** on 15-06-2021.

[30] Climate Policy Initiative (CPI) (2021) *2021 State of Cities Climate Finance*. Washington: CPI.

[31] For example, United Nations (2020) *COVID-19 and Human Rights – We are all in this together. Policy Brief.* New York: UN Headquarters.

When looking across recommendations for the recovery, common themes emerge which have implications for planning and the built environment:

- **Inclusivity and fairness:** Creating healthy and equitable places by mobilising sufficient global climate finance and targeting the most vulnerable in society; addressing regional inequalities and geographical vulnerabilities (e.g. Small Island Developing States (SIDS)); and improving institutional capacities and processes for democratic participation in spatial decisions about the future.

- **Sustainability and restoration:** Accelerating progress towards a low-carbon economy investing in planned urban regeneration, informal area upgrades and sustainable urban expansions by decarbonising heat and transport through context-appropriate technology; investing in reliable and smart energy grids and low-cost renewable energy and supporting resource substitution and ecologically restorative land use management; supporting skills, training and job growth in the above while avoiding investments and bailouts which are incompatible with global sustainability.

- **Resilience and adaptation:** Future-proofing communities and infrastructure to climate risks by providing safe affordable homes and multi-functional urban spaces that enhance economic, social and environmental resilience; supporting capacity for inclusive planning with the urban poor and vulnerable - such as the displaced - and moving towards urban economies that operate within planetary boundaries and place greater value on health, wellbeing and resilience.

Calls and recommendations in this sense come from the European Union[32], UK Committee on Climate Change[33], UN Inter-governmental Panel on Climate Change (IPCC)[34], the UN Inter-governmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES)[35], the Organisation for Economic Co-operation and Development (OECD)[36], the UN Development Programme (UNDP) and the Asian Development Bank (ADB)[37], UN-Habitat[38], the World Bank[39]

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[32] European Commission (2021) *Next Generation EU - Recovery Plan for Europe*. Brussels: EU Commission.

[33] Committee on Climate Change (2020). *Reducing UK emissions: 2020 Progress Report to Parliament*. London: CCC.

[34] Inter-governmental Panel on Climate Change (IPCC) (2021). *Sixth Assessment Report.* Geneva: IPCC.

[35] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem (IPBES) (2020). *Special Report: Nature's dangerous decline is unprecedented, but it is not too late to act*. IPBES.

[36] Organisation for Economic Co-operation and Development OECD (2020). *Building back better: A sustainable, resilient recovery after COVID-19*. Paris: OECD.

[37] UN Development Programme (UNDP) and Asian Development Bank (ADB) (2020). *Responding to the COVID-19 Pandemic: Leaving No Country Behind.* New York: UNDP.

[38] UN-Habitat (2020). *Sustainable urbanization critical to COVID-19 recovery, better quality of life.* Accessed at **https://bit.ly/3FPmCMQ** on 9-9-2021.

[39] Zachariadis T. et al. (2020). *"Building Back Better" in Practice. A Science-Policy Framework for a Green Economic Recovery after COVID-19*. Policy Research Working Paper n. 9528 Washington: World Bank

and many others. The desire for change is also reflected in public opinion. For example, in the UK, polls suggest that only 9% of Britons want life to return to 'normal' after the pandemic is over, with more than half of respondents hoping to make changes in their own lives and for the country to learn from the crisis. 60% would like the government to pursue health and wellbeing over economic growth after the pandemic has subsided[40].

Re-imagining planning

Modern urban planning was conceived during the 19th century as a public health intervention, responding to the spread of disease through overcrowded slums. Most European and North American current systems were designed or adapted to help countries recover after the devastation of World War II and the economic downturn that followed.

Through colonialism, planning systems spread through many countries, particularly in Sub-Saharan Africa, to serve the objectives of resource and value appropriation by colonising powers such as Britain. However, in the decades that followed the end of colonialism, in many countries planning systems evolved to reflect national democratic objectives: improving access to public and open spaces, setting standards for high quality and affordable housing, protecting natural and cultural assets, and shaping neighbourhoods to provide local services, access to infrastructure and transport. The RTPI Awards for Planning Excellence champion these achievements internationally[41].

While planning has a critical role to play in the recovery, it has become increasingly difficult to consistently achieve its objectives[42]. Part of this is due to the complexity of planning in a globalised world, characterised by 'wicked problems' such as uneven technological disruption, different demographic changes across global regions, rapid urbanisation and the climate and ecological crises. Solutions in one area can create unpredictable challenges in another, as demonstrated by current public health interventions and their effects on the economy.

But another problem is a loss of faith in the *concept of planning*. Over recent decades, governments and global institutions have increasingly favoured market-led solutions to key challenges: whether that be to stimulate innovation and economic productivity, tackle the housing crisis, or cut carbon emissions. Government expenditure was thought to displace private sector activity, with the role of the national financial institutions limited to balancing the books rather than investing in public value, often as a condition to access international credit.

Proponents of this view tend to perceive planning as a tool for managing the negative impacts of land use change and market-led development: a reactive function, rather than a positive way to

Group.

[40] Positive Money (2020). *New Polling: only: 12% Want the UK to Prioritise Economic Growth Over Well-being.* Accessed at **https://bit.ly/3BHfHD3** on 11-05-2021.

[41] For information on our awards see our website. Royal Town Planning Institute (RTPI) (2021). RTPI Planning Awards. Accessed at **https://bit.ly/2YOvroY** on 11-09-2021.

[42] The issues outlined in our UK-focussed research 'Delivering the Value of Planning' are similar to those observed in may naitonal planning systems. Royal Town Planning Institute (RTPI) (2016). *Delivering the Value of Planning.* RTPI Research Report 15. London: RTPI.

direct change. With this narrow perception, planning has been perceived as a barrier to continued growth, which can be temporarily scaled back during times of crisis. By narrowing its scope, it became easier to assert that planning is unable to address complex, global challenges: a self-fulfilling prophecy[43].

Even after a faith in market-driven approaches was shaken by the global financial crisis, the following decade saw the capacity for proactive and visionary planning further diminished by austerity and deregulation. City and-subnational governments saw disproportionate cuts, including in their planning departments, and planning services became dependent on the goodwill and professional integrity of officers which made planning processes more vulnerable to pressure and corruption[44]. Planning became more formulaic and litigious, with a focus on short-term financial gains, less effective public engagement and strategic coordination, and fewer powers to ensure delivery[45].

The capacity for innovative, proactive and fair planning is unevenly distributed across regions, countries and cities. Over multiple decades, a reliance on market-based solutions reduced planning to a reactive and regulatory tool for stimulating and steering generalised urban and economic growth, instead of managing and directing it. Prosperous cities and urban areas have reinvested some of these proceeds into better planning, attracting the investment needed to enable sustainable development, address inequality, boost resilience and cut emissions. But struggling regions - including low-income countries and regions affected by de-industrialisation - have lost valuable tools to shape their future. In that time, many new poor and vulnerable communities have been formed - namely large urban informal settlements - which have often been overlooked by planners. In some contexts, poor planning has even had negative outcomes in such settlements.

Because of a loss of confidence in our ability to plan, society has not yet fully absorbed the lessons learned from the 70s onwards when the 'limits to growth'[46] where first understood. We have not yet shaped planning as a tool to help ensure that economic activities create shared prosperity while staying within the ecological boundaries of the planet.

Good planning balances competing demands and interests over land development with a view to achieve sustainability and redistribute land value uplifts to advance environmental, social and economic objectives in the public interest. It does this by protecting ecological assets, while providing new services and infrastructure, public space, affordable housing etc. Investment and innovation in planning should focus also on delivering net-zero carbon transport and communities, ambitiously aim at making them carbon negative as well as reducing waste, facilitating resource regeneration and substitution and enabling ambitious biodiversity restoration.

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[43] Harris M. (2019). *A Future for Planning.* London: Routledge and RTPI

[44] See provisional findings and interim reports of the ongoing research on planners' professional integrity in South Africa and Zambia. *Cities of Integrity: Zambia and South Africa*. Accessed **https://bit.ly/30giNzR** at on 11-9-2021.

[45] For the UK, see the RTPI research reports: Royal Town Planning Institute (RTPI) (2018) *Investing in Delivery* London: RTPI; Royal Town Planning Institute (RTPI) RTPI (2019) *Serving the Public Interest? The Reorganisation of UK Planning Services In An Age of Reluctant Outsourcing*. London: RTPI.

[46] Meadows D. et al (1972). *The Limits to Growth.* Washington: Potomac Associates Books.

Our plans must be holistic in nature, support the systems that sustain and regenerate planetary resources and bolster the social and economic connections among people that allow communities to thrive economically and make the stewardship of natural resources possible. They also should be able to mobilise economic resources for delivery.

However, the impacts of Covid-19 have placed a huge financial burden on the organisations responsible for planning functions, coupled with a loss of income. As Covid-19 creates new complexities, the international community and financial institutions must work effectively with national and sub-national governments to strengthen innovative and strategic planning and shift from growth management to directing investments towards sustainable practices. We must strengthen and invest in planning for the recovery by building capacity for critical place-based systems-thinking. This will enable local and strategic plans to set ambitious visions which direct stimulus measures towards solutions addressing the challenges and opportunities outlined in this paper and improve inclusivity, sustainability and resilience across cities and towns.

1. Housing, health and wellbeing

1.1. Observations

Demographic and geographical variations in vulnerability to Covid-19

Covid-19 has had different impacts across world regions, countries, and sectors of society. Data shows that the majority of Covid-19 deaths have been recorded in people with underlying conditions. Related to this is age: In the UK most deaths were among people aged over 70[47]. However, vulnerability is also related to place-based exclusion and poverty, which can affect fair access to essential services as well as health and wellbeing.

At the onset of the pandemic, the impact of Covid-19 has been more felt in globally connected urban areas where the virus entered a country first, leading to concerns that the density of inhabitants in large cities might be associated with a higher risk of contagion and death. However, an analysis by UN-Habitat shows that mortality rates from Covid-19 in global cities are not related to their population's size, and infection rates have been higher in cities with lower population density in the sample[48].

Place-based inequality and exclusion are predictors of Covid-19 impacts. The most affected areas in cities such as New York[49], Singapore[50] and Paris[51], were characterised by overcrowded housing

[47] Public Health England (2021). *COVID-19 Confirmed Deaths in England (to 31 January 2021)* (report Updated 12 October 2021). London: PHE.

[48] UN-Habitat (2021) *Cities and Pandemics: towards a more just, green and healthy future*. Nairobi: UN-Habitat.

[49] Politico – New York (2020). *New York City's Most Crowded Neighborhoods Are Often Hardest Hit by Coronavirus.* Accessed at **https://cutt.ly/ZRhgnlg** on 12-9-2021.

[50] IOM – Migration Data Portal (2021). *Migration data relevant for the COVID-19 pandemic*. Accessed at **https://bit.ly/3ACvYHP** on 7-9-2021.

[51] Medecins Sans Frontieres (2020). *High COVID-19 Rates Found Among People Living in Extreme*

and a presence of poorer and more recent migrants - rather than being more densely built. Age, deprivation, overcrowding and other factors concur in determining vulnerability. In Sub-Saharan Africa, where overcrowded informal settlements host the majority of urban dwellers, only 2% of the population is over 70 years old[52]. This seemingly explains a lower impact of the pandemic on Africa even though a lack of reliable data might conceal a higher death toll than the official one[53].

As the virus spread across the population in towns and rural areas in the EU and the US many deaths were associated with health conditions which are markers of social deprivation, such as chronic cardiovascular disease or obesity[54]. Globally, ethnic minorities tend to suffer from diseases linked to material deprivation and are being disproportionately affected. While the causes are complex, the impact of Covid-19 on different places and people suggests that historical patterns of discrimination are perpetuated in current health inequities[55]. For example, in the UK, those living in more deprived areas were more than twice as likely to die from Covid-19 as those in less deprived areas[56]. Black Britons are almost twice as likely to die from Covid-19 as white Britons, while British Asians are around 1.7 times more likely to die[57].

Similarly, Native Americans in the US[58] and Indigenous South Americans in Brazil[59] are twice as likely to die of Covid-19 than their white counterparts in those countries. In Australia, conditions associated with Covid-19 vulnerability can be found at higher rates in the Aboriginal and Torres Strait Islander population[60]. For many indigenous people globally, health inequalities can go beyond a difficulty to access health services and include being discriminated against in terms of the quality of the treatment received[61].

Hardship in Paris. Accessed **https://cutt.ly/BRhg3tj** at on 12-9-2021.

[52] Sky News (2021). *Covid in Africa*. Special Report. Accessed at **https://bit.ly/3FM5rfe** on12-7-2021.

[53] Ibid.

[54] Organisation for Economic Co-operation and Development OECD (2020). *The territorial impact of COVID-19: Managing the crisis across levels of government.* Paris: OECD.

[55] UN Expert Mechanism on the Rights of Indigenous Peoples (EMRIP) (2020). *COVID-19 yet another challenge for indigenous peoples.* Statement 6 April 2020. Geneva: UNHRC

[56] Office for National Statistics (ONS) (2020) *Deaths involving COVID-19 by local area and socioeconomic deprivation: deaths occurring between 17 March and 17 April.*

[57] Office for National Statistics (ONS) (2020) *Coronavirus and the social impacts on Great Britain: 30 April 2020*.

[58] The Guardian (2021). *Exclusive: indigenous Americans dying from Covid at twice the rate of white Americans*. Accessed at **https://bit.ly/3p1GIxm** on 21-4-2021.

[59] Borgen Magazine (2021) *Indigenous South Americans and COVID-19*. Accessed at **https://bit.ly/3BL61at** on 11-4-2021.

[60] Yashadhana A. et al. (2020). *Indigenous Australians at Increased Risk of COVID-19 Due to Existing Health and Socioeconomic Inequities*. The Lancet - Regional Health VOLUME 1, n. 100007, AUGUST 01, 2020.

[61] UN Department for Social and Economic Affairs (UNDESA) (2021). *COVID-19 and Indigenous peoples*. New York: UNDESA.

Covid-19 exposing global, regional and city-level inequalities

The impacts of Covid-19 have been felt with different intensities at local, regional and national levels[62]. Contagion rates have been higher where Covid-19 entered a country first regardless of regional inequalities. As of November 2020, in China 83% of confirmed cases were concentrated in Hubei province; in Italy, the wealthiest region, Lombardy, registered the highest number of cases; in India, the state with the highest GDP, Maharashtra, registered 21% of confirmed cases while hosting 9.3% of the national population[63].

Impacts have then been relative to the general health and wellbeing of a population. World Bank research using the indicator of "relative severity" to normalize Covid-19 deaths for past mortality patterns shows disparities in the global impact of Covid-19: for example, over the course of last year in Malawi neonatal disorders have continued to kill more than Covid-19 except for February 2021[64].

In many places mortality rates have shown a correlation with deprivation at a national scale. Before the vaccination drive, in France, mortality rates were twice as large in municipalities in the first quartile of the national income distribution than in municipalities in higher quartiles[65].

Social forces, institutions, ideologies and policies have interacted over many decades to generate and reinforce inequities among places and specific ethnic or social groups. At the scale of the city, this resulted in certain communities being concentrated in more deprived, poorly serviced and environmentally degraded areas, leading to the impacts of Covid-19 being disproportionately felt along economic, social and ethnic lines.

In New York, the average Covid-19 death rate in areas with at least 30% deprived households has been 232/100,000 people, compared to 100/100,000 people in areas with less than 10% deprived households and disproportionately affected areas where Latino communities live[66]. Deprived parts of London and the UK have suffered far higher death rates from Covid-19 than more prosperous locations[67]. For example, the London Borough of Newham has high levels of multiple deprivation, overcrowding and air pollution, has been disproportionately impacted by Covid-19 and has 78% of residents who are BAME[68].

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[62] Organisation for Economic Co-operation and Development OECD (2020). *The territorial impact of COVID-19: Managing the crisis across levels of government.* Paris: OECD.

[63] Ibid.

[64] World Bank Group (2021) *Relative severity of COVID-19 mortality: A new indicator on the World Bank's data platform.* Blog accessed at **https://bit.ly/3aFbDah** on 8-9-2021.

[65] Organisation for Economic Co-operation and Development OECD (2020). *The territorial impact of COVID-19: Managing the crisis across levels of government.* Paris: OECD.

[66] NBC – New York (2020). *Hispanic Community in NYC 'Disproportionately' Impacted by COVID-19: Officials*. Accessed at **https://bit.ly/3j4A6uu** on 1-5-2021.

[67] Financial Times (2020). *Deprived areas hit hardest in UK by pandemic.* Accessed at **https://on.ft.com/3IlziN**E on 1-9-2021.

[68] Office for National Statistics (ONS) (2020) *Coronavirus (COVID-19) related deaths by ethnic group, England and Wales*.

Data from Mumbai, Dhaka, Cape Town, Lagos, Rio de Janeiro and Manila shows that neighbourhoods with slums which are generally poorly serviced and more polluted, are found to contain the highest density of Covid-19 cases in each city, revealing that slums constitute some of the most at-risk urban locations in the pandemic[69]. Communities living in deprived areas, and particularly in informal settlements, also tend to enjoy lower levels of tenure security and be at higher risk of evictions and homelessness, for example in case of a sudden loss of income during a lockdown.

Villa Bajo Flores Buenos Aires: Photo credit **Roy Maconachie** on **ShareAlike 4.0**

Patterns of exclusion and discrimination can be identified across global cities despite a lack reliable data. The Dharavi slum in Mumbai has one of the highest concentrations of Scheduled Castes across the city[70] and research conducted in the Nairobi slum of Kibera, suggests that marginalised ethnic groups are overrepresented among slum tenants[71].

Neighbourhood-level vulnerabilities and responses

Area-level characteristics affect vulnerability and resilience to Covid-19 in terms of access to green

[69] Sahasranaman A. and Jensen H. J. (2020) *Spread of COVID-19 in urban Neighbourhoods and Slums of the Developing World.* In Journal of the Royal Society – Interface 18: 20200599.

[70] Shaban A. and Abo;I Z. (2021). *Socio-spatial Segregation and Exclusion in Mumbai.* In Urban Socio-Economic Segregation and Income Inequality pp 153-170. London: Springer..

[71] VoxDev (2018) *Law of the land: Ethnic patronage in Kenya's slums.* Accessed at **https://bit.ly/2Xg7E0Y** on 21-09-2021.

and open space, amenities, local and health services and sanitation infrastructure. These can be compounded by other vulnerabilities such as higher levels of tenure insecurity and economic informality. In addition to the increased likelihood of living in overcrowded housing, deprived areas often have higher levels of air, water, noise and light pollution which influence health outcomes.

These factors are a consideration in many urban areas globally, however they can be particularly severe in informal settlements where Covid-19 prevention efforts, such as hand washing, self-isolation and distancing have been difficult and where particularly poor housing conditions expose to additional environmental health hazards. The Covid-19 response has also decreased the ability to respond to serious and widespread non-Covid-19 health issues in communities already more exposed to infections[72]: e.g. mother-to-child transmission of HIV/AIDS, TB, Hepatitis B and Malaria – all key global health targets under SDG3[73].

Research on the urban impacts and community responses to the Covid-19 pandemic shows that these have exacerbated a wide range of social inequalities and discriminations, against women and girls as well as towards LGBTQI people in countries such as the Philippines and Uganda. It also shows that poor and vulnerable communities have come together to respond to the pandemic in innovative and inclusive ways. These innovations have happened despite the social, political and economic barriers preventing or limiting their ability to influence decisions in a place[74].

Accessible open spaces have provided several critical functions during the pandemic. In different places and at different times, they have supported physical and mental health and wellbeing during lockdowns[75], supported livelihoods allowing essential businesses to operate with social distancing, enabled open air schooling and children play and provided space for setting up emergency healthcare operations and raising awareness of prevention and hygiene in the fight against Covid-19[76].

The pandemic has shone a light on the fact that the precarious work and the informal economy have important interdependencies with the formal sector and are integral to the provision of housing and basic services – such as food, care, logistics, transport and deliveries - indicating that investing in more inclusive cities after Covid-19 can foster a more resilient economy. The recovery needs to incorporate the lessons and innovations that have emerged at community level during the pandemic into efforts to ‘build back better’.

[72] Shifat Ahmed S. A. K. et al. (2020). *Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of preCOVID and COVID-19 lockdown stakeholder engagements*. BMJ Global Health 2020. Vol 5, e003042.

[73] Tampe T. (2020). *Potential impacts of COVID-19 in urban slums: addressing challenges to protect the world’s most vulnerable*. In Cities and Health. Vol. (ahead of print), n 1-4.

[74] Sverdlik A. and Walnycki A. (2021). *Better Cities after COVID-19.* London: IIED.

[75] Public Health England (2014) *Local action on health inequalities: Improving access to greenspaces.* London: PHE.

[76] UN-Habitat (2021) *Cities and Pandemics: towards a more just, green and healthy future*. Nairobi: UN-Habitat.

1.2. Implications for the recovery

Rising inequality between places and the finance gap

According to the OECD, the economic impact of Covid-19 will be geographically unequal and will depend on a region's specialisation in certain sectors and its connectedness to the global economy[77]. A generalised deterioration of local finances through a "scissors effect" of rising expenditure and falling revenues is also being observed as a result of the pandemic[78]. Estimates by UN-Habitat and partners indicate that African subnational governments might lose up to two thirds of their revenues because of Covid-19[79].

Both according to the OECD and United Cities and Local Governments (UCLG)[80] the decrease in public spending will particularly affect areas where local governments have a key responsibility for funding and delivery, such as social services, public health and public transport[81], all of which planning helps coordinate. Planning, housing and public infrastructure are among the sectors that represent the most significant financial burdens for cities: a survey of global city governments showed that 31% would postpone or stop capital investments in infrastructure, housing and the environment as a result of Covid-19[82].

In many countries, expected cuts will burden already weakened national finances. Following the global debt crisis started in the 1980s, many of the world's poorest countries in Latin America and Africa cut key areas of public spending in order to service their debt with effects on social determinants of health which persisted until Covid-19 struck[83].

Precedents show that epidemics can have a profound effect on public spending. Following the 2014-2016 Ebola outbreak, Sierra Leone subscribed a $ 172m loan programme spread until mid-2022 to overcome the economic downturn, which obliged the country to cut public spending per person by 15% by 2019 on 2016 levels to service it[84].

Such financial measures can affect the capacity of local governments to plan effectively and inclusively. For this reason, there are growing calls from institutions, researchers and civil society

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[77] Organisation for Economic Co-operation and Development OECD (2020). *Coronavirus (COVID-19)From pandemic to recovery: Local employment and economic development* Paris: OECD.

[78] Organisation for Economic Co-operation and Development OECD (2020). *The territorial impact of COVID-19: Managing the crisis across levels of government.* Paris: OECD.

[79] UN-Habitat (2020) *Covid-19 in African Cities: Impacts, Responses and Policies Recommendations*. Nairobi: UN-Habitat

[80] UCLG, Metropolis and LSE Cities (2021). *The Impact of the Covid-19 Pandemic On Subnational Finances: Emergency Governance for Cities and Regions. Analytics Note 3*. Barcelona: UCLG.

[81] OECD-CoR (2020), *The impact of the COVID-19 Crisis on Regional and Local governments: Main findings from the joint CoR-OECD survey*. Paris: OECD.

[82] UCLG, Metropolis and LSE Cities (2021). *The Impact of the Covid-19 Pandemic On Subnational Finances: Emergency Governance for Cities and Regions*. *Analytics Note 3*. Barcelona: UCLG.v5

[83] Thomson M. at al. (2017) *Structural adjustment programmes adversely affect vulnerable populations: a systematic-narrative review of their effect on child and maternal health*. Public Health Rev vol. 38, n. 13 London: British Medical Council.

[84] Christian Aid (2019). *The New Global Debt Crisis.* London: Christian Aid.

to ensure that the yearly 100bn climate funds' target pledged for the 26th Conference of the Parties to the UN Framework Convention on Climate Change (COP26)[85] is not only met but is directed to support global subnational governments' mitigation and adaptation efforts.

Mechanisms to make finance accessible to subnational governments, such as the Cities Development Initiatives for Asia by the Asian Development Bank[86] and the City Finance Gap Fund (CFGP) by the World Bank and European Investment Bank (EIB) are being made available[87]. The GFCP is innovative in its approach which encourages the formulation of "climate-smart plans" to direct investments so that they can amplify their effects at city level and builds on the EIB's expertise on plan-led approaches to urban investments used in places such as Manchester[88].

In its first year of operation, the GFCP has made support available to 33 global cities. It has a target capitalisation of $ 100m with the objective of mobilising $ 4bn in investments[89]. However, this only covers a fraction of what cities need: in 2020, UN-Habitat estimated the funding gap to achieve the SDGs in global cities at $ 38tn in the period 2020-2030[90].

A number of finance mechanisms will need to be made available to cover the finance needs of subnational governments to ensure that the recovery fosters inclusive and sustainable recoveries. This includes supporting countries with high levels of debt in making new resources available to their communities.

Research shows that planning has a role to play in directing and multiplying the effects of investments in several mechanisms being discussed in the lead up to COP26[91]. These notably include 'debt-for-climate' swaps, whereby a country can reduce its debt by agreeing with creditors to discount it and redirect the funds meant to service it towards agreed-upon climate action plans and projects. In the Seychelles, this mechanism was used to make resources available for a new national Marine Spatial Plan (MSP) co-ordinating conservation, climate-proofing and development actions across the islands' communities[92]. A similar mechanism is being negotiated with creditors for other countries, such as Belize[93].

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[85] See the relevant area of the COP26 website. Accessed at **https://bit.ly/3aIHAyo** on 12-09-2021

[86] Asian Development Bank (ADB) (NA). *Cities Development Initiative for Asia*. Accessed at **https://bit.ly/2Xccjkn** on 1-10-2021.

87 City Climate Finance Gap (2021). *Turn resilient low-carbon ideas into strategies and finance-ready projects. Accessed at https://www.citygapfund.org/* on 11-10-2021.

[88] European Investment Bank (EIB) (2014). *Greater Manchester Urban Regeneration*. Accessed at **https://bit.ly/3p3HWIv** on 10-10-2021.

[89] Energy Live News (2021). *City Climate Finance Gap Fund Provides Support to 33 Cities.* Accessed at **https://bit.ly/3AINJWf** on 10-10-2021.

[90] UN-Habitat (2020). *Financing Sustainable Urbanization: Counting the Costs and Closing the Gap*. Nairobi: UN-Habitat.

[91] IIED (2021). *Climate Change Loss and Damage. 1st Deliberative Dialogue Report*. London: IEED; and Steel P. and Patel S. (2020). *Tackling the triple crisis Using debt swaps to address debt, climate and nature loss post-COVID-19*. London: IIED.

[92] Commonwealth Secretariat (NA). *Case Study: Innovative Financing – Debt for Conservation Swap, Seychelles' Conservation and Climate Adaptation*. Accessed at **https://bit.ly/3DMtoAW** on 12-9-2021.

[93] Commonwealth Secretariat (2021). *Belize explores debt-for-climate swaps with Commonwealth support*.

Funding mechanisms that result in investments in co-ordination through and capacity for planning are key to help different tiers of governments to deliver emission reductions, biodiversity gains and the SDGs more effectively. Those targeting cities can be supported by ambitious national and regional sustainable urbanisation strategies. Efforts towards producing national urban policy frameworks are being supported by UN-Habitat in countries such as Brazil and South Africa[94].

1.3. How planning can support the recovery

Tackling place-based inequality

A wide variety of organisations and coalitions, including the United Nations, has called for a strong focus on social justice during the recovery. This will involve prioritising long-term human wellbeing and equality through capacity building and policies which reduce vulnerability to climate and other risks and take into account socio-economic status.

This chapter has identified how Covid-19 is exacerbating existing patterns of socio-economic inequality within cities and communities and across different countries and regions. Tackling this needs 'people-focused' solutions such as welfare and healthcare spending, including fair access to vaccines. However, it also requires place-focused and area-based solutions to poverty and inequality at a local level. This involves the delivering of homes, services, amenities and infrastructure that improve economic, social and health outcomes.

Fairer allocations of healthcare resources, better homes, improved environmental standards and urban services can support in tackling the spread of infectious diseases - particularly in informal settlements - as the global urban population grows[95]. Better and more socially cohesive cites can also support mental health and help address the multiple health impacts of climate change[96].

This means that the provision of affordable and adequate housing must be designed to be truly inclusive and achieve carbon neutrality, supported by the upfront provision of transport, utilities, and green and public space infrastructure. This will require integrated masterplans created by well-resourced and multi-skilled teams, and a diverse delivery from a wide variety of actors: private investors, large developers, small and medium enterprises (SMEs), tenants' and slum dwellers' associations, direct provision by city governments, etc.

Because of the pandemic, many countries are now better able to identify structural social weaknesses and understand how to make their cities more inclusive, sustainable and resilient in order to avoid future crises. This should happen in a dialogue and in coordination with cities and subnational governments, providing them with the appropriate powers, supporting them in accessing the finance they need and stressing the key value of effective community engagement and participation for improving outcomes.

Accessed at **https://bit.ly/3DBUUB6** on 11-10-2021.

[94] UN-Habitat (2021). *2020 Policy, Legislation, and Governance Section Annual Report*. Nairobi: UN-Habitat.

[95] Riley L. W. et al. (2007). *Slum Health: diseases of neglected populations.* In International Health and Human Rights vol. 7, n. 2 London: British Medical Council.

[96] Royal Town Planning Institute (RTPI) (2014). *Promoting Healthy Cities: why planning is critical to a healthy urban future*. London: RTPI.

The contribution of planning

The UN-Habitat publication 'International Guidelines on Urban and Territorial Planning' provides an essential checklist of the roles, responsibilities and accountability standards of different stakeholders involved in running an effective local planning system or delivering a city plan[97]. The subsequent publication 'Leading Change: Delivering the New Urban Agenda through urban and territorial planning' provides further policy context for them: urban plans should be rooted in the need to fulfil human rights - which would require upskilling planners to include them in their work -, increase accountability standards at all levels of governance, redistribute land values, and address the role of cities as hubs of material input and output resulting from the processes of production, distribution and consumption (e.g. through sustainable food systems and waste recycling)[98].

As the global urban population is set to increase by 2.5bn people by 2050 according to UN projections[99], reviewing urban governance systems as well as improving regulatory frameworks for housing provision and upgrades so that they are both appropriate and inclusive will be key challenges.

Land provision for urban expansions and infills will be one of the most significant of such challenges. However, it will also be a key lever for mobilising resources for an inclusive and sustainable recovery and advancing biodiversity and emissions reduction objectives. Urban land will need to be allocated not just to homes and infrastructure, but also to public spaces and nature-based climate adaptation and mitigation measures. These include urban mangrove restoration and tree planting, which can both help communities be resilient to extreme weather events, decrease the risks associated with flooding and overheating and improve health outcomes. For example, in 2013, the intact mangroves surrounding the town of General MacArthur in the Philippines spared the town from the worst impacts of typhoon Haiyan – one of the most powerful ever recorded - which instead severely impacted other places. In the sprawling city of Tacloban, typhoon Haiyan killed over 2,000 people[100].

A recent UN-Habitat review of the role of land to achieve affordable and adequate housing shows that urban land is at the core of adequate housing provision and that planning authorities can play a positive role in the operations of land and housing markets so that they can be inclusive of disadvantaged communities, and guide development to meet resilience and sustainability objectives. Local governments that have the sufficient powers and resources to sustainably direct and manage land input into local urban growth can facilitate a diversity of stakeholders to operate in local markets together: larger developers and SMEs alongside local authority or community-led housing provision are key to responding to different segments of the housing demand[101].

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[97] UN-Habitat (2015) *International Guidelines on Urban and Territorial Planning*. Nairobi: UN-Habitat.

[98] UN-Habitat (2018). *Leading Change: Delivering the New Urban Agenda through Urban and Territorial Planning*. Nairobi: UN-Habitat.

[99] UN Department of Economic and Social Affairs (UNDESA) (2018). *68% of the world population projected to live in urban areas by 2050, says UN*. Accessed at **https://bit.ly/3lOxToR** on 27-9-2021.

[100] The World (2013*). Saved by the Mangroves? A Philippine town dodges Haiyan's storm surge*. Accessed at **https://bit.ly/3vc6jF1** on 9-9-2021.

[101] UN-Habitat (2021). *The Role of Land in Achieving Adequate and Affordable Housing*. Nairobi: UN-Habitat.

Granting powers and resources to local planning departments to actively operate in and shape urban land markets - in ways that are transparent and accountable - can benefit all stakeholders in a city increasing affordability, resilience, and inclusivity and ensuring the long-term sustainability of investments. Typically, these powers and resources include the ability to levy and collect progressive urban land taxes, assemble land, award public land development to bidders who maximise public value creation and designate land for community-led developments and land trusts. Examples of good practice in this area span the globe from Germany to Thailand and the UK[102].

Canalside houses in Ho Chi Minh City: Photo credit **Tony Lam Hoang** on **Unsplash**

Such powers can unlock resources to deliver on multiple objectives. For example, Singapore has strong powers over land development and a key role in the direct provision of housing. Its government is pioneering hybrid engineering projects incorporating mangrove restoration into its coastal defence programme, funded partly through the proceeds of its urban development[103].

In 2010, the northern English town of Kirklees has pioneered an area-based carbon reduction approach by providing advice, support and incentives for better insulation to 170,000 homes. The Kiklees 'Warm Zone' involved a £ 20m investment over three years, and it is estimated to have generated values - including through increased real estate prices - equivalent to £ 248m[104].

[102] See for example Metropolis (2019). *Logement abordable : profils de cinq villes métropolitaines*. Montreal: Metropolis. Examples of best practice in this area are contained in the RTPI online Learn Module *Town Planning and the UN Sustainable Development Goals*. Accessed at **https://bit.ly/3aGEX08** on 9-11-2021.

[103] Ellison A. M. et al. (2020). M*angrove Rehabilitation and Restoration as Experimental Adaptive Management*. In Frontiers in Marine Science, Vol. 7, art. 327.

[104] Carbon Descent (2011). *Kirklees Warm Zone Economic Impact Assessment*. London: Carbon Descent.

With context-appropriate technology and approaches, area-based energy efficiency and emissions reduction measures can prove effective in warmer climates too. Through a project led by Associazione Volontari in Servizio Internazionale (AVSI), the targeted promotion and distribution of Improved Cooking Stoves (ICS) has increased energy efficiency and decreased pollution and fuel poverty for 7,500 households in the informal settlements of Chamanculo and Xipamanine in Maputo[105].

The scope of planning in delivering the global housing challenge should expand to address many issues at the same time. City extensions and urban upgrades will need to activate systemic and transformative changes that decrease resource extraction and support global biomes across land, air and water. They should increase resilience to climate change designating ad hoc land uses for mitigation and adaptation and bolster the community cohesion emerged during the pandemic.

The global campaign to "localise" the SDGs[106] - or empower cities and local stakeholders to deliver them - can support these efforts. As a key function of subnational governments in many countries, planning can contribute to both co-ordinate and generate resources to advance a fair and inclusive recovery. Among the key areas of focus for planning are:

- **Plan with vulnerable communities to include them into better urban service and housing provision in ways that are context sensitive, fair and sustainable.** Plans should help meet vulnerable communities' social, economic and development challenges while advancing inclusive climate resilience and carbon neutrality. Covid-19 has shown how local services, infrastructure and adequate housing are key to health outcomes and demonstrated how community cohesion can play a vital role in a health crisis. These lessons can inform better community participation in the planning process and support in identifying the interventions with the most effective impacts in terms of risk reduction and resilience building.

- **Plan strategically across neighbourhoods and local authorities and by coordinating service and infrastructure provision with new housing delivery and upgrades.** Covid-19 has exposed how some urban communities are subject to health inequities and more exposed to economic shocks. Essential resources and capacity should be made available to subnational governments, particularly in the global south, so that they can put in place recovery strategies to co-ordinate ambitious sustainability and emissions reduction actions and generate local revenue.

- **Plan for stronger public health, stressing the provision of community services, essential infrastructure and public space for improving health outcomes.** Covid-19 has shown how inclusive open space and local services have supported communities during lockdowns. These should remain a global priority at a time when rapid urbanisation puts a premium on their provision. Giving local authorities appropriate powers over land development can help ensure that different housing demands are met and sufficient land is

[105] World Access to Modern Energy (WAME) (2014). *Improved Energy Efficiency in Chamanculo and Xipamanine slum areas, Municipality of Maputo, Mozambique*. Accessed at **https://cutt.ly/wRfCed7** on 12-9-2021.

[106] See resource on SDG localisation available on the knowledge exchange online hub Local 2030. Accessed at **https://bit.ly/3mY9GeN** on 11-7-2021.

allocated to services and public and open space, and critically to nature-based adaptation and mitigation measures to increase both economic and climate resilience and sustainability.

2. Economic sectors, production and consumption

2.1. Observations

Different impacts across sectors and places

The impacts of Covid-19 and of the measures to contain its spread – such as lockdowns and social distancing - have been profound. The financial measures taken to absorb these shocks are expected have long lasting consequences on the world economy and shape its future.

Covid-19 may not necessarily affect overall growth. Despite uncertainties around global vaccination programmes, OECD projections foresee that the global economic output will go back to pre-pandemic levels already by the end of 2021, although unevenly distributed across countries and economic sectors[107]. In the UK[108] and in countries such as Indonesia, Malaysia and Vietnam a full recovery in terms of economic output is expected already in 2021[109].

Differential impacts on economic sectors can reflect on local and national economies that are specialised in them. Some activities have benefitted from lockdowns, such as teleworking, home deliveries and digital entertainment; others have been severely disrupted such as hospitality, food systems, logistics, entertainment, and education. The pandemic has exposed vulnerabilities in global supply chains leading to disruptions to trade which continue after many restrictions have eased.

Standard and Poor's tracking of the probability of default across listed businesses has shown changes in the categories most at risk from Covid-19 over the last year. Air travel and oil and gas companies have been consistently in the most at-risk categories over the height of the crisis, as well as retail and hospitality ones. On the other hand, listed real estate companies - focussing on formally planned areas of globally connected cities – have scarcely been affected[110].

These global trends might result in different outcomes in different places. In Africa for example, poor infrastructure leaves the strategic energy sector more exposed to supply chain disruptions

[107] Organisation for Economic Co-operation and Development OECD (2020). *Keeping the Recovery on Track – OECD Economic Outlook.* Paris: OECD.

[108] Confederation of British industries (CBI) (2021). *UK economy back to pre-covid level by end of year.* Accessed at **https://bit.ly/3p4v7O4** on 12-9-2021.

[109] Nikkei (2020). *Vietnam, Indonesia and Malaysia seen fully recovering in 2021*. Accessed at **https://s.nikkei.com/3j1i1gG** on 10-9-2021.

[110] Standard & Poor (2021). *Industries Most and Least Impacted by COVID-19 from a Probability of Default Perspective*. Accessed at **https://bit.ly/3j3379N** on 7-9-2021.

and a decrease in foreign direct investments (FDIs)[111]. In Latin America and the Caribbean, a large number of small firms unable to absorb the shock of lockdowns leaves the manufacturing sector exposed[112]: the International Labour Organization (ILO) estimates that this will be the global region worst affected by a loss of labour income[113].

Some sectors might be particularly at risk, such as travel and tourism. Countries that have high contributions to GDP from tourism such as Mexico and Italy might see the relevant sectors of society hit[114]. However, the most severe societal impacts are happening in smaller economies highly dependent on tourism, such as Caribbean island states[115].
Of all industrial sectors, the automotive one has seen the stronger decline in growth rate in the second quarter of 2020, which has resulted in both local and global impacts. For example, the West Midlands, the English region with most automotive firms, is the UK worst affected local economy[116]. In Germany, a wave of job losses is expected across Bavaria, Lower Saxony and Baden-Wuerttemberg with expected ripple effects on global automotive suppliers[117].

Global logistics, which accounts for about 12% of global GDP[118], has seen impacts across all the services it provides - such as transport, inventory management, warehousing, order processing - with cascading effects across other sectors. Major disruptions have been caused by both sudden spikes in demand – e.g. for medical supplies - and slumps in production during industrial shutdowns[119]. These developments have shown the vulnerabilities of the just-in-time model of ordering, producing, and delivering along intricate global value chains.

Sudden changes in lifestyles preferences during the pandemic have resulted in uneven growth in real estate prices despite significant economic uncertainty, raising concerns over an overheating real estate market. For example, in China, first tier cities in the Yangtze Delta have seen increases linked to the availability of better healthcare and infrastructure[120]. In London, suburban homes with

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[111] Shen W. and Ayele S. (2020). *COVID-19 and the African energy sector*. Energy and Economic Growth – Applied research Programme. Oxford: Oxford Policy Management.

[112] Organisation for Economic Co-operation and Development OECD (2020). *COVID-19 in Latin America and the Caribbean: Regional socio-economic implications and policy priorities*. Paris: OECD.

[113] International Labour Organization (ILO) (2020). *Impact on the labour market and income in Latin America and the Caribbean*. Geneva: ILO.

[114] World Economic Forum (2020). *COVID-19: These countries are most at risk from falling tourism*. Accessed at **https://bit.ly/3DE65JN** on 10-9-2021.

[115] United Nations Conference on Trade and Development (UNCTAD) (2020). *Covid-19 and Tourism: assessing the economic consequences.* Geneva: UNCTAD.

[116] The Guardian (2020). *West Midlands economy hardest hit from Covid-19 as auto sector stalls.* Accessed at **https://bit.ly/3AN4qiZ** on 13-9-2021.

[117] Financial Times (2020). *German car industry counts cost of Covid and technological change*. Accessed at **https://on.ft.com/3BLfqia** on 21-9-2021.

[118] Chartered Institute of Logistics and transport (CILT) (NA). *About CILT*. Accessed at **https://bit.ly/3mVEqxh** on 12-9-2021.

[119] International Finance Corporation - World Bank Group (2020). *The Impact of COVID-19 on Logistics*. Washington: World Bank Group.

[120] Yang M. and Zhou J. (2021). *The impact of COVID-19 on the housing market: evidence from the Yangtze River delta region in China.* In Applied Economic Letters.

gardens and good accessibility to central urban areas have also increased[121]. A sustained geographical polarisation of real estate prices might hamper the effectiveness of land value capture mechanisms for evenly supporting places to recover.

Impacts on Food Systems

Covid-19 impacts have been felt across the board, however those on food systems are particularly significative as they have shone a light on the role of cities as centres of distribution and consumption.

Transport disruptions causing delays in bringing products to consumers have affected urban food markets – particularly in the global south. The pandemic has caused a lack of agricultural and food processing labour, a disruption of informal food trade and an interruption of essential services such as school meals' distribution[122]. In April 2021, the World Food Programme estimated that 296 m people in the 35 countries where it works didn't have enough food— a 111m increase in one year[123].

In conjunction with other economic factors, such as a slump in the price of oil, food prices have seen high levels of inflation in many places with severe impacts in countries with limited domestic production, that are net importers[124] and have rapidly urbanising populations[125]. In low- and lower middle-income countries' diets can be highly dependent on informal food trade[126] and the restrictions to accessing public space have affected poor communities' diets and livelihoods[127].

Uneven impacts on food systems are related to their connectedness to global markets. For example, seafood is among the most globalised food industries, with 38% of global catch sold on international markets and a majority of workers employed in small-scale fisheries, which are less resilient to disruptions[128].

OECD research suggests that the economic downturn might result in a longer term decrease in

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[121] Cheshire P. et al. (2021). *Why central London has seen the biggest rises in house prices, despite COVID*. Blog accessed at **https://bit.ly/3aEbCU7** on 11-9-2021.

[122] Food and Agriculture Organization (FAO) (2020). *Urban Food Systems and Covid-19*. Rome: FAO.

[123] World Bank (2021). *Food Security and Covid-19 – Brief*. Accessed at **https://bit.ly/3pbkyJk** on 11-9-2021.

[124] International Finance Corporation (IFC) (2020). COVID-19 *Rapid Assessment: Impact on the Nigerian Private Sector and Perspectives on Accelerating the Recovery*. Supplement to *Creating Markets in Nigeria: Country Private Sector Diagnostics*. Washington: World Bank Group.

[125] Fortune (2021). *From Brazil to Turkey, food prices are spiking worldwide*. Accessed at **https://bit.ly/2YYwqTT** on 7-9-2021.

[126] Crush, J. S., and Frayne. B.G. (2011). *Supermarket Expansion and the Informal Food Economy in Southern African cities: Implications for Urban Food Security*. Journal of Southern African Studies vol. 37, n. 4, pp. 781–807.

[127] Giroux. S. (et al). (2021). *Informal vendors and food systems planning in an emerging African city*. In Food Policy. Special Issue. Vol. 13, 101997.

[128] IIED (2020). *Evaluating the impact of the COVID-19 pandemic on small-scale fisheries and its markets. Project summary*. Accessed at **https://bit.ly/30z3YZw** on 12-8-2021.

food consumption: reduced demand might lead to decreased production and thus to further food insecurity, in a vicious circle[129]. Some of the most severe impacts will be in Sub-Saharan Africa where decreased food production is expected to be the largest driver of new poverty[130] and could be compounded by the risks accumulated by continuing rapid and unplanned urbanisation.

Ngoc Ha Market in Hanoi: Photo credit **Dragfyre** on **Wikimedia Commons**

In countries such as Kenya and Vietnam, the pandemic has accelerated the expansion of online food retail and supermarkets, with larger stores doubling as hubs for online delivery in Nairobi[131] and Hanoi[132]. While these represent opportunities for business innovation, such processes are also shown to impact informal food traders who can be squeezed out of wealthier urban markets exacerbating poor communities' food insecurity; a trend observed, for example, in Cape Town[133].

[129] Organisation for Economic Co-operation and Development (OECD (2020). *Food Supply Chains and COVID-19: Impacts and Policy Lessons*. Paris: OECD.

[130] Hallegatte S. and Walsh B. (2021). *COVID, climate change and poverty: Avoiding the worst impacts.* Accessed at **https://bit.ly/3lMzgUM** on 11-10-2021.

[131] Capital Business (2020). *Naivas Braves COVID-19 to Open New Kilimani Food Market*. Accessed at **https://bit.ly/3j7OL7W** on 21-9-2021.

[132] Wertheim Heck S. (2021). *The impact of the COVID-19 lockdown on the diets of Hanoi's urban poor.* Blog accessed at **https://bit.ly/3vnLhDw** on 11-9-2021.

[133] Peyton S. (2015). *Implications of supermarket expansion on urban food security in Cape Town, South*

Labour and migration

The impacts observed on poor and vulnerable urban areas in the previous chapter are complementary to those experienced by the individuals living in them. The pandemic has demonstrated the dependence of cities on 'key workers' - i.e. those necessary to run essential services and businesses in a crisis. In the UK, these are often found in the lowest-paid decile[134]. Logistics disruptions and shortages have also demonstrated the dependence of the global economy on informal and precarious employment.

Such workers are more vulnerable both to infection by the coronavirus as well as the economic impacts of lockdowns and places with large shares of non-standard and informal employment have been more exposed to Covid-19 across countries. This is exemplified by the spike in Covid-19 cases among garment industry workers in Leicester[135].

Internal and international migrants tend to concentrate in cities and are more likely to be in non-standard employment and overrepresented in economic activities such as care, deliveries, low skilled industrial work, food processing etc. – and among 'key workers', such as nurses[136]. Across these categories, women are estimated to be worst affected by the pandemic for their higher likelihood of being in lower paid, non-standard employment. Lockdowns have also put a further burden on them, as unpaid household and care work is more frequently carried out by women[137].

These factors have contributed to produce flows of reverse migration. In the UK, due to the overlap of Brexit and Covid-19, up to 1.3m foreign-born residents are estimated to have left the country over the last year[138]: a leading cause of the recent fuel and food shortages[139]. In India, in the initial days of the first lockdown in March 2020 up to 40 million internal migrants are estimated to have been displaced or severely affected by sudden lockdown measures[140]. A flow of reverse migration of South Asian migrant workers has been observed in several world regions[141].

The World Bank projects that, as a result, remittances will decline by almost 20% in the next year

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Africa. In African Geographical Review, vol. 34, n. 1. Pp. 36-54.

[134] Office for National Statistics (ONS) (2020). *Coronavirus and key workers in the UK*. Accessed at **https://bit.ly/2YQ6kCl** on10-9-2021.

[135] Clark I. et al (2020) *Working and Living Practices may Explain Leicester's Coronavirus Spike*. The Conversation. Accessed at **https://bit.ly/3BOTxP6** on 11-9-2021.

[136] European Commission – Knowledge for Policy Unit (2020). *Immigrant Key Workers: Their Contribution to Europe's COVID-19 Response*. Accessed at **https://bit.ly/3j88ch0** on 12-9-2021.

[137] Huffington Post (2021). *'Left Behind': Young Women on Low Incomes Worst Impacted by Pandemic*. Accessed at **https://bit.ly/2Z0odyN** on 18-9-2021.

[138] BBC (2021). *Covid-19: Have a million people left the UK?.* Accessed at **https://bbc.in/3APMhBt** on 7-9-2021.

[139] BBC (2021*). Brexit: Vegetable producer says labour shortage means food is being thrown away.* Accessed at **https://bbc.in/3n4dhli** on 12-9-2021.

[140] Mukhra R. at al. (2020). *COVID-19 Sets off Mass Migration in India*. In Archives of Medical Research vol. 51, n. 7, pp. 736–738.

[141] Lee J. N. at al. (2020). *COVID-19 and the Great Reverse Migration in South Asia*. Blog accessed at **https://bit.ly/3aJ71Qz** on 12-9-2021.

in the sharpest dip in recent history[142]. In Sub-Saharan Africa, a mix of a reduction of remittances and FDIs are contributing to fears of foreign debt crises for some countries[143] and the African Development Bank projects 30m job losses as a result[144]. The ILO expects a global increase of informal work as well as unemployment and underemployment[145].

2.2. Implications for the recovery

Covid-19 impacts, digital technology and changing consumption patterns

In the sectors where the current downturn can transition into a long-lasting recession, a slump in economic activities may be converted into permanent job losses. The strongest impacts are expected in places with a higher dependency on at-risk sectors, smaller firms and higher shares of precarious work[146]. Economic contraction could spread beyond the most at-risk places, and accelerate trends already present, such as mergers – e.g. in the retail sector - and increased automation – e.g. for warehousing and orders management.

However, for the sectors where home working has been possible, the pandemic has resulted in increased savings, pent-up demand and shifts in consumption patterns. These are often concentrated in groups living in globally connected cities and regions, with higher spending power and higher resource consumption per capita. As consumers' confidence is restored, such shifts could support climate-friendly economic transitions focussed on low carbon products and services.

Emerging consumption choices from these groups seem to place a stronger focus on health, wellbeing, social value, choice of healthier and climate-friendly diets and fewer larger purchases with higher value for money[147]. Key shifts have happened in how consumers access services too: there have been increases in telemedicine, online shopping, online entertainment, and remote and flexible working[148]. These changes are having pervasive effects on urban public spaces and retail, as well as on the demand for housing and travel.

If encouraged by raising awareness on sustainable lifestyles and leveraged by supporting low carbon and circular productive cycles – as per objectives of SDG12[149] -, new behaviours could

[142] World Bank (2020). *World Bank Predicts Sharpest Decline of Remittances in Recent History*. Accessed at **https://cutt.ly/qRjMEVH** on 12-9-2021.

[143] African Development Bank (ADB) (2020). *African Economic Outlook 2020 – Supplement*. Abidjan: African Development Bank Group.

[144] Ibid.

[145] International Labour Organization (ILO) (2020). *COVID-19 crisis and the informal economy: immediate responses and policy challenges – Brief*. Geneva: ILO.

[146] Ibid

[147] BBC (2021). *Has Coronavirus Made Us more Ethical Consumers?* Accessed at **https://bbc.in/3DRGHjB** on 12-9-2021.

[148] Puttaiah M. H. et al. (2020). *All change: how COVID-19 is transforming consumer behaviour*. Zurich: Swiss Re Institute.

[149] United Nations – Department of Social and Economic Affairs (UNDESA) (NA). *SDG 12 – Responsible Consumption and Production – Goals*. Accessed at **https://bit.ly/3pbZWQP** on 30-8-2021.

have cascading effects in sectors that are responsible for large shares of GHG emissions across different categories, as activities resume. A landmark report from the UN World Tourism Organisation estimated that 22% of all transport related GHG emissions are attributable to global tourism[150] and food systems are estimated to contribute to 21% to 37% of them with a key share from food waste[151].

Shifts in consumption patterns are not limited to the global north. Chinese[152] and African[153] consumers are also increasingly focussing on health and wellbeing and shopping and accessing services online. The United Nations Conference on Trade and Development (UNCTAD) global e-commerce review shows that Covid-19 triggered a global e-commerce turning point. The most popular Latin American online marketplace doubled the number of traded items per day in one year and an e-commerce platform present in eleven African countries reported a 50% jump in transactions in the same period[154].

However, such shifts can have significant implications for cities in terms of congestion and pollution. In the UK, an increase in online shopping has been linked to an increase in urban traffic compared to pre-pandemic levels driven by home deliveries[155].

For digital innovation and new consumption patterns to serve long-term sustainability objectives, they need to be accompanied by innovative urban policy as well as raised ambitions for green industrial and energy strategies enabling employment in-low carbon sectors. For example, the European Union's updated industrial strategy – considered one of the most ambitious globally - is proposing to regulate foreign subsidies to carbon intensive sectors and integrate digital technology with renewable energy infrastructure to support balanced development across EU regions[156].

If not joined up with other strategies, a more widespread adoption of digital technology can bring about new cleavages in society and deepen existing ones, namely by failing to include informal workers. For example, digital technology can enable firms to compete with informal workers over urban markets. A study on informal waste workers in Nairobi, Lima and Delhi shows that only those who were able to acquire digital skills to manage their relations' networks were able to benefit from digital technology[157]. Despite a perception that workers in informal economies are

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[150] UN World Tourism Organization (UNWTO) (2019). *Tourism's Carbon Emissions Measured in Landmark Report Launched at Cop25.* Accessed at **https://bit.ly/30DUTid** on 1-8-2021.

[151] Carbon Brief (2021). *Food Systems Responsible for 'One Third' of Human-caused Emissions*. Accessed at **https://bit.ly/3DPo9Rb** on 11-9-2021.

[152] McKinsey & Company (2021). *China consumer report 2021 - Special edition November 2020. Understanding Chinese Consumers: Growth Engine of the World*. New York: McKinsey & Company.

[153] HIS Markit (2021). *Post-COVID-19 sub-Saharan African consumer spending*. Accessed at **https://cutt.ly/pRhliiC** on 12-9-2021.

[154] UN Conference on Trade and Development (UNCTAD) (2021). *Covid-19 and E-Commerce – a global review.* Geneva: UNCTAD.

[155] Traffic Technology Today (2021). *UK traffic volumes exceed pre-Covid levels – with differences*. Accessed at **https://cutt.ly/DRhzXYe** on 12-9-2021.

[156] European Commission (2021). *Updating the 2020 Industrial Strategy: towards a stronger single market for Europe's recovery – Press Release*. Accessed at **https://bit.ly/3paoHNn** on 12-9-201.

[157] Practical Action (2016). *Technology and the Future of Work. Experiences of informal waste workers and street vendors in Dhaka, Lima, and Nairobi*. Technology Justice Policy Briefing 5. Rugby: Practical

faster to innovate because of low regulation, a study of Indian informal street vendors shows that they are less prone to use technology than their counterparts employed in the formal economy in the same social class[158].

Plans, strategies and new governance arrangements to deliver the recovery should address the social risks of uneven digitisation and ensure that the positive effects of technology propagate to all sectors of society. A review of successful urban policy responses to support the informal economy, stresses that the adoption of digital technology can reap social and economic benefits in the informal sector if combined with capacity building and increased collaboration with city institutions; for example, using digital information systems to include associations of informal workers in procurement processes or to designate suitable urban spaces for their activities[159].

Trade, investments and local inclusion

The pandemic has affected international trade. Under the UK presidency, several COP26 negotiation streams have introduced direct links to trade policy[160], even though these reportedly have weak links to sustainability discussions being held at the World Trade Organization (WTO) and their contributions to global climate action are still unclear[161].

UNCTAD research shows that lockdown measures have coincided with a decline in global trade and that FDIs have declined more markedly since the beginning of Covid-19 continuing a downward trend from 2015. The strongest decline has been in greenfield FDIs (which involve companies setting up operations in a country from the ground up including production, logistics and offices) at - 37%[162]. This has been linked to a pause on investments due to the pandemic possibly leading to an accelerated trend of 'reshoring' of industrial activities[163] which could result in changes to the demand for land for industrial activities.

In the UK, the Government has consulted on the creation of Special Economic Zones (SEZs) around 8 new free ports[164] and stressed their role to potentially speed up the recovery[165] even

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Action.

[158] Kaushik. A. K. and Rahman Z. (2016). *Are Street Vendors Really Innovative Toward Self-service Technology?* In Information Technology for Development, vol. 22, n. 2, pp. 334-356.

[159] C40 (2020). *How to support informal workers and economies in a green and just recovery*. Accessed at **https://bit.ly/3aKOP9f** on 4-9-2021.

[160] ODI (2021). *Four ways the UK can bring climate and trade agendas together at COP26.* Blog accessed at **https://bit.ly/3n4g3x9** on 21-9-2021.

[161] Ibid.

[162] UN Conference on Trade and Development (UNCTAD) (2021). *Impact of the Pandemic on Trade and Development – Transitioning to a New Normal.* Geneva: UNCATD.

[163] UN Conference on Trade and Development (UNCTAD) (2020). *How COVID-19 is changing global value chains.* Accessed at **https://bit.ly/3vlS6VO** on 20-8-2021.

[164] Zhan J. X. and Santos Paulino A. U. (2021*). Investing in the Sustainable Development Goals: mobilization, channeling, and impact*. Journal of International Business Policy vol. 4, pp. 166–183.

[165] Artnet (2021*). The UK Will Establish Eight Freeports as Part of a Broader Effort to Attract the Ultra-Wealthy and Jump-Start the Economy.* Accessed at **https://bit.ly/3aIo1X8** on 12-9-2021.

though evidence on SEZs' effectiveness to increase productivity is mixed[166]. Their effects on local sustainability, which is key for resilience, are also not straightforward: according to UN-Habitat, SEZs can be perform poorly if they are not planned as part of resilient and sustainable value chains and with the needs of surrounding communities in mind[167].

Initiatives to introduce ambitious and transparent Environmental, Social and Corporate Governance (ESG) standards for businesses, for example in the EU[168], could help establishing frameworks to effectively monitor the economic, social and environmental sustainability of value chains and help align new low-carbon sustainable production to emerging consumers' demand[169].

OECD research shows that spatial planning has a key role to play in the development of sustainable value chains in agricultural, forestry and food industrial districts when linked to sustainable land management practices[170]. For example, the Africa Finance Corporation (AFC) financed the successful creation of a furniture export industry in Gabon by building a SEZ and two ports close the capital Libreville linking sustainable forestry with manufacturing and creating around 6,000 jobs[171].

However, other value chains – e.g. in the mining sector – are entangled in globally ramified and complex legal and financial networks. For example, UN Research Institute for Social Development (UNRISD) research on copper extraction in Zambia, the world's seventh producer, showed how environmental and social impacts on local towns was influenced by financial decisions taken elsewhere leaving local communities with a decreased ability to inform strategic aspects of local development, including its spatial dimensions[172]. This has been linked to missed opportunities to diversify the local economy and to a process of counter-urbanisation in the Zambian Copperbelt[173].

In complex and financialised value chains, improved international regulations and information disclosure standards could not only support sustainability but also make new resources available for local inclusive development supported by strategic planning.

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[166] Zeng D. Z. (2019). *Special Economic Zones: Lessons from the Global Experience. Private Enterprise Development in Low Income Countries (PEDL) Project Synthesis Paper n. 1*. London: UK Aid; and UN Conference on Trade and Development (UNCTAD) (2019). *World Investment Report 2019 – Chapter IV. Special Economic Zones*. Geneva: UNCTAD.

[167] UN-Habitat (2020). *Special Economic Zones (SEZs) and Urbanization*. Nairobi: UN-Habitat.

[168] European Commission (2018). *EU climate benchmarks and benchmarks' ESG disclosures*. Accessed at **https://bit.ly/3BKOoYp** on 15-9-2021.

[169] PWC (2021). *Are you ready for the ESG revolution?* Accessed at **https://pwc.to/3b0xBFb** on 21-9-2021.

[170] Organisation for Economic Co-operation and Development (OECD) (2020*). Towards Sustainable Land Use. Aligning Biodiversity, Climate and Food Policies*. Paris: OECD.

[171] Organisation for Economic Co-operation and Development (OECD) and African Center for Econmic Transformation (2020). *Quality Infrastructure in 21st Century Africa*. Paris: OECD.

[172] United Nations Institute for Social Development (UNRISD) (2018). *Valueworks: Effects of Financialization along the Copper Value Chain*. Geneva: UNRISD.

[173] Potts D. (2005). *Counter-urbanisation on the Zambian Copperbelt? Interpretations and Implications.* In Urban Studies. Vol. 42 n. 4. pp. 583-609.

2.3. How planning can support the recovery

Cities and sustainable value chains

The trends outlined above will have strong implications for logistics, food systems, location choices of firms and residence on how people will choose or be able to live and move around with knock-on effects on consumption and production. This prompts planners to help society conceive and create places in new ways after Covid-19.

Supporting urban areas to adapt and drive transitions has a transformative potential due to cities' pivotal positions in the material and energy flows that underpin the global economy. The World Bank has recognised the form of future urban development as critical to both enhancing global productivity and curbing emissions and waste, and the 2020 UN-Habitat World Cities Report has focussed on the idea that sustainable urbanisation produces a 'value' that goes beyond the physical limits of an urban area and is shared with the places responsible for meeting the needs of urban dwellers[174]. The Gates Foundation has highlighted the development of inclusive and sustainable 'urban value chains' – i.e. the role of urban labour and economic activities in national and international value chains - as an avenue for supporting sustainable development[175].

The crisis has shown how challenges and vulnerabilities in our cities are unequal and entangled in complex networks of socio-economic relations. Addressing them to make cities work for everyone and the planet will require systemic approaches across different policy areas such as planning, land management, local governance and digital innovation.

For example, the UN Capital Development Fund (UNCDF) focusses on strengthening subnational finance and inclusive digital economies as parallel channels for its financing models targeting least developed countries (LDCs)[176]. These strands are also highlighted in the UN cross-agency project 'Building Urban Economic Resilience During and After Covid-19' giving technical assistance to 16 global cities to draft financial plans to restore productivity and the local economy in sustainable ways and prioritising low-carbon activities[177].

In rapidly urbanising countries, such as Nigeria[178], infrastructure and construction have been included in the priorities for the recovery. Urban land can have a key role in mobilising finance for the recovery, for example when allocated for green industrial activities, released for housing development, or used as collateral to access credit.

However, if unplanned and not coordinated with policies to direct investments towards sustainable

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[174] UN-Habitat (2021). *World Cities Report 2020: The Value of Sustainable Urbanization*. Nairobi: UN-Habitat.

[175] See the Value Initiative programme by the Small Enterprise Education and Promotion Network 2007 – 2012. Project summary accessed at **https://bit.ly/3j5RJde** on 12-9-2021.

[176] See strategic priorities of UN Capital Development Fund on its official website Accessed at **https://www.uncdf.org/** on 11-10-2021.s

[177] UN Department of Economic and Social Affairs (UNDESA) (2021*). Building Urban Economic Resilience During and After COVID-19 – Project summary*. Accessed at **https://bit.ly/2YVSkaa** on 10-8-2021.

[178] Nyong A. et al (2021). *Nigeria Moves Toward a Sustainable COVID-19 Recovery*. Blog for World Resources Institute. Accessed at **https://cutt.ly/ZRjWzt3** on 12-9-2021.

economic activities, urban growth can perpetuate unsustainable patterns of development and increase the vulnerabilities highlighted by Covid-19. For example, in several larger cities in Africa and Asia, unplanned urban expansion is expected in some of the most productive local croplands with potential effects on urban food security[179].

For the recovery to be sustainable, infrastructure projects and plans should focus on supporting a low-carbon economy and balancing development across first tier and secondary cities. For this to happen, they should align with national urban policies so that infrastructure can enable urban agglomeration effects and encourage firms to locate in cites and become embedded in sustainable value chains.

However, in 2018, only 18 African countries had national strategies focussing on urbanisation. Research into their effectiveness identified a failure to support the urban manufacturing sector to become embedded in national and international value chains as a weakness in several of them[180].

Numerous organisations and coalitions, including the UN[181], have called on nations to target recovery packages towards sectors that can accelerate progress towards net-zero carbon. This includes jobs and training in energy efficiency retrofits, renewables, electric vehicles and sustainable land-use systems. In countries with higher GHG emissions from agriculture such as Ireland and Indonesia, restructuring land systems could support both green jobs and decarbonisation[182].

Many industrial activities are labour intensive, and their transition to sustainable modes of production could help maintain current levels of employments. For example, in the UK, the North of England has expertise in renewable energy generation and storage technologies which has potential to expand. The West Midlands has specialisms in manufacturing vehicle components which could be repurposed and geared up to support new forms of integrated electricity powered mobility[183], for example focussing on shared modes, last-mile travel or subscription-based models which complement instead of competing with public transport.

According to UNCTAD research, in some sectors, such as health, incentives to FDIs could lower production costs and favour knowledge and technology spill-overs along global supply chains, strengthening local healthcare systems and economies through skill development and cooperation with local research institutions[184].

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[179] D'Amour C. B. et al. (2017). *Future urban land expansion and implications for global croplands.* In Proceedings of the National Academy of Sciences of the USA, vol. 114, n. 34, pp. 8939-8944.

[180] Cartwright A. at al. (2018). *Developing Prosperous and Inclusive Cities in Africa - National Urban Policies to the Rescue?*. Cape Town: African Centre for Cities.

[181] UN News (2021). *UN chief urges 'clear and credible' plans to achieve net zero*. Accessed at **https://bit.ly/3vkCSAq** on 15-9-2021.

[182] Organisation for Economic Co-operation and Development (OECD) (2020). *Towards Sustainable Land Use. Aligning Biodiversity, Climate and Food Policies*. Paris: OECD.

[183] Local Government Association (LGA) (2021). *Local green jobs – accelerating a sustainable economic recovery.* London: LGA

[184] UN Conference on Trade and Development (UNCTAD) (2019). *World Investment Report 2019 – Chapter IV. Special Economic Zones*. Geneva: UNCTAD.

The contribution of planning

Sustainable urbanisation is emerging as a cross-cutting opportunity to put the world on track to net-zero and restore biodiversity. The UN has published its landmark 'UN System-wide Strategy on Global Urbanisation' meant to coordinate actions across agencies and programmes to leverage urbanisation processes to achieve global sustainability by 2030[185].

Agencies that have not traditionally engaged with urban development are increasingly identifying urban plans as key instruments to improve outcomes in their areas of focus. UNICEF has identified urban planning principles for improving vulnerable children's lives globally[186]. The UN Secretary General's High-Level Panel on Internal Displacement - a group of high-level experts reviewing the UN-coordinated response to displacement within countries - has advocated for the inclusion of the displaced in local urban plans[187]. The Food and Agricultural Organization (FAO) has issued a framework for engaging local governments and communities in their Food Urban Agenda[188] and the FAO's City-Region Food System Programme is providing technical assistance to nine global cities to mainstream climate and pandemic risk management into food systems, including by designating urban and peri-urban land for sustainable food production and distribution[189].

For urban growth to deliver on these expectations, urbanisation processes will need to be aligned to the growth in sustainable and low-carbon sectors, while curbing unnecessary and wasteful consumption and enabling the phasing out of unsustainable economic activities.

The impacts of the pandemic on cities, and the responses emerging from them, have increased the level of awareness of the role of sustainable urbanisation in fostering development and of cities' position as hubs in the global economy. From a planning perspective, this has led to a resurgence in the interest in 'urban metabolism' approaches – i.e., quantifying the material and energy flows a city mobilises - to introduce targeted measures to decrease demand, increase efficiency and "close the loop" of production, consumption and waste through circular practices. This builds on the experience of development projects focussing on circular sanitation infrastructure and sustainable food systems[190].

However, the high level of technical expertise required to introduce metabolism approaches in cities – exemplified by the comprehensive circular waste and energy infrastructure introduced in the Stockholm neighbourhood of Hammarby Sjostad - have collided with data scarcity and low resources and capacity in cities in the global south. Development projects focussing on urban

[185] UN Chief Executive Board for Coordination and UN-Habitat (2019). *UN System-Wide Strategy on Sustainable Urban Development*. New York: United Nations.

[186] UNICEF (2018). *Shaping urbanization for children. A handbook on child-responsive urban planning.* New York: UNICEF.

[187] UN Secretary General's High-Level Panel on Internal Displacement (2021). *Shining a Light on Internal Displacement: A Vision for the Future.*

[188] Food and Agriculture Organization (FAO) (2019). *FAO Framework for the Urban Food Agenda*. Rome: FAO.

[189] Food and Agriculture Organization (FAO) (2020). *City Region Food Systems Programme. Reinforcing Rural-Urban Linkages for Resilient Food Systems*. Rome: FAO.

[190] Faraud C. (2017). *Urban Metabolism in Practice.* Working Paper 186. London: Development Planning Unit – University College London (DPU-UCL).

metabolism have underestimated the importance of community ownership in policy and intervention design – often linked to structural barriers such as low levels of tenure and job security in informal areas[191].

The emerging 'Doughnut Economics' (DE) approach is being used by subnational governments and city stakeholders to identify the data and information they need for assessing the local, global, and social and environmental implications of their local economies and keep impacts within planetary boundaries. In Cornwall[192] and Amsterdam[193] the DE approach it is being used to assess and design policy, procurement processes, plans and strategies. Countries such as Costa Rica[194] are also exploring its applicability to sectoral national strategies.

Urban vegetable gardens in Havana: Photo credit **Susanne Bollinger** on **Wikimedia Commons**

Some of these developments imply a more extensive application of planning expertise in policy, strategy formulation and programme delivery by a wide variety of actors. The UN System-wide Strategy on Global Urbanisation highlights the importance of cross-sectoral policy coordination -

[191] Korpilo S. (2017). *Integrating the Concept of Urban Metabolism into planning of Sustainable Cities. Analysis of the Eco² Cities Initiative.* Working Paper 168. London: Development Planning Unit – University College London (DPU-UCL).

[192] Local Government Association (LGA) (2021). *Cornwall Council: Doughnut economics in council decision making.* Case study. Accessed at **https://bit.ly/2XlGPIP** on 16-9-2021.

[193] City of Amsterdam (2020). *Policy: Circular economy*. Accessed at **https://bit.ly/3FSrmRL** on 15-9-2021.

[194] Douughnut Economics Action Lab (DEAL) (2021), *Regenerate Costa Rica*. Accessed at **https://cutt.ly/hRhlNn9** on 21-9-2021.

e.g. through national urban policies[195] - to ensure that, in rapidly urbanising countries, urban economies of agglomeration have a role in multiplying and balancing the benefits of sustainable economic development across cities and regions.

The success of such urban policies will be linked to their ability to foster an effective coordination across areas such as food systems, housing provision, land management and infrastructure. For example, in Zambia, food considerations are being included into the National Urbanisation Policy and the currently being discussed Urban and Regional Planning Act[196].

Well-resourced and multi-skilled local planning departments should have a key role in co-ordinating these endeavours. However, a survey of the built environment professions in Commonwealth countries – home to one third of the global population - supported by the Royal Town Planning Institute, shows that planning capacity is critically low in many developing countries members of the Commonwealth[197]. To support the recovery, urban planning expertise will need to be made available to a wide range of actors, including finance institutions, investors and development actors. The capacity and skills of local planning departments to engage and support other stakeholders to address complex and ramified issues will need to be significantly increased. Among the key areas where the contribution of planning expertise will be key are:

- **Sustainably meeting the land needs of sectors which can deliver emission reductions, environmental gains and decent job growth along their value chains.** This will require using strategic planning across wide geographical areas and making planning expertise available to different actors to ensure the sustainability and resilience of value chains and logistics and the inclusion of all sectors of society in a global low-carbon economy. It will also need a close engagement with business groups, trade unions, informal workers' associations, communities, infrastructure providers, investors etc.

- **Linking digital technology adoption to urban socio-economic inclusion.** Effectively spreading the benefits of digital technology should focus on improving local regulatory environments and capacity to support non-standard and informal workers in adopting technology that suits their needs and includes them in sustainable value chains, making their livelihoods more resilient and urban space and policy more inclusive of their needs.

- **Coordinating investments in a low carbon economy with upfront infrastructure provision through national urban policies.** New infrastructure should be aimed at balancing development across cities and promote low-carbon activities. National urban policies, with close involvement from infrastructure providers, communities, and local stakeholders, can provide confidence for investors, and ensure that measures taken to stimulate growth in low carbon sectors are enhanced by urban economies of agglomeration focussed on sustainable and resilient value chains.

[195] UN-Habitat (NA). *National Urban Policies*. Accessed at **https://bit.ly/2Z2fj3Q** on 21-9-2021.

[196] Food and Agriculture Organization (FAO) (2020). *City Region Food Systems Programme. Reinforcing Rural-Urban Linkages for Resilient Food Systems*. Rome: FAO.

[197] Commonwealth Association of Planners (CAP) et al. (2020). *Planning for Climate Change and Rapid Urbanisation – Survey of the Built Environment Professions in the Commonwealth*. Edinburgh: CAP

3. Travel and Urban Infrastructure

3.1. Observations

Covid-19 and the viability of transport systems

Restrictions imposed to stop the spread of Covid-19 have dramatically altered people's daily lives, impacting how they move. In many cities globally, the risks posed by overcrowding on public and shared modes of transport, at urban stations and transport hubs resulted in strict limitations to their use imposed across global cities[198]. It also resulted in temporary traffic measures to give pedestrians a larger share of urban streets to limit the risk of contagion from Covid-19.

Changing mobility patterns have fluctuated globally with the tightening and easing of restrictions. Where official data are lacking and transport needs are met by a combination of formal and semi-formal providers, mobile phone data render a picture of shifts in travel patterns. The Google Community Mobility Report for Bangladesh as of 21 April 2021 - when the government had introduced restrictions on movements and ordered the closure of non-essential shops and services[199] - suggests visits to retail and recreation places were down 37% and visits to public transport hubs by 33% while trips within and to residential areas were up 20%[200] compared to a median value calculated over five weeks in early 2020[201].

In other places, where restrictions have been eased, travel behaviour reflects this. Phone data for Zambia for 21 April 2021 for example, where restaurants, bars, gyms and casinos were allowed to reopen with social distancing[202], suggests a 16% increase in visits to retail and recreation and a 16% increase in the use of public transport[203].

Research on global mobility data across 16 countries in the global south, indicates that visits to public transport hubs had fallen by as much as 80% in August compared to early March 2020[204]. In cities around the world, such as London, Lagos, Johannesburg, Rio de Janeiro and Addis Ababa restrictions on the number of passengers on transport services caused significant losses in

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[198] Sidel J. (2020). *What are the challenges faced by urban transport in the Global South?* Blog for London School of Economics accessed at **https://bit.ly/3BUd9Bt** on 21-9-2021.

[199] India.com (2021). *Bangladesh Announces 8-Day Complete Lockdown till April 21, Suspends International Flights.* Accessed at **https://cutt.ly/uRjYVOC** on 12-9-2021.

[200] Google (2021). COVID-19 *Community Mobility Reports. Bangladesh report – 20 April 2021.* Accessed at **https://cutt.ly/zRsWQIh** on 21-4-2021.

[201] Google (2021). COVID-19 *Community Mobility Reports.* Accessed at **https://cutt.ly/XRsWGs6** on 21-4-2021.

[202] Garda World (2021). *Zambia: COVID-19 restrictions remain in place nationwide as of May 4 /update 9*. Accessed at **https://cutt.ly/rRsWVyl** on 12-9-2021.

[203] Google (2021*). COVID-19 Community Mobility Reports. Zambia report – 20 April 2021*. Accessed at **https://cutt.ly/zRsWQIh** on 21-4-2021.

[204] Bird J. et al. (2020). *Impact of COVID-19 on public transport*. Blog for International Growth Centre accessed at **https://cutt.ly/xRsEqSW** on 9-9-2021.

revenue for official transport operators[205]. In Brazil, The National Association of Urban Transport estimated the loss in fare income to $180 million a day during lockdowns[206].

With ridership significantly impacted, transport providers have faced challenges to the viability of their operations[207]. Supported by the World Bank, the largest provider of development financing for transport globally, many countries have developed emergency responses to the impacts of the pandemic, which included making financial support available to transport operators[208]. However, in many cities in developing countries, shared transport modes can often fill the gaps left by other forms of public transport. These can often be semi-formal and run by small operators poorly regulated by city or transport authorities. Bus owners, minivan drivers or taxi and shared ride drivers earn income only if they carry passengers and are therefore more vulnerable to fluctuations in ridership leading to substantial increases in fares during lockdowns in cities such as Dakar and Kumasi[209].

Semi-formal and informal transport workers are also more likely to slip through the net of government support packages. In Nairobi restrictions have been imposed on 12,000 to 18,000 estimated minivans (*matatus*)[210] impacting the livelihoods of informal and precarious transport workers. In Monrovia 11% of urban jobs are estimated to be directly linked to the transport sector[211]. Despite hardships, such transport providers have often introduced social and technological innovation to reduce the spread of Covid-19[212].

Access to safe, affordable and inclusive public transport

The pandemic has put the access to safe and affordable transport at risk. Transport plays a crucial role in connecting people to goods, services and to social and economic opportunities. It also supports the economic agglomeration effects that make urbanisation a driver of global development. Its disruption in cities of the global south has led to concerns about the viability of transit systems and the economic survival of smaller transport providers with cascading effects on the livelihoods of the urban poor and vulnerable.

Globally, the pandemic has led to an enduring reduction in the use and availability of public transport. In low- and middle-income countries, restrictions on the use of public transport have

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[205] Ibid.

[206] Transformative Urban Mobility initiative (TUMI) (2020). *The COVID-19 outbreak and implications to sustainable urban mobility – some observations*. Accessed at **https://cutt.ly/KRsEUuV** on 12-9-2021.

[207] Africa Transport Policy Program (SSAP) (2020). *Urban Mobility and Covid-19 in Africa*. Washington: World Bank Group.

[208] World Bank (2020). *World Bank Group Response to Covid-19. The Transport Sector a Mobility Crisis*. Washington: World Bank Group.

[209] Africa Transport Policy Program (SSAP) (2020). *Urban Mobility and Covid-19 in Africa*. Washington: World Bank Group.

[210] Al Jazeera (2020). *In Pictures: Riding Kenya's matatus amid new coronavirus measures*. Accessed at **https://cutt.ly/URsRfDX** on 12-9-2021.

[211] Africa Transport Policy Program (SSAP) (2020). *Urban Mobility and Covid-19 in Africa.* Washington: World Bank Group.

[212] Ibid.

further exposed spatial inequality when lockdown measures have effectively confined poorer communities in locations disconnected from urban markets and jobs in central locations. In Addis Ababa, Lagos and Johannesburg for example, public buses have had to reduce capacity up to 60% to keep passengers safe and there has been a significant drop in public transport use across cities in the Asia-Pacific region[213]. Cities in low- and middle-income countries also have a greater proportion of people who rely on public transport, shared mobility or walking to access services and jobs[214]. Where curfews have been imposed, such as in South Africa or Kenya, travelling safely in large, densely populated urban areas has also posed new risks from a surge in private traffic[215].

Even before the pandemic, access to safe and affordable transport was spatially unequal. Evidence from Nairobi, suggests that the share of employment opportunities within one hour of travel, is up to five times higher for those with cars compared to those on shared transport, mini-vans or on foot and in Bogota, employment opportunities are concentrated in corridors accessible through the city public transport system which covers poorly the most deprived urban and peri-urban areas[216]. The pandemic has also exacerbated inequality of access to transport for physically challenged and older people[217].

In many developing countries formal public transport is among the more expensive modes available to households, forcing vulnerable users, such as low-income women, to revert to cheaper modes often provided by semi-formal and informal operators. This has road safety implications. In Nigeria for example, data suggests that 83% of men travel as single passengers while only 8% of women do, mainly due to being accompanied by children. The same study found this to have unequal safety impacts, with a significantly higher number of female than male passengers involved in three or more accidents per year, with serious and often fatal consequences for children[218]. Evidence also shows that women can face additional burdens associated with unpaid care work and commitments which create new needs for women to travel[219]. In Sub-Saharan Africa, Covid-19 has imposed new mobility constraints on women[220].

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[213] United Nations Centre for Regional Development (UNCRD) and United Nations Economic and Social Commission for Asia & the Pacific (UNESCAP) (2020). *Intergovernmental 13th Regional Environmentally Sustainable Transport (EST) Forum In Asia - Background paper for Policy Dialogue 1*. Aichi: UNCRD.

[214] Walk21 Foundation (2021). '*Our walking is our asset': Exploring the way in which walking is valued in pedestrian practice and policy in African cities*. High Volume Transport – Applied Research. Redhill: IMC Worldwide.

[215] BBC (2021). *Kenya Covid Rules Leave Thousands Stranded in Traffic*. Accessed at **https://cutt.ly/XRsR4LX** on 11-9-2021.

[216] Bird J. et al. (2020). *Impact of COVID-19 on public transport*. Blog for International Growth Centre accessed at **https://cutt.ly/xRsEqSW** on 9-9-2021.

[217] Rahman S. U. (2021). *Final Report: Impact of Covid-19 On The Mobility Of Physically Challenged People And Older People.* High Volume Transport – Applied Research. Redhill: IMC Worldwide.

[218] World Bank (2020). *World Bank Group Response to Covid-19. The Transport Sector a Mobility Crisis*. Washington: World Bank Group.

[219] Organisation for Economic Co-operation and Development OECD (2020). *Women at the Core of the Fight Against COVID-19 Crisis*. Paris: OECD.

[220] Jennings G. and Arogundade E. (2021). *Women Were Put On The Back-End: Covid-19 Mobility Constraints And Their Lessons And Implications For Gender-Equity In Sub-Saharan Africa*. High Volume Transport – Applied Research. Redhill: IMC Worldwide.

In rural areas, where the majority of poor people live globally, limited connectivity is a critical constraint to development. According to the World Bank Rural Accessibility Index, about 450 million people in Africa — or more than 70% of its total rural population — are estimated to have been left unconnected due to missing transport links during the pandemic[221].

The issues of limited mobility disproportionally affect small businesses and producers in their ability to bring products to urban markets and how they access distribution networks and essential services. In response to the pandemic, development actors are supporting countries to reprioritise rural transport investments to address critical road links to hospitals and urban markets and services[222]. If planned to align with sustainable urbanisation objectives, such links can enable suburban transport links and connect poorer rural hinterlands to the opportunities found in growing secondary cities and towns.

Road safety and air quality

In many low- and middle-income countries, non-motorised transport (NMT) users represent a significantly higher proportion of people commuting and travelling in cities[223]. This is often due to necessity: for example, in Sub-Saharan Africa transport costs in cities had reached 20% of average household income in larger cities in 2005[224]; as a result of the pandemic two daily trips now represent 60% of daily household income of the bottom 20% urban dwellers in Accra and 47% in Monrovia[225].

However, car use is globally on the rise as growing middle classes and sprawling urbanisation encourage car-dependent patterns of development: in Malaysia, the number of car trips is projected to increase from 40m daily trips in 2010 to 131m in 2030[226].

In many cities the reduction in car traffic caused by lockdowns has been taken as an opportunity to rapidly introduce dedicated cycling lanes with a view to encourage a long-term systemic shift towards active travel[227] with reported improved road safety for NMT users. In July 2020, Ethiopia announced a 56% reduction in road related deaths due to lower traffic volumes compared to the same period the year before[228] However, the number of fatalities per kilometre travelled increased

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[221] Sustainable Mobility for All (2017). *The Global Mobility Report 2017*. Washington: Sustainable Mobility for All.

[222] World Bank (2020). *World Bank Group Response to Covid-19. The Transport Sector a Mobility Crisis*. Washington: World Bank Group.

[223] Bird J. et al. (2020). *Impact of COVID-19 on public transport*. Blog for International Growth Centre accessed at **https://cutt.ly/xRsEqSW** on 9-9-2021.

[224] Vanderschuren M. (2012). *Non-Motorised Transport in Africa*. Chapter in Williams R. (2012). The Sustainable Transport & Mobility Handbook. Alive2Green

[225] Africa Transport Policy Program (SSAP) (2020). *Urban Mobility and Covid-19 in Africa*. Washington: World Bank Group.

[226] Free Malaysia Today (2018). *Number of Malaysians using vehicles to increase 1.4 times by 2030*. Accessed at **https://cutt.ly/YRsYm1J** on 11-9-2021.

[227] BBC (2020). *How cities are clamping down on cars*. Accessed at **https://cutt.ly/ARsYV1L** on 6-8-2021.

[228] UN-Habitat (2020). *UN-Habitat calls for cities to use pandemic as an opportunity to improve cycling and walking infrastructure.* Accessed at **https://cutt.ly/2RsY7S5** on 12-10-2021.

with contributing factors such as higher speeds due to lower traffic volumes and a larger proportion of more vulnerable pedestrians unable to access shared transport as result of restrictions[229]. Between 40 and 80% of fatalities in low-income countries are NMT users[230].

Street scene in Kampala: Photo credit **Random Institute** on **Unsplash**

The pandemic has also further highlighted the need for action on pollution as there are links between air pollution and incidence of many non-communicable illnesses. In 2016, air pollution in both urban and rural areas accounted for an estimated 4.2m premature deaths globally, with 91% of these occurring in low and middle-income countries, particularly in the WHO region of the Western Pacific, which includes China, Vietnam and Malaysia[231].

Road transport accounts for a significant proportion of emissions of all the main air pollutants (with the exception of sulphur oxides)[232], and almost 12% of GHG emissions in 2016[233]. The cost associated with health damage from ambient air pollution is estimated to be $ 5.7tn, equivalent to

[229] Schafer H. (2020). *Road safety matters, more so during COVID-19*. Blog for World Bank Group accessed at **https://cutt.ly/0RsUyXI** on 12-9-2021.

[230] UN Environment Program (UNEP) (2016). *Global Outlook on Walking and Cycling.* Nairobi: UNEP

[231] World Bank (NA). *Pollution.* Accessed at **https://cutt.ly/xRsIJK1** on 12-9-2021.

[232] European Environment Agency (2018). *Indicator Assessment - Emissions of air pollutants from transport*. Accessed at **https://cutt.ly/xRsOeeu** on 12-9-2021.

[233] Ritchie H. (2020). *Sector by sector: Where Do Global Greenhouse Gas Emissions Come From?* Blog for Our World in Data accessed at **https://cutt.ly/NRsOkhE** on 12-9-2021.

4.8% of global GDP[234]. While lockdowns and reduced transport emissions presented some improvements in air quality, recent evidence suggests that pollution rebound sharply as restrictions lifted with implications for climate change, public health and economic development[235].

3.2. Implications for the recovery

Unequal investments in transport

Currently, much of the world's urban growth is poorly managed or planned, resulting in disconnected or sprawling communities whose mobility needs are not being met. As the world urban population is set to increase by 2.5 bn people to 2050[236], the need to provide land for affordable and adequate housing, integrating and upgrading informal areas and delivering affordable and inclusive transport are interlinked.

Increased public spending in the global north due to Covid-19 is shifting donors' attitudes: a report from Development Initiatives shows that in 2020 bilateral donors have decreased aid commitments by 17% from 2019 with five seeing falls by 40% or more – with the biggest cut from the UK. Data suggests that Official Development Assistance (ODA) remains supportive of infrastructure projects [237].

In many places, building urban roads is a key focus of interventions[238] as road infrastructure is expected to more efficiently increase revenues through direct taxation (e.g. on land designated for urban development). However, urban roads have a poor record of advancing sustainability objectives, particularly if not coordinated with housing and transport delivery through inclusive local strategies[239].

Investments are also unequal. Last year the bulk of infrastructure ODA went to large developing economies such as India, Indonesia, Egypt and China, where viability is seen as more certain, rather than in least developed countries where it has a critical role for initiating capital intensive infrastructure projects. In Ghana, classified as a middle-income country since 2007, investments are increasing energy reliability and security[240] and there is confidence that private investments

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234 World Bank (NA). *Pollution*. Accessed at **https://cutt.ly/xRsIJK1** on 12-9-2021.

235 Financial Times (2020). *Air pollution rebounds in Europe's cities as lockdowns ease.* Accessed at **https://cutt.ly/SRsOxi4** on 12-9-2021.

236 UN Department for Social and Economic Affairs (UNDESA) (2018). *Around 2.5 billion more people will be living in cities by 2050, projects new UN report*. Accessed at **https://cutt.ly/WRsOITh** on 21-9-2021.

237 Development Initiatives (2020). *How is aid changing in the Covid-19 pandemic? Briefing*. Bristol: Development Initiatives.

238 See for example: Business Daily (2016) W*orld Bank deal paves way for work on Nairobi's first elevated highway*. Accessed at **https://cutt.ly/SRsSicr** on 12-9-2021; African Development Bank (ADB) (2016) *African Development Bank Group approves loan to improve urban transport in Abidjan*. Accessed at **https://cutt.ly/QRsShXY** on 12-9-2021; and Pulse (2016) *Lagos state government to decongest roads with highway expansion*. Accessed at **https://cutt.ly/qRsSQYB** on 12-9-2021.

239 Goodfellow T. (2020). *Massive African infrastructure projects often hurt, rather than help, local people* Blog for The Conversation accessed at **https://cutt.ly/0RsSLWy** on 16-9-2021.

240 International Finance Corporation - World Bank Group (2017). *In Ghana, Reliable Energy Promises Reliable Progress.* Accessed at **https://cutt.ly/KRsS86y** on 18-9-2021.

can be mobilised to fund sustainable infrastructure projects despite economic uncertainties. The Ghanaian government has released plans to attract private investment to deliver ambitious intercity and urban rail infrastructure mobilising up to $ 12.9 bn in investments[241].

However, the already mentioned “scissors effect” on local governments’ finance is resulting in a decrease and suspension of transport projects and lower maintenance of existing transport infrastructure. In South Africa, a decline in ridership on bus rapid transit (BRT) systems and commuter railways has led the government to question the viability of continued public subsidies to fares[242].

Covid-19 and systemic transport shifts

According to the Institute for Transport and Development Policy (ITDP), Covid-19 has exposed the shortfalls in transposing mass transit models across contexts and highlighted the need to better adapt solutions, such as bus rapid transport (BRT) systems, to the local social, spatial and economic context. A key issue revolves around the competition between formal and semi-formal transport operators which can result in unviable infrastructural investments, unaffordable transport options for the urban poor as well as an erosion of the livelihoods of precarious transport workers. For example, a failure to adapt the ‘trunk-feeder’ BRT model developed for Curitiba (with primary long-distance bus lines accessed through slower local services) is thought to be a root cause of the public transport economic viability and social sustainability issues experienced in Johannesburg since the introduction of its BRT system[243].

In many cities, the decrease in traffic due to the pandemic has given local governments’ an opportunity to first experiment and then introduce systemic changes to urban mobility with a view to permanently reduce car trips and promote a more widespread adoption of active travel and public transit as primary modes. Bogota[244] and Paris[245] have rapidly expanded their network of cycling lanes, and Milan has pioneered a city wide and low-cost approach to turn car-oriented urban spaces into pedestrian-friendly places involving communities in their redesign[246]. Kampala has introduced pilot projects to make some central streets more friendly to pedestrians and

[241] International Rail Journal (2021). *Ghana outlines $US 12.9bn worth of rail projects to attract private investment.* Accessed at **https://cutt.ly/JRsDraA** on 17-9-2021.

[242] Institute for Transportation and Development Policy (ITDP) (2021). *The Role of BRT in Post-Pandemic South Africa*. Blog for ITDP accessed at **https://cutt.ly/aRsDW2W** on 19-9-2021.

[243] Ibid.

[244] Smart Cities World (2020*). Bogotá expands bike lanes to curb coronavirus spread*. Accessed at **https://cutt.ly/2RsDZgn** on 18-9-2021.

[245] Forbes (2020). *Paris To Create 650 Kilometers of Post-Lockdown Cycleways*. Accessed at **https://cutt.ly/eRsDNzQ** on 20-9-2021.

[246] Public Space (2021). *The Role of Public Space in Post-COVID-19 Cities.* Accessed at **https://cutt.ly/ORsD8iZ** on 16-9-2021.

bicycles[247]. In the UK, cities such as London[248] and Glasgow[249] have introduced low traffic neighbourhoods (LTNs) which prioritise cycling and walking and encourage a shift to electric vehicles (EVs) by providing new kerbside charging points.

In many Southeast Asia cities with high presence of international tourists pre-pandemic, such as Hanoi, Penang, Bangkok or Siem Reap, areas which prioritise pedestrians can be concentrated around tourist and heritage sites, leaving cities such as Bangkok - and its tourism sectors - to face challenges and new opportunities in finding suitable uses for them as global tourism flows remain low[250].

3.3. How planning can support the recovery

Supporting "avoid-shift-improve" approaches

In 2015, the UN adopted the Addis Ababa Action Agenda (AAAA) for aligning global financing flows and policies with local sustainable development priorities. The agenda highlighted the importance of efficient and inclusive transit systems as part of infrastructure investments and quantified the gap to fund adequate infrastructure between $ 1tn and $ 1.3tn a year for developing countries. It also recognised the different challenges faced by both low-income countries and middle-income ones and their equally important - albeit different - implications for sustainable development and curbing emissions[251].

Following the adoption of the AAAA, the UN Secretary-General's High-Level Advisory Group on Sustainable Transport position paper recommended that recognition is given to the different transport solutions and innovations existing across the global north and south and that exchange of knowledge in both directions should be pursued to sustainably meet global transport needs and curbing emissions. However, they also recognised that a single overarching global policy approach of "avoid-shift-improve" should be adopted independent of context[252]. This means adopting measures for curbing demand for unnecessary and unsustainable travel – namely disincentivising private fossil fuel-powered transportation -, shift travel demand to sustainable modes and active travel, and improve the ability of transport systems to create benefits for society at large – namely through social and gender inclusion and connecting the poor and vulnerable to urban economic opportunities.

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[247] Ngabirano M. (2020). *Kampala's Inspiring Journey Towards a Cycling-Friendly City*. Blog for Urbanet accessed at **https://cutt.ly/XRsFqsc** on 18-9-2021.

[248] Bloomberg (2020). *In Covid-19 Recovery, London Bets Big on Low Traffic.* Accessed at **https://cutt.ly/QRsFyB6** on 12-9-2021.

[249] Glasgow City Council (2021). *Spaces for People: Dennistoun.* Accessed at **https://cutt.ly/CRsFsxq** on 21-9-2021.

[250] Deutshce Welle (2020). *Coronavirus: Bangkok's backpacker strip stares at uncertain future.* Accessed at **https://cutt.ly/BRsFhC9** 19-9-2021.

[251] United Nations (2015). *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda)*. New York: United Nations.

[252] United Nations Secretary-General's High-Level Advisory Group on Sustainable Transport (2015). *Position Paper on Financing Sustainable Transport.*

This chapter has identified how restrictions and the economic downturn caused by Covid-19 has hampered access to transport across global cities and increased risks for the long-term viability of transit systems in many places. If not addressed, unequal accessibility and connectivity can exacerbate the patterns of socio-economic inequality highlighted in the first chapter and increase health and safety risks across cities and world regions.

The recovery from the pandemic presents an opportunity to reconfigure transport networks for universal access, safety and decarbonisation to help improve access to essential services, expand job opportunities and foster inclusive and sustainable urban growth. This will require a focus on supporting both public transport operators and semi-formal and informal providers of shared mobility through the crisis to ensure prices are affordable and that the reallocation of road space (for bus lanes, active travel etc.) are inclusive.

Digital technology and comprehensive transport approaches

To address the issues outlined above, solutions will need to be focussed on individuals incentivising owners to shift to sustainably powered vehicles, for example by retrofitting vehicles to be electric. Pilot projects and start-up ventures in places such as Kampala[253] and Nairobi[254] are supporting shared minivans and moto-taxi (*boda boda*) owners to retrofit their vehicles. In several European countries[255], support packages during the pandemic have given subsidies to buy electric bicycles and scooters.

Investing in technology will be also key: transport is one of the areas where its adoption is most promising in terms of improving development outcomes. The use of the digital protocol 'General Transit Feed Specification' (GTFS) for collecting and sharing transport data has enabled the inclusion of semi-formal minivan routes into user-friendly transit maps and route planning applications in Nairobi[256] and Mexico City[257], increasing their accessibility and reliability. In Kampala, the SafeBoda app links customers with moto-taxi drivers who have received road safety training, are insured, carry safety-rated helmets and are identified through an online profile[258].

Government intervention and policies are driving transport innovation in many places. In China, government policy provided tax exemptions and financial incentives to EVs manufacturers and stimulated demand for electric powered urban buses through its 'Public Transportation First' policy[259]. In Malawi, the Department of Civil Aviation (DCA) worked with UNICEF to designate a

[253] Zembo (2020). *Electric Boda Bodas.* Helsinki: Nordic Development Fund (NDF) and Energy and Environment Partnership Trust Fund (EEP Africa).

[254] CleanTechnica (2019). *EV Conversions Go Mainstream in Kenya*. Accessed at **https://cutt.ly/aRs1QTA** on 12-9-2021.

[255] European Cyclists Federation (ECF) (2020). *Money for bikes: financial incentives give cycling in Europe a boost during COVID recovery.* Accessed at **https://cutt.ly/yRs1Uuv** on 21-9-2021.

[256] For more information, see the website of the project Digital Matatus. Accessed at **http://digitalmatatus.com/about.html** on 11-9-2021.

[257] International Transport Forum (ITF) (2019) *App-Based Collective Transport Service in Mexico City: A Start-Up Case Study Discussion Paper*. Paris: OECD.

[258] For more information, see the website of the project Digital Matatus. Accessed at **https://safeboda.com/ug/** on 11-9-2021.

[259] United Nations Global Compact and World Resources Institute (WRI) (2018) *The Ambition Loop.*

drone corridor to deliver medical supplies to remote areas and collect spatial data with a view to study the viability of aerial deliveries[260].

The contribution of planning

A key contribution from planning will be place-focused and area-based solutions to ensure that unnecessary trips are avoided and that investments in urban infrastructure are coordinated with an increased offer of sustainable and inclusive - both shared and public - transport.

The pragmatic and demand-sensitive integration of informal areas in formal planning through context appropriate approaches is vital to this, even though caution should be used when dealing with uncertain tenure status. As travel demand increases, sensitively integrating informal areas into urban transport and infrastructure plans, can help maintain the high levels of active travel prevalent in them while promoting economic and social development[261].

Comprehensive transport planning should prioritise context-appropriate infrastructural investments, be joined up with other city strategies, and introduce governance structures to deliver inclusive transport equitably across communities and different municipalities in larger city regions. For example, the Medellin Metro Cable, a system of gondola lifts feeding passengers to a high-capacity metro system, has been designed to expand the urban transit system to hillside deprived communities and connect them both to central locations and the wider urban area[262]. It has also been accompanied by a programme to improve walkability and create local public libraries alongside its new stations as part of a city-wide programme of informal area upgrades[263].

In Algeria, since 2011, six cities have inaugurated a new tramway line, including secondary ones such as Setif and Sidi bel Abbes, and most have plans for extending them[264]. In Oran, the new tramway has been paired with plans to direct urban sustainable development[265].

Ground-breaking research reviewing the walkability policies of several African cities indicates that significant progress to safety and social and economic development could be attained through better co-ordination and a fairer allocation of existing resources to improving city-wide walkability[266].

Washington: World Resources Institute.

[260] International Transport Forum (ITF) (2019*), Transport Innovations from the Global South Case Studies, Insights, Recommendations.* Paris: OECD.

[261] The International Association of Public Transport (UITP) (2021). *Key Insights into Transforming the Informal Transport Sector.* Brussels: UITP.

[262] Centre for Public Impact (2016) *The Metrocable: transport by urban cable car in Medellín.* Accessed at **https://cutt.ly/yRs0E3C** on 21-9-2021.

[263] For more information see the outputs of the 'Metrocables' research project of Development Planning Unit – University College London (DPU-UCL). Accessed at **https://cutt.ly/0Rs0Dk2** on 21-9-2021.

[264] Urban transport Magazine (2019). *New tram systems in Algeria – further projects are planned*. Accessed at on 16-9-2021.

[265] Said G. (NA) *Sustainable Urban Development Practices in City Centre: Tentative Analysis of Projects in Progress in Oran, Algeria*. In Sustainable Architecture and Urban Development. Vol. NA, pp. 237-250.

[266] Walk21 Foundation (2021). *'Our walking is our asset': Exploring the way in which walking is valued in pedestrian practice and policy in African cities*. High Volume Transport – Applied Research. Redhill: IMC

Medellin Metro Cable: Photo credit Jorge Lascar on **Wikimedia Commons**

A UN-Habitat report on the upgrading of streets and public spaces in informal areas shows that, if co-ordinated by city-wide plans and strategies, street interventions can improve active travel and how the urban poor access transport. For example, approaches used in Manila and Rio de Janeiro have strategically identified streets for priority upgrades to allow public transport to reach slum communities and decrease safety risks and environmental pollution. Street improvements, when paired with measures to increase tenure security, have resulted in poor communities investing in their built environment, for example by opening shops on refurbished streets which have seen an increase in footfall[267].

Cities that have a history of investment in accessible and inclusive public transport can capitalise on past investments to expand their residents' digital connectivity. Curitiba is using the network created by its BRT system to deliver complementary broadband infrastructure, both to improve its transport offer through better data models and to expand access to the internet[268].

For the positive effects of such investments to reverberate across urban communities these should be joined up and coordinated by cross-sectoral strategies of urban service and housing delivery and informal area upgrades, which can align private and public investments to serve multiple development objectives at the same time. This approach can be hampered by funding

Worldwide.

[267] UN-Habitat (2012). *Streets as Tools for Urban Transformation in Slums: a Street-Led Approach to Citywide Slum Upgrading.* Nairobi: UN-Habitat.

[268] United Nations Climate Change (2017). T*he Buses of Brazil: Connectivity - Intelligent Transport Solution*. Accessed at **https://cutt.ly/FRs2yT1** on 14-9-2021.

mechanisms that privilege infrastructure projects based on their economic viability, for example based on land value appreciation alone, instead of cross-cutting sustainability objectives guided by plans formulated with communities.

Dramatically reducing fossil fuel dependency while increasing the offer of sustainable transport modes is key to meet both sustainability and emission reduction objectives. In many developing countries this can be apparently in conflict with the objectives of rapidly improving critical connections, e.g. of hinterlands to cities. It can also be hampered by low technical capacity – for example to design and build tramway and light rail infrastructure - , a lack of reliable energy grids and limited skills for manufacturing and repairing EVs – such as electric buses - or retrofitting traditional ones.

This makes directing investments towards renewable energy, green infrastructure and industry key to drive development and avoid externalities from poor air quality and road fatalities. It can also contribute to energy security and lock in future emissions as demand for energy and travel increases.

However, low- and middle-income countries have far fewer responsibilities in the current climate crisis and rely on fossil fuels for achieving key development objectives and meeting the essential needs of their populations. For example, Bangladesh has used its nationalised gas resources for power generation, industrial growth, the development of its fertilizer sector, water supply for irrigation, and cement production rather than making it available for home consumption. As a result of this and other policies, it has become self-sufficient in terms of food production in 2019[269]. This exemplifies how a phasing out of fossil fuels will need to be conducted sensitively and with ambitious albeit proportionate timescales giving appropriate support to countries according to principles of fairness and international climate justice.

Investing in sustainable transport globally will support the efficient allocation of energy to meeting the most pressing development needs. Plan-led place-based approaches should be centrepieces in the efforts to decarbonise cities and be catalysts of inclusive placemaking and healthier and more resilient communities. Integration of transport and land use planning is essential to ensure that a wide range of outcomes are met through joined up strategies, coordinated investments and long-term city visions. Among the key areas where planning can make a contribution are:

- **Planning for mixed-use communities with accessible local services and networks of adequate walkable roads linked to inclusive transport systems.** Effective land use planning can help promote sustainable settlement patterns which are compact and mixed-use and ensure access to essential amenities such as markets, schools, basic health care and local jobs via active travel and sustainable shared modes of transport. Such approaches can be also applied to retrofit existing urban areas, namely informal ones, by conducting upgrades that introduce mixed land uses and services, focus on strategic provision of multiple infrastructure and increase tenure security.

- **Coordinate context-appropriate urban infrastructure investments with inclusive urban strategies and plans formulated with communities.** Investments should focus on

[269] The Atlantic (2021). *Bangladesh Really Is a Climate Success Story*. Accessed at **https://cutt.ly/QRs2gNN** on 4-10-2021.

context-appropriate transport infrastructure that favour a shift to sustainable transport modes for the largest number of transport users but also improve resilience and development outcomes for vulnerable and poor urban communities. This will require identifying the most appropriate transport networks based on economic viability as well as social value and ensure that interventions are designed to include deprived urban areas linking them to economic opportunities. Interventions should prioritise local walkability and promote an integration with improved and inclusive semi-formal transport provision. This will require comprehensive consultation with key stakeholders, such as transport workers and slum communities whose transport needs are not being met.

- **Invest in digital technology that makes transport systems integrated, safe and affordable and enables them to deliver multiple development outcomes.** Investments in transport infrastructure should be used as opportunities to deliver complementary digital infrastructure with a view to support the reliability and accessibility of semi-formal transport networks and include their workers in socially inclusive systemic transport shifts. This should support their integration – rather than competition - with formal transit systems and benefit the communities that rely on their services increasing road safety as well as social and gender inclusion.

Conclusion

Cities and the global recovery

This paper describes a wide range of impacts observed during the pandemic and discusses their implications for the recovery. Lessons learned in the response should inform how we advance sustainability and biodiversity objectives and support GHG emissions reductions in ways that are both ambitious and inclusive and fair.

Significant impacts on urban communities have been linked to poor housing and localised poverty and exclusion, as well as to disconnectedness and a lack of affordable and inclusive transport. Rectifying these shortcomings will be key to the future resilience of the global economy. It will also help protect the most vulnerable from the projected impacts of the climate and biodiversity crisis. As cities grow globally, addressing housing and transport will also be central to ambitious emissions reductions: in 2016, energy use in buildings and for transportation accounted together for over one third of global GHG emissions.

However, the pandemic has also shone a light on the vulnerability of the world economy and the role of cities as hubs in it. Shifts in consumption patterns have been observed where lockdowns have encouraged new ways of buying products and accessing services online while industrial shutdowns, reverse migration flows and disruption to logistics networks have impacted labour and production.

Urban dwellers' lifestyles - such as their diets - are linked to significant shares of emissions across GHG sectors and grave habitat losses, e.g. in tropical rainforests. As the global population grows and urbanises, cities will have an increasingly larger role in the material and energy flows that underpin the world economy and, if unaddressed, will result in further unsustainable impacts.

As the world emerges to a new normal, countries should aim at levering a new demand for sustainable products and services and positioning the relevant economic activities within sustainable and inclusive value chains that can grow a low-carbon economy. A more widespread adoption of digital technology should aim at facilitating this and focus on including the most vulnerable in society.

Countries should also aim at introducing circular and regenerative economic practices to help the sectors underpinned by unsustainable resource extraction - and where the downturn may translate into permanent job losses - to convert and restructure. This should happen in ways that are fair across communities and countries. The investments in the recovery from Covid-19 offer an opportunity to push forward far-reaching carbon emissions and sustainable development objectives.

Planning the recovery and delivering on the Paris Agreement

A commitment to the 'Paris Agreement' – operationalising the UN Framework Convention on Climate Change (UNFCCC) – requires countries to present or update a diverse set of strategies and pledges co-ordinating national climate action. These include Nationally Determined Contributions (NDCs) for emissions reductions, National Adaptation Plans (NAPs), Long-term Low GHG Emission Development Strategies (LT-LEDS) and measures to transfer and adopt technological innovation for effective climate action.

Making these strategies, measures and pledges dovetail presents significant challenges. Their complexity and scale, the trade-offs between them and the evolving constraints they are subject to pose obstacles to their implementation.

For example, NDCs need to consider demographic projections: in many places lowering emissions will need to accommodate enough energy production to meet the demand of a considerably increased population. NAPs will need to take into account evolving settlement patterns: in many places ensuring people's safety and resilience to more frequent extreme weather events will need to be negotiated with increased migration to places of economic opportunity - such as global coastal cities.

Urban planning is key to co-ordinating efforts in these areas. Making appropriate planning powers over land development as well as finance and resources accessible to subnational governments will be instrumental to initiate and sustain the delivery of immediate and ambitious co-ordinated actions across places – from informal area upgrades to regional spatial development strategies.

Cities, by concentrating people and firms, technical expertise and knowledge, can support economic agglomeration effects spurring innovation, increasing productivity and supporting the geographically balanced growth of low-carbon sectors linked to sustainable land-use systems and to green industrial production.

Supported by appropriate policies and investments, these sectors could be linked to renewables generation and decreased resource extraction by favouring material substitution (e.g. timber instead of steel and cement for construction), circular practices, and energy efficiency. Digital technology adoption will be key to materialising these shifts, and its adoption should be guided by policies supporting the effective inclusion of the most vulnerable in society.

In many countries, ambitious national urban policies will be key to putting urbanisation onto a path

of sustainability and ensuring that the 'value of sustainable urbanisation' is shared with the places responsible for meeting urban dwellers' needs. A key focus of these should be supporting the urban manufacturing sectors and service industries to become embedded in global sustainable value chains.

Our review of the impacts of Covid19 and their implications has highlighted four areas of focus for policy and actions that are relevant to planning:

- **Governance and resourcing:** Financing the recovery should involve advancing processes of decentralisation and strengthening the fiscal capacities of global subnational governments, as well as providing them with appropriate powers over land development and for cross-boundary strategic planning. Specific resources should be dedicated to increasing their accountability by effectively engaging communities as well as businesses, infrastructure, energy providers, etc. Global financing mechanisms, grants and programmes should have a focus on dramatically enhancing the capacity for strategic planning at national, regional and city level and for co-ordinating across scales.

- **Joined-up national and local strategies:** To support the above, countries should develop national urban policies to co-ordinate sustainable urban growth with sectoral national strategies - e.g. on food security and sustainable industrial development – stressing the role of secondary cities and towns. These should provide clear frameworks for local plans to sustainably allocate land uses and guide investments in genuinely affordable homes and informal areas upgrades in co-ordination with urban service, transport provision and strategies for employment generation. Plans should designate networks of national, regional and urban ecological, green and public spaces that increase resilience, support climate adaptation and enable sustainable land-use systems that support habitat restoration.

- **Common objectives and metrics:** Breaking with past trends, testing plans, infrastructure decisions and bailout packages against shared objectives for the future, with metrics that target decarbonisation as well as health and inclusion and are agreed upon through inclusive participation exercises. Such metrics should inform comprehensive sustainability frameworks designed to guide the decisions of sectoral authorities and subnational governments enabling them to co-ordinate investments and make communities swiftly progress towards the achievement of the SDGs, ambitious biodiversity gains and drastic emissions reductions in ways that are context-appropriate and fair.

- **Data and technology:** Establishing effective, open and accountable data governance structures that improve information accessibility for critical decision making on adaptation and mitigation efforts and GHG emissions reductions and their social and economic implications. These will need to be accompanied by an increased capacity for local data collection and analysis in plan-making with a view to effectively include left behind communities. The adoption of digital technology should dovetail with the formulation of national and local policy that enable its benefits to be spread to all parts of society, including informal and precarious workers.

Re-imagining planning

The UN, through its 'System-Wide Strategy on Sustainable Urban Development', has highlighted global sustainable urbanisation as an opportunity to address multiple development, biodiversity, and emissions reductions objectives at once. Well-resourced and multi-skilled planning departments should have a leading role in delivering them locally.

Our review of the contributions planning can make to the recovery has also highlighted a need to re-imagine planning after the pandemic.

Planning should expand its scope to include place-based systems-thinking into plan-making, looking at the local and global, and social and environmental implications of urban development. This should support society in instrumentalising the lessons learned since the limits to growth in a planet with finite resources were understood.

The implications of Covid-19's impacts indicate that planning can contribute to the recovery across a wide variety of development objectives. This entails that planning knowledge will need to be made available to actors working on issues as diverse as food security, forced displacement, health service provision and green industrial development. In many places, this will require a break from a centralised idea of planning to foster a more widespread understanding of the profession's role in negotiating competing interests over land development to advance the public interest.

Genuinely collaborative approaches will be fostered by increasing the capacity for testing the development and infrastructure proposals against shared visions and measurable objectives for the recovery, looking for synergies which deliver the widest benefits to sustainability, emissions reductions, resilience and inclusivity.

A renewed focus on participation will be key to support planners to include the needs and aspirations of individuals, communities and businesses into the visions for an inclusive and sustainable future with a strong focus on social and climate justice and the needs of vulnerable people and disadvantaged communities at their heart.

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