A choice between two futures for pandemic recovery

It is easy to imagine a world that never fully recovers from COVID-19. Today's outbreak response lays the groundwork for that timeline: although some countries have risen to the challenge of testing, reporting, and governance, others have failed. Whereas some countries ignored WHO recommendations and relied primarily on international travel bans (which became a facet of a failed response), now other countries that had approached elimination, like New Zealand and Australia, are maintaining strict border controls to isolate themselves from others' failures. As international trust and multilateral cooperation has receded, this new regime of pandemic containment has been embraced by biosecurity-driven approaches to prevention.[1] International travel restrictions might have delayed global spread,[2] but they also mark a sudden erosion of global norms around outbreak response.[3] As a result, one of the few incentives under the 2005 International Health Regulations to promote rapid notification of potential public health emergencies of international concern—the avoidance of travel and trade restrictions—has been undermined, risking that countries delay notification to WHO and the world when future outbreak events occur.[3] This situation puts every country at even greater risk for future pandemics.

The near-term future could be similarly bleak. The pandemic risks not merely exacerbating but entrenching racial, ethnic, disability, gender, socioeconomic, and age inequalities and animosities if governments fail to implement not only safety nets but also reparative policies, informed by the voices of those ignored or suppressed before COVID-19. Although more than 30 candidate vaccines have reached clinical trials, so-called vaccine nationalism threatens to undermine their equitable distribution and effective deployment, and many countries could be left without the ability to eliminate severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). If that happens, the next few years could see a total state-shift in global connectedness, as some countries become essentially impossible to travel to or from. This situation will be compounded if countries require vaccination certificates for entry without parallel equitable global vaccine access.[4] Fragmentation begets fragmentation; without multilateral cooperation, COVID-19 could redraw the world map.

This is not the only possible post-pandemic world. For the countries that managed to engage public health infrastructure early, life has all but gone back to normal (for now). This path is contingent on strengthening health systems so that they are accessible, available, acceptable, and sufficient quality for all without discrimination, as well as resilient, so that health emergencies do not sideline progress in maternal and child health, tuberculosis, HIV, and neglected tropical disease programmes. To achieve such systems includes rethinking international commitments for ensuring the sharing of data and samples, and global equitable access to diagnostics, vaccines, and treatments.[5] A future that restores global cooperation is also one better prepared for the looming climate crisis. Although COVID-19 lockdowns have only negligibly curved greenhouse gas emissions, climate models project that a global strategy to decarbonise the post-pandemic recovery could reduce warming 0·3°C by 2050.[6] In a world that "builds back better",[7] smart choices go hand-in-hand: solidarity over solitude, sustainable growth over short-term economic recovery, and health system strengthening over securitisation.

Although these possible paths are diverging slowly, every day makes a difference in terms of possible outcomes for the global health landscape after the pandemic ends. Although global health security is not unfamiliar with simulation exercises to test preparedness and response capabilities, COVID-19 has shown how inadequate our metrics and exercises were at considering governance failures and normative breakdowns.[8] The global community faces a renewed challenge of scenario thinking, not unlike the exercises used by scientists and policy makers for climate change and land use planning. By using shared policy assumptions to integrate visions of climate warming (representative concentration pathways [RCPs]) and visions of land use and society in the future (shared socioeconomic pathways [SSPs]), scientists are able to project how our choices today create a gradient of possible timelines. Together, these are used in a scenario matrix that accounts for independently made but usually correlated choices about economic

development, social transitions, global governance, land use change, and greenhouse gas emissions.

The RCP-SSP framework helps to delineate the boundaries of possible futures, and helps scientists show why some global futures are incompatible with particular targets for climate change mitigation. Some of the plausible futures are less appealing than others, and many share features of the current global health crisis. For example, in the third SSP, regional rivalry drives international fragmentation, creating a world in which every country faces the climate crisis alone, with the greatest possible combination of challenges to both mitigation and adaptation. In simulations, it becomes nearly impossible to achieve the scenario (RCP 2·6) in which the world is likely to stay under the 2°C limit to warming set in the Paris Agreement.[9] The SSP3 scenario is not used as one of a set of mutually exclusive destinations for global climate policy. Instead, it articulates one hypothesis of how plausible and arguably defensible short-term priorities—such as a scramble for domestic food, energy, and political security, driven by "resurgent nationalism" that rejects international cooperation[10]—could create a less liveable future and, conversely, preclude a better one. The policy assumptions that engineer that timeline are too close to the realities of COVID-19 for comfort: normative breakdowns, weakening international law, and the continued departure of the USA from its orbit in global governance all create a world that is as unliveable as the present day, but for a century longer.

Global health urgently needs to adapt the tools that institutions like the Intergovernmental Panel on Climate Change and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services use to describe and compare possible futures. Even in a crisis, the choices we make today that create short-term optimisations have long-term consequences, and they close off the possibility of safer, fairer, and healthier worlds. Developing a language to describe those branching timelines will help policy makers to reckon with the reality that even the best-intentioned acts—such as closing a border to save lives—are not the ones that make us most prepared for the next century of pandemics.

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*Colin J Carlson, Alexandra L Phelan
colin.carlson@georgetown.edu

Center for Global Health Science and Security (CJC, ALP) and O'Neill Institute for National and Global Health Law (ALP), Georgetown University, Washington, DC 20007, USA

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