



Strategic foresight for the COVID-19 crisis and beyond: Using futures thinking to design better public policies

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The COVID-19 crisis has shaken the world, setting in motion cascading waves of change with a wide range of possible trajectories. While it is impossible to predict the future, strategic foresight offers the tools for successful policy making in the face of high uncertainty. This involves exploring and preparing for a diversity of possible developments in order to future-proof strategies, identify new potential opportunities and challenges, and design innovative ways of improving well-being under rapidly evolving circumstances.

This document is a resource to help governments and organisations use foresight in their policy making related to COVID-19 and its aftermath. It presents key uncertainties and possible future developments that could have short- and medium-term policy implications, a preliminary guide for using these elements, and an annotated selection of foresight pieces from a variety of authors.



The COVID-19 global pandemic is generating high uncertainty affecting all policy areas. Beyond questions about the future spread and impacts of the disease on public health, there is significant uncertainty regarding the cascading effects that may arise from the disease and responses to it, and how these will interact across multiple interconnected systems over the coming months and years. This context of heightened turbulence accentuates existing challenges and increases the risk of governments making policy decisions based on overly hasty or narrow assumptions about the future.

Strategic foresight is an approach to assist decision making in the face of uncertainty. It is based on the principle that responsible and effective policy making requires considering and preparing for a wide range of possible future developments and their implications. In the context of COVID-19, foresight contributes to better policy making in the following ways:

- **Stress testing and future proofing policy advice and recommendations.** Strategies based on narrow assumptions about the future may prove ineffective or counterproductive if prevailing conditions change. For example, it may be dangerous to base policies on the assumption that confinement measures can be safely ended within a few months, or that that public opinion on key issues (e.g. environment, inequality, surveillance) will remain constant. Asking how well current or proposed policies would perform under different future conditions can help make these policies more robust and adaptive.
- **Identifying new challenges and opportunities.** Considering possible future developments in advance allows work to begin sooner on strategies to prevent or mitigate new challenges or seize new opportunities that could be generated by the COVID-19 crisis and its cascading impacts.
- **Designing innovative and forward-looking policy actions and strategies.** Foresight can help to generate new thinking and directions on how best to advance societal goals and global well-being by challenging and expanding our perceptions of what is possible in the future.

This document is intended to assist governments and organisations in applying strategic foresight approaches to strengthen their public policy work related to the COVID-19 crisis and beyond. In particular, it aims to highlight key uncertainties and possible future developments resulting from COVID-19 that could have implications for policy in both the short and medium term. It is divided into the following sections:

1. Uncertainties and approximate “scenarios” for the spread and health effects of COVID-19 over the coming two months to two years. These are not the focus of the paper, but a necessary starting point for exploring broader systemic impacts and uncertainties.
2. Uncertainties and possible developments stemming from the impacts of COVID-19 on various interconnected systems: social, technology, economy, environment, and governance. These are intended as building blocks for exploring implications for and across various public policy areas.
3. Engaging with uncertainty: a practical guide on how to use these elements to explore policy implications and design recommendations for governments.
4. Additional reading: an annotated selection of recent foresight studies and thought pieces related to COVID-19, representing a diversity of sources and practitioners.

How to use this document

The contents of this document may be used as a basis for reflection by individual analysts, for preliminary foresight discussions among teams and committees, or as input into longer-term, forward-looking analyses relating to the impacts of COVID-19 on policy. Simple steps (further explained in section 3) include:

- Selecting a few plausible, surprising and significant changes that could be caused by the COVID-19 crisis that could be relevant for a particular policy area.



- Exploring the potential impacts these changes could have on that policy area and system and what new challenges or opportunities they could create.
- Identifying potential implications for policies, including new strategies for advancing societal objectives.

Updates and Improvements

Readers are invited to help keep this document current during the rapidly evolving crisis by suggesting updates and improvements such as additional uncertainties and potential developments (following the format in section 2), or relevant items for the additional reading list. Suggestions may be sent to foresight@oecd.org.

Uncertainties regarding the spread and health effects of COVID-19

Disagreement and uncertainty persist within the medical research and epidemiological community on a large number of key aspects of COVID-19 and its impacts. Until a reliable evidence base and consensus is achieved on these points, it is prudent for policy makers to keep all plausible outcomes in play in their decision making, including those that may appear unlikely or extreme. These uncertainties include:¹

- The speed at which the disease will spread in different areas and under different mitigation measures
- The infection fatality rate under ideal conditions, and the effective fatality rate in the absence of adequate healthcare (as may be the case in several countries or regions)
- The prevalence of hitherto unreported mild cases among the population
- The longer-term health impacts on infected populations
- The extent and duration of acquired immunity among infected populations
- The timing, availability and reliability of widespread testing
- The timing, availability and effectiveness of potential treatments or vaccines

Based on these uncertainties one can derive a range of illustrative scenarios to facilitate comprehension and discussion. These scenarios offer an approximate representation of the possible breadth of trajectories for the future spread and impact of COVID-19 over the coming months and years. Simplified into three broad categories based on increasing severity from “bad” to “worse” and “even worse”, they provide a starting point to assist public policy analysts and decision makers in exploring the potential further impacts and interactions of COVID-19 on various systems and related policy areas.

¹ Neither the uncertainties nor the scenarios are intended to be an authoritative statement on the science and do not necessarily reflect the latest scientific evidence.



Table 1. Illustrative Scenarios of Future Spread and Effects of COVID-19

Period	“Bad”	“Worse”	“Even Worse”
June-August 2020	<ul style="list-style-type: none"> Cases and deaths peak rapidly and decline 	<ul style="list-style-type: none"> Cases stable where mitigation maintained, rise elsewhere 	<ul style="list-style-type: none"> Mitigation measures break down Rapid rise in cases and deaths
September 2020 – June 2021	<ul style="list-style-type: none"> Widespread immunity Focus on testing Shift support to areas/countries most in need 	<ul style="list-style-type: none"> Ongoing moderate mitigation still required for all but immune 	<ul style="list-style-type: none"> Humanitarian disaster as disease overwhelms developing countries
July 2021 –	<ul style="list-style-type: none"> Universal effective vaccination COVID-19 crisis over Focus on rebuilding economy and preparing for future crises/changes 	<ul style="list-style-type: none"> Partially effective vaccination Ongoing “1-3x flu” New economic model based on need for safe distancing 	<ul style="list-style-type: none"> No effective vaccination Ongoing “5-10x flu” Economic and societal turmoil

Uncertainties and possible developments regarding the impacts of COVID-19 on various interconnected systems

The following is an initial list of uncertainties and possible developments that could arise as COVID-19 further impacts and interacts with different human and natural systems. Each bulleted uncertainty is followed by two or more possible developments. These developments represent contrasting extremes on a wide spectrum of possible trajectories and outcomes. While reality will certainly be more nuanced and complex, the purpose is to provoke the reader to look beyond their current assumptions and expectations about the future and to consciously consider and prepare for a variety of alternative conditions. Readers are invited to suggest additions and refinements, and to develop variations most relevant to their own policy areas and/or local realities.

Society

- *Will the crisis trigger a change in societal attitudes towards co-operation on public goods, or will self-interest dominate?*
 - Co-operation: Emerging from trauma, humanity develops a higher propensity for co-operation, responding to the realisation that a chain is only as strong as its weakest link. Communities rally to protect the vulnerable and defend their common interests both locally and globally. Citizen support for solidarity and co-operation extends to a range of issues for which effective action at the global level could prevent disproportionate negative consequences for humanity (e.g. climate change, persistent inequality, antimicrobial resistance, and existential threats raised by emerging technological developments).
 - Self-interest: Fear, mistrust and self-interested behaviour grow, both within and between societies. Unilateral action (e.g. to secure medical resources) and a tendency to blame others sow division and disunity and frame the global fight against pandemic diseases and other crises as a zero-sum game. The tragedy of the commons worsens.
 - Frenetic alliances: Cascading crises feed successive waves of solidarity, with society's attention shifting quickly from issue to issue. Ad hoc and at times unlikely alliances form between groups with common thematic interests, but remain fluid and often superficial. Society is thus socially engaged, but struggles to adapt to the rapid pace of change and high level of complexity,



leading to information overload and crisis fatigue limiting sustained efforts towards lasting positive change.

- *Will the course of urbanisation evolve toward de-urbanisation, or re-urbanisation?*
 - De-urbanisation: A significant portion of urban dwellers move to rural and suburban areas as widespread telework frees many from the need to commute regularly for employment. With ongoing risks of infection from COVID-19 or new diseases, population concentration is viewed as a liability rather than a benefit of urban life, while smaller towns offer less surveillance, greener and more spacious living, increased opportunity for property ownership, and the potential for more self-sufficient lifestyles.
 - Re-urbanisation: Urban agglomeration continues with cities coming out as “winners” due to concentration of (medical and knowledge) infrastructure. Repurposing of office and retail space for mixed-use and more affordable and spacious residential accommodation and leisure helps to address previous constraints on urban quality of life. Localised co-working spaces and improved pedestrian and cyclist corridors help reduce air pollution. Contactless infrastructure is integrated with the surveillance apparatus needed to enable safe population mixing.
 - Enclaves: The contrast between urban and rural becomes less meaningful as people move towards self-contained enclave lifestyles. Mobility between enclaves is limited and unused infrastructure repurposed into mixed-use mega-complexes. People maintain in-person contact with members of their enclave and rely on technology to interact with the wider world. Discontent festers over the loss of freedom of movement, however, and physical separation sharpens inequality.

- *What will be the level of social fracturing, and along which fault lines?*
 - Growing inequality: Inequalities magnified by the crisis (e.g. income, racial, generational, digital literacy) create deep and lasting resentment and a growing social outcry.
 - Culture war: Society fragments in new ways along existing populist lines, such as over collective obligation to protect the most vulnerable, or measures to restrict movement of people deemed to be a health threat to the community.
 - Finding solidarity: The experience of collective action during the crisis spurs new forms of solidarity, including backing for higher compensation for lower-paid essential workers, and support for disproportionately impacted members of society. Intergenerational tensions are eased as older populations accept a new social contract providing greater opportunities for youth. Young people develop a new appreciation for elders and a greater sensitivity to their needs and vulnerabilities.
 - COVID classism: Society is divided into tiers based on the risk people are perceived to present to society, affecting their ability to return to work and access certain public spaces. These tiers could be based on COVID-19 “immunity” classifications by testing or vaccination status, and on whether people adopt spread-control measures such as the use of track-and-trace applications.

- *Will COVID-19 be a setback or accelerator for gender equality?*
 - Setback: Women’s earnings and career potential are reduced due to homecare pressures during waves of confinement that disproportionately limit their ability to work. Job losses linger in lower-paying and informal industries where in some countries women are more concentrated. Maternal health is compromised as a result of overflows in health systems and millions losing access to family planning services.
 - Accelerator: Increased recognition of the value of “essential” in-person work leads to better compensation and working conditions for occupations disproportionately carried out by women.



Massive expansion of telework enables more flexible and family-friendly work schedules benefitting both genders. Expansion of universal basic income enables financial compensation for both women and men providing domestic caregiving and other socially beneficial but previously unpaid work. This is supported by a recognition of effective female leadership during the crisis.

- *Will COVID-19 cause migration pressures to grow, ease, or shift?*
 - Migration pressures grow: COVID-19 provokes severe economic, social and governance breakdowns and civil conflict in multiple countries, leading to mass movements of refugees and economic migrants. Meanwhile, accelerated automation and rising unemployment due to COVID-19 lead to lower demand for immigrants in traditional receiving countries. Concentrated outbreaks of COVID-19 among migrant communities and/or as a result of population movement reinforce resistance to migrant flows.
 - Migration pressures ease: Tracing technologies put in place for COVID-19 serve as a platform for widespread data analysis of prospective migrants, enabling greater selectivity and effective management of migration and raising public support for increased flows. There is increased awareness of the need for migrants to meet labour needs in many “essential” jobs in healthcare, homecare, and agriculture. In other occupations, accelerated adoption of telework reduces the need for physical migration to access employment and/or enables settlement in underpopulated areas.
 - Migration shifts: Ongoing risk of infection limits short-term travel and shifts migration to longer-term settlement (following necessary quarantine periods). COVID-free zones with reviving economies become magnets for top global talent.
- *Will COVID-19 accelerate the shrinking of civic space or catalyse a revitalisation of civil society organisations and their role?*
 - Shrinking civic space: COVID-19 further weakens the capacity and influence of civil society, as emergency decision making by governments squeezes out time for consultation, a crisis mentality justifies limitations on dissent, and financial pressures lead to a reduction in funding from governments and the public. Civic mobilisation and activism is limited by restrictions on in-person gatherings as well as by increasing surveillance and censorship in the digital sphere.
 - Civic revival: Existing and new civil society organisations, social purpose businesses and digitally enabled citizen movements gain support and legitimacy as a result of their contributions to defending the public interest during the COVID-19 crisis. They assume a key role in convening democratic dialogue, articulating positive visions for change, holding governments to account and delivering innovative solutions, becoming crucial players in a more diverse multi-stakeholder approach to achieving collaboration on global issues.

Technology

- *Will the crisis lead to triumph or disillusion for medical science and technology?*
 - Triumph: Increases in collaborative scientific and medical research and innovation, including in genomic research, virology and use of AI in diagnosis and vaccine development, lead to unexpected breakthroughs with broader social dividends.
 - Disillusion: Trust and confidence in science decreases due to mixed and inconsistent messages about facts related to the illness, especially in the case of unexpected disruption such as a faulty recommended treatment or failure to produce an effective vaccine.



- *Will digital interaction become a mainstay of social life?*
 - Virtual reality renaissance: Market for digital interaction platforms continues to grow, and new technologies such as virtual reality tourism expand as people's reluctance to leave home is sustained, including new VR-based socialisation options, especially among young people.
 - Digital whiplash: The period of intense physical separation from others leads to an opposing reaction where people focus on creating more and new spaces for (hygienic) in-person connection. Digital interaction platforms return to (near) pre-crisis levels.
- *Will the COVID-19 response lead to a technology-enabled "global health awakening"?²*
 - Health "awakening": A comprehensive "5P" (prevention, precision, participation, partnership, and personalisation) health model leads to raised health and wellness standards thanks to a chain of breakthroughs, for example in real-time detection and health monitoring. These make use of AI, big data and global health research collaborations, and have spill-over effects to other parts of society, such as insights for the fight against climate change.
 - Health "dark age": Technology-based global health initiatives are derailed by an unexpected force such as a widespread cyberattack or severe fracturing in medical research as competitive national or private interests overtake the global public good. Massive, ongoing demand for tests and vaccines and/or value chain failures lead to high prices; millions go without access for long periods while others are able to get on with life. Criminal activity such as fabrication of faulty tests and vaccines undermines trust in health technology.
- *Will COVID-19 lead to a post-privacy era or a pro-privacy backlash?*
 - Post-privacy: The balance between COVID-19 and the economy is enabled by mass adoption of personal surveillance technologies. These evolve beyond contact tracing to include real-time monitoring of physiological responses. Though initially voluntary, such technologies become effectively mandatory due to the access they permit to employment, public spaces and social gatherings. As COVID-19 recedes these technologies are kept in place due to their broader health and security benefits including protection from potential threats such as bio-terrorism.
 - Pro-privacy: Sudden pressure for mass surveillance focuses public attention on the issue of digital privacy. Strong public pressure leads to the development of new technologies and institutions designed to safeguard privacy while leveraging population data for the public good.

Economy

- *Will the perennial state-versus-market debate be recast in a new light and result in states taking a greater role in the future economy, or will the private sector lead the recovery?*
 - New statism: Governments, having supported not just a vulnerable minority but large majorities of their populations, gain new legitimacy and mandates to act in the economy. This leads to renewed and expanded welfare states, extending into governments retaining control of large sectors of the economy previously occupied by the private sector. Industrial policy becomes more important.
 - Resurgence of the private sector: Heavily indebted by their actions to keep economies on life support, governments turn to the private sector to offer the dynamism needed to reboot the economy.

² See also Sohail Inayatullah and Peter Black, "Neither a Black Swan Nor a Zombie Apocalypse", additional reading list, page 17.



- *Whither employment and unemployment?*
 - Jobs for the young: The labour market recovery favours young people, in that digital innovation creates new jobs based on skill sets better developed in tech-savvy younger generations. Younger workers are better able to take on the risk of a more flexible labour market.
 - Jobs for the old: The labour market recovery favours older people, who are more experienced. Older people re-enter the market or delay retirement due to the economic impacts of the crisis (e.g. on retirement savings), displacing younger people from new and previously held jobs.
 - Jobs for the essential: The labour market rewards those (at all skill levels) whose work is essential but cannot be easily automated or performed remotely, with pay and benefits rising to compensate for the additional risks of physical contact in a world still threatened by infection.
 - Jobs for digital nomads: As global competition reduces earnings for teleworkers, employment grows for those living in, or willing to relocate to, communities with high digital connectivity and lower cost of living.
 - Jobs for robots: The labour market never fully recovers due to a range of colliding factors, for example humans being seen as a risk factor in the economy. Industries accelerate automation to become more resilient and efficient. The transition is facilitated by the continuation of income support policies put in place during the crisis.

- *Will COVID-19 speed or reverse the trend towards corporate concentration?*
 - Corporate concentration: The COVID-19 crisis pushes all but the biggest businesses into bankruptcy. Leading firms (especially those positioned to benefit most from the accelerated digital transformation) sweep in to acquire weakened competitors. Large firms with a global presence consolidate their position through the rise in e-commerce and their logistical capability to serve distant markets in a time of need. Continental industrial policy focuses on supporting home-grown titans to compete on a global scale.
 - Digital decentralisation: The crisis acts as a wave of disruption, sweeping away millions of unproductive “zombie” firms while forcing many others to adopt productivity-enhancing digital technologies in order to survive. This turbulence creates a multitude of new niches, including for agile smaller firms with low cost structures and/or local consumer loyalty. A citizen-led movement to ensure a level playing field of open and neutral digital platforms enables a highly innovative and competitive networked global economy of interconnected small firms mediated by blockchain and AI. The rules of this fluid digital economy are such that large firm size is no longer a significant competitive advantage.

- *Will the economy re-globalise, or re-localise?*
 - Re-globalisation: The COVID-19 crisis catalyses new global trade and investment links in order to address localised supply shocks. Accelerated digitalisation enables a new wave of globalisation that is more transparent and efficient, for example significantly reducing friction at border crossings.
 - Physical localisation combined with digital globalisation: The crisis highlights the vulnerabilities of global value chains, leading to diversification of manufacturing, agriculture and natural resource extraction to more local (national or continental) producers and circular economy initiatives aimed at more efficient reuse of physical resources within each region. At the same time, work, ideas, designs, data and software circulate increasingly freely as part of a globally digital economy, continually circumventing barriers to information flows.
 - Regional blocks: The crisis accentuates divisions and mistrust between the US and China while forcing European and other governments to either pick a side or go their own way. The inability



to separate sensitive from non-sensitive data results in a hardening of digital borders between increasingly parallel and incompatible digital regions. Parallel hardware (5G), software, and digital services evolve into parallel logistics systems whereby even physical trade and travel between regional blocks becomes restricted.

- Autarchy: Ongoing risks of infection lead many countries and localities to insulate themselves from the global economy, fostering local self-sufficiency (assisted by automated production and renewable energy) and characterised by strong “buy local” and “holiday at home” movements.
- *Will the current financial system weather the storm or be transformed?*
 - Finance weathers the storm: Thanks to the reforms following the 2008-09 financial crisis, global financial institutions prove remarkably resilient during the COVID-19 crisis. They are able to capitalise on their liquidity to serve as intermediaries for public sector support to the economy, thereby solidifying their role as a trusted pillar of stability in the economy.
 - Finance transformed: Despite initial resilience, a contagion of corporate and sovereign debt defaults rapidly destabilise the balance books of existing financial institutions, forcing many into insolvency or dissolution. Alternative forms of fintech emerge to fill the gaps.

Environment

- *Will there be movement towards or away from environmental sustainability?*
 - Towards: The COVID-19 crisis brings the link between environmental sustainability and societal resilience to the fore, leading societies to seek more balance in environmental, economic and social priorities. It demonstrates how delaying necessary preventive action can result in far greater costs, leading to widespread public support for strong societal action to address climate and other environmental crises before they can get worse.
 - Away: Environment is seen as secondary or in opposition to the economic recovery by governments and households, some of which are in severe economic distress. Environmental measures are relaxed or postponed, and environmental degradation continues or accelerates to compensate for lost economic activity, for example through higher emissions.
 - Health focus: The crisis focuses increased attention on health and on the connections between environment and health. There is a shift in resources to prioritise those environmental issues that are perceived as having the most direct consequences for health.
 - Environmental policing: The gravity of the COVID-19 crisis leads to a push for more aggressive and punitive approaches to environmental issues. Beginning with a focus on wet markets and wildlife trade, this expands to restricting industrial meat production, urban air pollution and other environmental factors associated with potential threats to human health.
- *Will there be a return to the previously growing trend in sustainable and socially responsible business practices, or will survival priorities outweigh such concerns?*
 - Responsibility: Under pressure from investors, regulators, shareholders and/or consumers, responsible business conduct becomes more deeply engrained in corporate culture and institutions (e.g. through environment, social, and governance (ESG) investment standards or the adoption of pro-social business structures such as benefit corporations and cooperatives). Environmental stewardship is further mainstreamed as a resilience strategy to ensure business viability in the face of supply chain disruptions, environmental threats and other potential shocks.



- Survival: Businesses see anything other than bottom-line focused, short-term survival strategies as low priorities given the immense economic impact. A deep economic recession dampens any appetite among investors, consumers or governments to push a sustainability agenda.
- Wave of waste: Consciousness of hygiene among consumers leads businesses to higher-waste practices such as increased volumes of packaging and more single-use goods.
- *To what degree will consumers shift their priorities?*
 - A post-stuff revolution: The COVID-19 crisis breaks consumption patterns, leading to an extended depression in demand as people prioritise building or rebuilding savings. Most consumers realise they can thrive on fewer material goods, so consumption patterns shift further to digital and experiential goods as travel remains limited due to health concerns.
 - A stuff-by-post revolution: The crisis provokes a mass re-materialisation whereby consumers use e-commerce to equip their living spaces for greater comfort, ongoing telework, and potential future periods of confinement (e.g. office and exercise equipment, appliances and furnishings, digital entertainment upgrades). Demand increases for bicycles, scooters and cars to replace ride-hailing/sharing and public transport deemed unsafe.
- *What will be the long-term impact on the role of oil in the global energy profile?*
 - Phasing out: Depressed demand and lack of storage facilities causes oil well closures, compounded by public support for divestment away from fossil fuels and cheap credit amenable to capital-intensive renewable energy.
 - Uneven transition: Major oil companies implement plans to transition to green energy faster than expected and renewables take off in some countries, but sale of assets such as oil rigs and low prices means oil remains central to energy production in emerging and developing economies and decarbonisation is not co-ordinated.
 - Rebound: Low oil prices largely remove market incentives for renewables. Demand fully rebounds through the economic recovery with a weak public counter-response.

Governance, Geopolitics and International Development

- *What could the impacts be for governance and democracy?*
 - Rising authoritarianism: The desire for a strong state response paired with lack of functional capacity translates to authoritarianism and strongman politics in some states, further enabled by increased digital surveillance capacities globally.
 - Anti-government backlash: populations blame governments/elites for restrictive confinement measures, the economic downturn caused by the pandemic, or both. As conditions worsen, support rises for populist messages that seek to shift blame to others.
 - Evidence-based governance: Increased appreciation of the importance of statistics, research and evidence-based policy strengthens support for more technocratic governance. Electorates reward governments viewed as competently managing both the health crisis and its economic consequences.
 - Deliberative or participatory democracy: The COVID-19 crisis accelerates the proliferation and uptake of digital citizenship tools, strengthening democracy by connecting governments and citizens and enabling the development of more deliberative or participatory approaches.



- *How might COVID-19 affect regional (e.g. urban vs rural) political dynamics and power shifts?*
 - Urban centres: Agglomeration continues and large cities come out of the crisis as “winners” due to concentration of (medical) infrastructure and knowledge generation and dissemination. This leads to a continuation/acceleration of manifestation of cities as primary centres of political power.
 - Rural centres: Rural areas gain additional pull-factors as cities and densely populated areas are increasingly perceived as “incubators” for potentially more frequent outbreaks. This leads to a possible shift in political attitudes and voting blocs and/or push for more autonomy.
 - Cross-pollination: Shared traumas of the COVID-19 crisis and its subsequent impacts combined with a moderate de-urbanisation trend create a new basis for common identity and change the trajectory of growing political divisions between rural and urban areas. While ideological islands still exist, there is a sense of collective national identity and shared values that reaches toward increased centrism.
 - Rural resentment: While hotspots exist, rural communities are largely spared the worst of the pandemic and resentment grows over economic consequences suffered by rural communities for the sake of more vulnerable urbanites. Polarisation grows, and political opportunists further feed the flames.

- *What adaptations could occur in the multilateral system?*
 - Reform and revival: The cascading systematic effects of the disease as well as its indiscriminate nature serve as a strong argument for renewed endorsement of multilateral co-operation. Multilateral responses to COVID-19 that are perceived as slow or inadequate force reforms and/or the emergence of new but complementary institutions.
 - Fracturing: The multilateral system begins to break down due to lost credibility and resources, and unilateral or bilateral actions and decisions prevail, making way for new but competing institutions, power players and alliances.
 - Changing of the guard: Emerging and developing economies see a rise in regional multilateralism as institutions such as the BRICS, New Development Bank, African Union, African Development Bank and Islamic Development Bank play a lead role in mobilising resources for the response and recovery and/or grow in their leadership among the post-WWII institutions.

- *How could COVID-19 affect the global Sustainable Development Goals (SDGs)?*
 - Emergency response: The longer-term SDGs lose their relevance in the face of significant humanitarian disasters that severely reverse hard-won progress in global development. This trend intensifies in the absence of a ‘post-COVID’ world and/or successive waves of outbreaks. The developing world enters a more tumultuous period of repeated, large-scale disruption (e.g. the locust scourge currently threatening food security in East Africa).
 - Gained systemic perspective: The SDGs’ holistic vision of development is reinforced as there is a new appreciation of interconnectedness and interdependence of human development outcomes and human security. Limited resources require prioritisation between goals, but also spur innovation and collaboration in the development sector.
 - Health focus: Intense focus on rallying resources to strengthen health systems globally, particularly on disseminating the COVID-19 vaccine, lead to health advancements but come at the cost of a more systemic resilience perspective on development.



- *How could COVID-19 alter patterns of international development co-operation?*
 - Global co-operation: The global health emergency and economic aftermath trigger a major new commitment to development co-operation that moves beyond a traditional North-South approach to focus on multi-directional mutual learning and solidarity. Global public investment becomes the new approach to solving development challenges. This involves concessional international public finance to promote sustainable development and includes ODA as well as triangular and South-South co-operation.
 - South-South co-operation: Due to lack of coherence and solidarity in the global response to COVID-19, developing countries come out of the crisis with lower levels of trust, leading to long-term shifts away from development co-operation with the Global North and/or the strengthening of partnerships among middle- and lower-income countries and multilateral institutions.
 - North-South co-operation: COVID-19 leads to serious humanitarian and food security crises that impact neighbouring countries differently given varying vulnerability levels and power dynamics within sub-regions of the Global South. The result is rising regional inter-country inequality and tension over refugee influxes that contributes to regional disintegration, which in turn bolsters the relative importance of North-South Co-operation and ODA.

Engaging with uncertainty: a practical guide

The uncertainties and possible developments outlined in the previous section are just a few among many others that could be identified and considered. They are presented as a practical starting point for applying foresight to policy making related to COVID-19 and its aftermath.

An initial foresight exercise for COVID-19

As a first step, we recommend choosing, individually or in groups, three to five uncertainties from the list in section 2, and/or identifying your own, that are most relevant and potentially impactful for your policy area and upcoming work. It is preferable to select uncertainties from multiple issue areas, including some that may seem distant from your own, as often the most surprising disruptions emanate from outside one's own system.

The following process can then be used to engage in a discussion about these uncertainties.

'What ifs': Take one side or perspective of each uncertainty and create a 'what if' statement.

- For example, the uncertainty "Will the course of urbanisation evolve towards de-urbanisation, or re-urbanisation?" could prompt the statement, "What if the proportion of the population living in major urban centres falls significantly over the next decade?"

Signals: Identify early signals that this development could come to pass.

- For example, signals of de-urbanisation are people retreating from urban centres to rural areas to weather the crisis, and the shift to telework.
- Signals can come from data, news pieces, expert analyses or other credible sources. If signals cannot be identified, consider re-evaluating 'what if' statements for plausibility and revise as needed.

Consequences: Explore some of the further (second- and third-order) consequences that could emerge if plausible 'what if' statements came to pass.



- For each ‘what if’ statement, create a series of three to five “if-then” statements to identify second-order effects. Ideally, these will likewise touch on multiple issue areas. If third-order effects follow naturally, include them in the discussion.
- For example, “If the urban population drops significantly, then there could be a wave of rural gentrification (second-order). This could lead to a rise in homelessness in rural areas (third-order).”

Implications: Begin to explore the implications of “what if” statements and their consequences for your policy area by asking:

- What new challenges could emerge for our policy area under each of these plausible future developments? What new opportunities could emerge?
- What current plans and/or objectives could be disrupted or invalidated if one or more of these challenges or opportunities occurred?

Actions: Begin to consider actions that might need to be taken to avoid or prepare for the challenges and opportunities that have emerged from your analysis by asking:

- Given the current uncertainty, what actions should our organisation (e.g. unit, directorate, department, government) be taking now to prepare for the potential implications of COVID-19?
- In light of our analysis, what issues should be flagged to governments so that they can better prepare?

Foresight for better policies: further steps

It is recommended that governments and organisations adopt a concerted and systematic approach to embedding foresight in policy making during the COVID-19 crisis and beyond. This involves:

- Working with experienced strategic foresight professionals to design and facilitate foresight processes in support of key policy priorities. These range from a short “sprint” series of foresight workshops to longer exercises involving horizon-scanning, scenario planning and visioning, and engaging a wide range of participants and perspectives.
- Integrating strategic foresight to the ongoing structures and processes of policy making. An introductory guide to strengthening anticipatory governance can be found [here](#).
- Collaborating across governments and other organisations to pool efforts on exploring future uncertainties and their implications in key areas of shared interest.

Such efforts support more responsible, innovative and forward-looking public policy making, both for the COVID-19 crisis and in the ongoing broader context of high uncertainty and rapid change.

The OECD strategic foresight unit is available to support OECD Directorates, Committees and Governments in applying a more in-depth foresight analysis to key priority issues, with a particular focus on medium- to longer-term issues that cut across policy areas.

This includes targeted foresight interventions and longer term collaborations involving OECD personnel, members of the global Government Foresight Community, and broader experts and stakeholders. For more information contact us at foresight@oecd.org.

Additional reading

As a further resource, the following annotated reading list provides a selection of foresight publications related to COVID-19. This is an ongoing compilation; submissions are welcome at foresight@oecd.org.



Scenario planning for a post-COVID-19 world

Michael Wade, Global Center for Digital Business Transformation, International Institute for Management Development, May 2020

This short report aims to help business leaders prepare for the “new normal” of a more uncertain world after COVID-19. It begins with three factors that could create uncertainty in the short and long term: 1) Virus Longevity; 2) Global Mindset; and 3) Digital Adoption. Based on the interplay of these factors, the report proposes four scenarios that aim to “challenge thinking, question assumptions, and help think more broadly about the future.” The report concludes with guidelines for how these scenarios can be used in a workshop format.

<https://www.imd.org/contentassets/b9e9a6572dbc4d11af99038674577ec7/imd-covid-19-scenario-planning-report.pdf>

Post COVID-19 Territorial Scenarios

Frank D'hondt, Territorial Capital Institute, World Urban Campaign, May 2020

This think piece explores a wide array of pessimistic and optimistic post COVID-19 pathways for villages, towns, cities and city regions, grouped under the headings of economic, social, environmental, partnership and peace. It concludes with four alternate scenarios and five suggested planning steps to leverage the COVID-19 health crisis towards a better future.

https://www.worldurbancampaign.org/sites/default/files/post_covid-19_territorial_planning_scenarios.pdf

Our COVID Future: The Long Crisis Scenarios

Alex Evans and David Steven, Long Crisis Network & Local Trust, May 2020

These scenarios explore four futures for how societies could respond to the COVID emergency based on two key drivers of change, whether the multi-layered crisis will lead to polarisation or collectivism and whether the response is centralised or distributed. It disaggregates the exploration of impacts between different actors in society and at the local, national and global levels, concluding with a call for collective action.

<https://www.longcrisis.org/scenarios/>

Welcome to the 21st century – How to plan for the Post-Covid Future

Tim O'Reilly, self-published online, May 2020

O'Reilly draws on a range of historical moments to argue we are at an inflection point where things will not go back to “normal” and explores a collection of illustrative what ifs on issues from travel to schooling. He posits that civil society and policy makers now have the chance to use this development to re-build in a more resilient, just and robust way.

<https://www.oreilly.com/tim/21stcentury/>

The COVID-19 Effect: What's Next?

Dr. Maha Housain Aziz, Medium, 26 May 2020

Drawing from previous work on the future world order, the author offers four Covid-19-induced scenario-like “predictions” for 2021. These are supported by emerging signals of change from across the world and cover changes at the geopolitical, political, economic, and social levels.

<https://medium.com/@ma152/the-covid-19-effect-whats-next-9ed755a1c88f>



The Future of Inequality in a Post-Covid-19 United States

Eli S. Margolese-Malin, Medium: Future Horizons, 19 May 2020

This article explores the interconnections between structural inequality and vulnerability to the virus in the US. The author begins with the premise that disasters historically are not great equalizers, and uses four 'societal development' scenarios for the next 5 to 10 years that point to a critical role for policy in alleviating the impacts on minority and low-income populations from this and future crises.

<https://medium.com/future-horizons/the-future-of-inequality-in-a-post-covid-19-united-states-7e11223cb32b>

Post-Covid-19 Series (I-V)

Various authors, Foresight for Development, May 2020

A series of five articles from this foresight initiative hosted by the Southern Africa Node of the Millennium Project. Authors take a speculative approach to illuminating some of most pressing questions about the future with Covid-19 from a variety of perspectives. For example, asking what potential inventions will be designed to identify and manage future pandemics, and about the possibility of an underground economy emerging as a response to Covid-19.

<https://www.foresightfordevelopment.org/featured/post-covid-19>

No return to the past with the COVID-19

Dr. Helene Lavoix, The Red (team) Analysis Society, 30 April 2020 (current issue)

Foresight consultancy The Red (Team) Analysis Society sheds light on some of the uncertainties regarding a future with Covid-19. Propagating the use of classic foresight techniques such as analysing the cascading impacts of an event on different levels of analysis, and in combination with strong scientific underpinnings the authors argue in favour of dismantling the cognitive bias that things "will go back to normal" and explore case studies of two city states.

<https://www.redanalysis.org/2020/03/04/the-coronavirus-covid-19-global-epidemic-no-return-to-the-past/>

Foresight professionals, it's high time to claim your seats at the table of decision-making!

Martin Mayer, YouMeO, 23 April

The Covid-19 crisis is portrayed as a pivotal moment for (strategic) foresight to assert itself more strongly into the heart of government policy making and decision making. While primarily aimed at foresight practitioners, the article also provides a useful roadmap of specific measures to be taken by those interested in including more foresight into their decision-making process.

<https://www.youmeo.fr/post/foresight-professionals-it-s-high-time-to-claim-your-seats-at-the-table-of-decision-making>

What World Post-COVID-19? Three Scenarios

Mat Burrows and Peter Engelke, Atlantic Council, 23 April

This "preliminary" geopolitical analysis summarises the likely trajectories of the disease, economic recovery and socio-political implications in the US by world region. It presents three scenarios for the international system to the mid-2020s that focus primarily on its stability and the balance of power between the US and China, as well as exploring the interplay between the economic recovery and domestic politics.

<https://atlanticcouncil.org/content-series/shaping-post-covid-world-together/what-world-post-covid-19-three-scenarios/>



The Coronavirus Butterfly Effect: Six Predictions for a New World Order

Parag Khanna and Karan Khemka, Fast Company, 14 April

The authors combine emerging signals with historical precedents and long-term trends to offer a set of plausible predictions that touch on a multitude of topics. Examples include collapse of petro-states, a W-shaped economic recovery and the fragmentation of “science diplomacy.”

<https://www.fastcompany.com/90488665/the-coronavirus-butterfly-effect-six-predictions-for-a-new-world-order>

COVID-19: Confronting uncertainty through and beyond the crisis: the power of scenario-thinking to enhance decision-making

Jonathan Goodman et al, Monitor Deloitte, Center for the Long View, April 2020

The authors argue that the COVID-19 pandemic is a more global, complex and impactful crisis than today’s decision makers have experienced. They explain that in this context, effective strategy requires embracing uncertainty, seeking diverse perspectives, envisioning multiple different futures, and incorporating scenarios into decision making. They provide advice for confronting uncertainty at and across all levels of the organisation including by CEOs and their teams, functional leaders, and boards.

<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/COVID-19/COVID-19-confronting-uncertainty-through-and-beyond-the-crisis.pdf>

Post COVID-19 Reorganization Scenarios

Leah Zaidi, Multiverse Design, March 2020

Four scenarios based on Jim Dator’s archetypal “Generic Images of the Future” in combination with Zaidi’s “Seven Foundations Model”. Detailed analysis of possible future developments in the categories from political, philosophical to the artistic level.

<https://www.multiversedesign.com/>

Three Mistakes in the Moral Reasoning about the Covid-19 Pandemic

H. Orri Stefánsson, Institute for Futures Studies, 30 March

The author uses the economic impact of the disease to shed light on countries’ ill-preparedness for the moral reasoning about trade-offs and risk that the pandemic has made unavoidable. It does so by looking at the shortfalls of policy advice through the lens of a failure to engage in “holistic (all-things-considered) reasoning.”

www.iffs.se/media/22879/iffs-working-paper-2020_12_three-mistakes-in-the-moral-reasoning-about-the-covid-19-pandemic.pdf

What are the “new normals” that COVID-19 might be pointing to?

Prateeksha Singh, Medium, 27 March

This piece presents a collection of possible “new normals”, with a focus on the Asian context. Trends are sorted into categories including tech, governance, economy, social distancing and collective connectivity, and climate change. The author offers a range of weak signals of change as well as an open invitation to contribute.

<https://medium.com/@undp.ric/what-are-the-new-normals-that-covid-19-might-be-pointing-to-d5abe71fa7b7>



The Future of Covid-19: Two Scenarios

Dr. Florence Gaub, European Union Institute for Security Studies, 21 March

This policy brief paints two pictures of responses to managing the public health crisis in Europe, the US, China, and Russia, and explores broader implications for the economy and trends in globalisation in 2021 and 2025, thus stressing the important differences between one-size-fits-all and action-learning policy pathways.

<https://portal.oecd.org/eshare/sge/eosg/layouts/15/DocIdRedir.aspx?ID=ESHARESGE-21-11374>

The World After Coronavirus

Yuval Noah Harari, *Financial Times*, 20 March

Possible future scenarios focus on two governance choices we must face: totalitarian surveillance vs. citizen empowerment and nationalist isolation vs. global solidarity. Crucial to the former is clear information based on scientific facts and public trust in authorities, whereas the latter reveals the importance of global co-operation.

<https://www.ft.com/content/19d90308-6858-11ea-a3c9-1fe6fedcca75>

Neither a Black Swan Nor a Zombie Apocalypse

Sohail Inayatullah and Peter Black, *Journal of Futures Studies*, March 18

The authors explain why COVID-19 is not a 'black swan' and present four brief scenarios for the crisis' wider impacts. It concludes with practical recommendations on preventing the next outbreak from a technological and eco-health perspective.

<https://jfsdigital.org/2020/03/18/neither-a-black-swan-nor-a-zombie-apocalypse-the-futures-of-a-world-with-the-covid-19-coronavirus/>

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