



COVID-19 and the State of Global Mobility in 2021

Meghan Benton
Samuel Davidoff-Gore
Jeanne Batalova
Lawrence Huang
Jie Zong

The opinions expressed in the report are those of the authors and do not necessarily reflect the views of the International Organization for Migration (IOM). The designations employed and the presentation of material throughout the report do not imply expression of any opinion whatsoever on the part of IOM concerning legal status of any country, territory, city or area, or of its authorities, or concerning its frontiers or boundaries.

IOM is committed to the principle that humane and orderly migration benefits migrants and society. As an intergovernmental organization, IOM acts with its partners in the international community to: assist in meeting the operational challenges of migration; advance understanding of migration issues; encourage social and economic development through migration; and uphold the human dignity and well-being of migrants.

The Migration Policy Institute (MPI) is an independent, nonpartisan think tank that seeks to improve immigration and integration policies through authoritative research and analysis, opportunities for learning and dialogue, and the development of new ideas to address complex policy questions. MPI adheres to the highest standard of rigour and integrity in its work. All analysis, recommendations and policy ideas advanced by MPI are solely determined by its researchers.

This publication was made possible through support provided by the German Federal Foreign Office, Ministry for Foreign Trade and Development Cooperation of the Netherlands, and the IOM Migration Resource Allocation Committee (MIRAC). The opinions expressed herein are those of the authors and do not necessarily reflect the views of the Federal Foreign Office (Germany), the Ministry for Foreign Trade and Development Cooperation (the Netherlands) or the IOM.

Publisher: International Organization for Migration

17 Route des Morillons
P.O. Box 17
1211 Geneva 19
Switzerland
Tel.: +41 22 717 9111
Fax: +41 22 798 6150
Email: hq@iom.int
Website: www.iom.int

Publisher: Migration Policy Institute

1275 K St. NW
Suite 800
Washington, D.C. 20005
USA
Tel.: +1 202 266 1940
Fax: +1 202 266 1900
Email: communications@migrationpolicy.org
Website: www.migrationpolicy.org

This publication was edited by MPI. It was issued without formal editing by IOM.

ISBN 978-92-9268-275-0 (PDF)

© 2022 Migration Policy Institute and International Organization for Migration.
All Rights Reserved.

Design: Sara Staedicke, MPI

Layout: Yoseph Hamid, MPI

Photo: [iStock.com/Maria Korneeva](https://www.istock.com/MariaKorneeva)

No part of this publication may be reproduced or transmitted in any form by any means, electronic or mechanical, or included in any information storage and retrieval system without permission from the Migration Policy Institute or International Organization for Migration. A full-text PDF of this document is available for free download from www.migrationpolicy.org.

Information for reproducing excerpts from this publication can be found at www.migrationpolicy.org/about/copyright-policy.
Inquiries can also be directed to communications@migrationpolicy.org.

Suggested citation: Benton, Meghan, Samuel Davidoff-Gore, Jeanne Batalova, Lawrence Huang and Jie Zong. 2022. *COVID-19 and the State of Global Mobility in 2021*. Washington, D.C., and Geneva: Migration Policy Institute and International Organization for Migration.

COVID-19 and the State of Global Mobility in 2021

Meghan Benton
Samuel Davidoff-Gore
Jeanne Batalova
Lawrence Huang
Jie Zong

May 2022

Contents

- Executive Summary** 1

- 1 Introduction** 5

- 2 The Story of Mobility 2021** 6
 - A. Travel Measures and the Pandemic Response 6
 - B. Regional Trends 15
 - C. Responses to New Variants 21

- 3 Impact on Migration and Mobility** 27
 - A. Regular Movement 27
 - B. Irregular Movement 33
 - C. Increasing Inequalities in Mobility and the Pandemic Response 38

- 4 Shifting Policy Goals and Risk Tolerance** 44
 - A. Metrics to Assess Risk and Set Policy 45
 - B. Changing Risk Tolerance 47

- 5 Regional and International Coordination** 49
 - A. Regional Cooperation 50
 - B. Vaccines and Boosters 53

- 6 Recommendations** 58

- Appendices** 63
 - Appendix A. Data Sources and Methodological Considerations 63
 - Appendix B. Regional Trends in Travel Measures and Exceptions, Points of Entry Status and COVID-19 Cases 65

- About the Authors** 70

- Acknowledgements** 72

Executive Summary

Since the beginning of the COVID-19 pandemic, countries, territories and areas (C/T/As) have sought to prevent the virus' spread through a broad array of travel measures. These have included both travel restrictions, such as bans on arrivals or visa cancellations for travellers from particular jurisdictions, and health requirements, such as quarantine requirements, testing and – most recently, in some C/T/As – vaccination and recovery certificates. These measures have had different goals, from seeking to prevent the virus arriving at all (containment), to postponing its arrival (delay), to minimizing the number of infections (mitigation). Initially, travel restrictions, alongside widespread closures of airports and other points of entry, were designed to halt all forms of human movement in their tracks. But governments have increasingly sought to safely restart cross-border mobility of all types and, thus, many of the newest rules seek to safely expand the groups who are able to travel or replace blunt entry bans with measures to minimize the risk of the virus spreading.

The International Organization for Migration (IOM) has been tracking travel measures and border closures since March 2020. This study is the result of collaboration between IOM and the Migration Policy Institute (MPI) to analyse the implications of these data and, in particular, to track on an annual basis the impact of COVID-19 on cross-border mobility.

The sheer volume of travel measures in play – more than 100,000 as of the end of 2021 – continues to chill cross-border mobility. It is striking that this picture remained largely unchanged in the face of huge shifts in the epidemiological situation over the course of 2021, which saw peaks and troughs in the number of confirmed COVID-19 cases globally and within C/T/As, shaped by outbreaks of new variants of the virus as well as rising vaccination rates.

The sheer volume of travel measures in play – more than 100,000 as of the end of 2021 – continues to chill cross-border mobility.

Governments and authorities are grappling with how to lift travel restrictions safely and are seeking to do so in a measured way, largely through health requirements for travellers, such as testing and vaccination, and through exceptions to some travel measures for certain groups to facilitate their entry. The main trends in 2021 included:

► **A rise in traveller-based measures and move away from blanket country-based measures.**

Health requirements, which are applied to individuals rather than the C/T/A they are travelling from, have increasingly become the main tool with which governments and authorities manage safe travel. By the end of 2021, all but 5 out of 229 C/T/As worldwide had health requirements in place; at the beginning of 2021, 17 did not. Requirements for vaccination or recovery certificates in particular grew rapidly in the second half of 2021, while the use of travel restrictions, border closures and quarantine requirements declined. Yet not all regions followed this pattern. Some C/T/As – mostly in the Asia-Pacific – maintained country-based route restrictions, as they tried to contain the virus by preventing transmission from international travellers and quashing outbreaks through robust domestic measures

as part of an eradication strategy.¹ But even many of these C/T/As planned to open up in late 2021, at least until the Omicron variant delayed their plans.

- ▶ **A shift to “mobility by exception”.** Most C/T/As have maintained exceptions to travel measures since the beginning of the pandemic, for instance to allow their own nationals, residents and their family members to return home. But 2021 saw an expansion in the volume and types of exceptions. Instead of lifting restrictions, most governments layered on exceptions to existing rules – creating greater complexity. In addition to nationals and residents (and their family members), groups commonly covered by exceptions included diplomats, health-care workers, business travellers, cross-border workers and, increasingly, vaccinated travellers. Exceptions were also introduced for new vaccination requirements, for instance by clarifying that children, who often were not eligible for vaccination, could still enter and/or avoid quarantine.
- ▶ **Inconsistent responses to variants of concern.** Despite the widespread circulation of several variants of concern in 2021, governments and authorities did not respond consistently. For instance, some imposed route restrictions in response to the designation of the Alpha, Beta and Gamma variants as variants of concern, while others waited until cases had ballooned and circulated globally. And even C/T/As pursuing an eradication strategy that sought to prevent the arrival of such variants were unable to prevent outbreaks of the subsequent Delta and Omicron variants. Travel restrictions designed to prevent Delta and Omicron from entering a jurisdiction were often imposed after these variants were in circulation globally, thus demonstrating the difficulties of timing policy responses to prevent the arrival of new variants.

Because travel remains highly regulated, most forms of formal mobility were still below pre-pandemic levels in 2021. However, some forms of irregular (and often less safe) migration actually increased because many of the underlying conditions driving people to move have worsened during the pandemic. This study identified the following mobility trends:

- ▶ **Regular movement began to increase but remained below pre-pandemic levels.** As C/T/As lifted travel restrictions, regular migration picked up to some extent, but migrants and travellers continued to face greater costs to move across borders, as well as pandemic-related delays and backlogs in visa and travel processing. Tourism and business travel began to recover but did not reach anything close to pre-pandemic levels in 2021, and there were clear regional differences in the timeline for restarting “non-essential” movement. Student mobility completely recovered in some C/T/As, but it remained muted where stringent travel measures were in place. For labour and family migrants, consular closures and processing backlogs complicated and delayed the process of visa issuance. Innovations, such as the waiving of interview requirements or introduction of remote visa processing, helped keep immigration systems moving, but wait times ballooned almost everywhere nonetheless. Some countries actively worked to attract labour migrants, from seasonal agricultural workers in Costa Rica and the United States, to health-care workers in the United Kingdom and entrepreneurs in the United Arab Emirates. Other countries, such as Canada, found that mobility restrictions, backlogs and caution on the part of would-be migrants held them back from attracting the desired number of newcomers.

¹ “Eradication” refers to the public health practice of seeking to eliminate diseases such as malaria and polio, instead of managing spread through a “mitigation” approach.

Worldwide, refugee resettlement remains well below pre-pandemic levels and even further below global needs. However, the Afghanistan evacuation, during which some COVID-19 protocols were waived out of necessity and yet did not result in outbreaks, suggests that humanitarian movements can continue safely during public health emergencies.

- ▶ **Some forms of irregular and unsafe movement increased.** With opportunities to move through regular channels limited by pandemic-related policies, and with economic and social conditions worsening in many countries, irregular migration increased in some areas. For instance, maritime arrivals in the European Union met or exceeded pre-pandemic levels² along the Central and Western Mediterranean and West African routes, though arrivals across the Eastern Mediterranean route dropped. At the US-Mexico border, the number of encounters between US border authorities and irregular migrants increased significantly compared to pre-pandemic levels, although this increase was driven in part by some people attempting to cross multiple times following rapid expulsions. Further south, the number of migrants passing through the dangerous stretch of jungle known as the Darién Gap ballooned after Panama and Colombia lifted restrictions on movement across their shared border. And in some parts of sub-Saharan Africa, such as the Horn of Africa, Mali and the Niger, and Southern Africa, cross-border movements recorded by IOM's Displacement Tracking Matrix (DTM) have continued throughout the pandemic, in some cases consistently increasing beyond pre-pandemic levels.
- ▶ **Travellers and migrants faced high costs, and the gap between who can and cannot move continued to widen.** In 2021, the costs of travel – including financial costs related to testing, quarantine and other requirements, as well as persistent uncertainty – continued to deter mobility and widen the global gap between movers and non-movers, with regular migration channels accessible only to those able to shoulder these higher costs. Unequal access to vaccination and costlier border-crossing related to mobility restrictions may have also exposed migrants to further risks of violence, exploitation and abuse, including those related to smuggling and trafficking. Beyond the journey itself, other pandemic-related policies also had a disproportionate and negative impact on migrants and refugees; although some governments and authorities worked to integrate migrants into their COVID-19 response and recovery plans, many remained excluded from vaccination campaigns, health care, social services and unemployment support. And while such exclusions often existed before the pandemic, barriers to social protection have had an increased impact in a period when many people have relied on public services to survive illness and economic downturns.

In 2021, the world saw considerable policy innovation, particularly around risk assessment and digital health credentials. Government responses also became more alike as pandemic management strategies in many countries shifted from emergency response to living with the virus. Key trends include:

- ▶ **Global coordination was limited but growing.** C/T/As continued to implement travel measures unilaterally, with little evidence that international dialogue was leading to concrete coordination on borders and travel. However, efforts to strengthen coordination gained some momentum over the course of the year, primarily through the United Nations system, and governments and international

2 "Pre-pandemic levels" refers to levels in the year directly prior to the en masse imposition of pandemic-related travel measures in March 2020 (March 2019 to February 2020).

organizations reiterated their commitment to cooperation, including on a long-term rethinking of the global mobility architecture to better integrate health considerations.

- ▶ **Cooperation was stronger in some regions than others.** Regions with the greatest pre-pandemic levels of cooperation, particularly those with existing intraregional mobility and border frameworks, were best equipped to coordinate C/T/As' pandemic responses. European cooperation went as far as implementing an "emergency brake" mechanism to coordinate the introduction of travel restrictions in response to new variants of concern and developing a regional system to verify travellers' vaccination, testing and recovery status. Cooperation in other regions, such as the Southern Common Market (Mercosur) in South America, were hampered by ongoing internal conflicts between Member States. Many travel bubbles – quarantine-free areas with lighter touch COVID-19 protocols for travellers – failed to get off the ground amid repeated outbreaks, although some C/T/As, especially in the Asia-Pacific, continued to negotiate new bilateral (rather than regional) bubbles.
- ▶ **Emerging vaccination requirements for travel increased global fragmentation.** Global vaccine inequity is compounding unequal access to mobility: residents of C/T/As with lower vaccine coverage have been shut out of travelling to some places with vaccine requirements or forced to resort to irregular and less safe forms of movement. These inequalities may grow as governments shift to requiring digital health credentials to prove vaccination, testing or recovery status. While governments show some signs of consolidating around a set of health credential systems, limited technical integration between systems and divergences on which vaccines should be accepted (and under what dose regimen) may hinder efforts to return to pre-pandemic mobility through vaccination.

Governments and authorities, international organizations and other key stakeholders have an opportunity in 2022 to work together on the building blocks for a stronger global architecture on mobility and health. This includes pursuing agreement on when and how to impose travel restrictions, standards for health screening and testing, and a road map towards interoperability in digital health credentials, as well as beginning the process of planning for the next pandemic. But these efforts will take time. In the interim, governments should work to consolidate and rationalize pandemic-related travel protocols around four core principles. Rules governing cross-border mobility should be:

- ▶ **Clear** – streamlined, clearly communicated and based on clear metrics – and apply to all travellers rather than be country based;
- ▶ **Equitable**, with governments and authorities seeking to minimize costs to travellers and showing flexibility in offering alternatives to vaccination and in how they verify health documents;
- ▶ **Streamlined**, with entry restrictions that expire by default (rather than remaining on the books indefinitely), and working towards interoperability in digital verification systems; and
- ▶ **Future focused**, as investments made in systems now should form the basis for the response to future pandemics.

Adopting such principles would go a long way towards safely restoring the benefits of cross-border movement worldwide.

1 Introduction

The COVID-19 pandemic has had seismic impacts on cross-border mobility, from short-term travel and tourism to refugee resettlement and migration. After an unprecedented shock to mobility in 2020, many commentators hoped that 2021 would bring a return to pre-pandemic trends in the cross-border movement of people. These hopes were bolstered by the rollout of highly effective vaccines over the course of 2021 and a burst of innovation around digital health credentials and other tools to facilitate safe travel, along with increased regional and international coordination and phased lifting of measures restricting travel. Governments and authorities made considerable efforts to facilitate mobility and access to regular migration pathways, expanding health requirements (instead of blanket bans) and refining travel restrictions in response to evolving public health challenges. Yet efforts to open up were not straightforward, and as of the end of 2021, more than 100,000 travel-related measures remained in place. The sheer volume of rules meant that moving across borders remained costly and complex, and tourism, business travel and many forms of migration remained below pre-pandemic levels.

This sluggish revival of cross-border movement was perhaps surprising in light of huge advances in testing, vaccination, surveillance and treatment, and the fact that most domestic economies were largely open by the year's end. The rollout of vaccines alongside expansions in antiviral and monoclonal antibody treatments and greater knowledge on how to limit the spread of the virus enabled many countries, territories and areas (C/T/As) to shift in 2021 to living with the virus, keeping the vast majority of economic activities going even in face of outbreaks, while others have been forced to stay open because of economic

Vaccines did not offer the silver bullet many predicted for mobility – especially as access to them remains highly unequal across the globe.

necessity. Yet cross-border mobility did not restart at the same rate. Vaccines did not offer the silver bullet many predicted for mobility – especially as access to them remains highly unequal across the globe. Their uneven rollout spurred a complex patchwork of different vaccination mandates and requirements and extensive yet fragmented innovation in the area

of digital health credentials. The arrival of new variants of SARS-CoV-2 (the virus that causes COVID-19), including most prominently Delta and Omicron, sparked additional rounds of travel restrictions in response to new outbreaks across the globe. And new barriers to cross-border movement emerged: many people around the world still lack access to the vaccine, locking them out of places that require it, while others may face prohibitive testing costs or be deterred by the complexity and rapidly changing nature of travel requirements.

The International Organization for Migration (IOM) has been tracking travel measures and border closures since the pandemic began in March 2020, and it has made reports on these measures publicly available on its COVID-19 Mobility Impacts platform since May 2020.³ IOM and the Migration Policy Institute (MPI) have been collaborating to analyse the implications of these data. This report builds on the first publication in this partnership, *COVID-19 and the State of Global Mobility in 2020*, which presents a baseline understanding of how the world responded to the onset of the COVID-19 pandemic and its implications for people on the

³ International Organization for Migration (IOM), "COVID-19 Mobility Impacts", accessed 25 February 2022.

move.⁴ The current report examines the pandemic response and its effects on mobility in 2021, and whether the key questions from 2020 – from vaccine efficacy to the potential of greater international coordination – have been resolved.

Much is still uncertain regarding the future trajectory of the COVID-19 pandemic, but a number of questions may become more prominent in its next phase. First, if the Omicron variant is – as many expect – the first step towards SARS-CoV-2 becoming *endemic*, what are the implications for travel and mobility? Second, will the remaining handful of C/T/As still committed to an eradication strategy switch gears or maintain their commitment to stamping out COVID-19 cases, and how will this affect their relationship with the rest of the world for the foreseeable future? And finally, will inequalities in vaccine access, testing capacities, digital technologies and border management capacities further widen the gap between who can and who cannot move – at least through regular channels?

This report outlines trends in cross-border mobility regimes at the global and regional levels in 2021, comparing these to the benchmark set in 2020. Next, it looks at the impacts and costs of these travel measures on migrants and migration around the globe. Then, it examines the policy questions C/T/As face in deciding how to adapt their mobility systems as conditions continue to change. Finally, the report considers the role of international coordination in the design and implementation of travel measures and the use of digital health credentials. The report concludes with recommendations and key questions the world will need to grapple with in 2022.

2 The Story of Mobility 2021

The year 2021 began at an inflection point in the pandemic response: the Alpha and Beta variants, which emerged in late 2020, were spreading widely around the globe, and the rollout of several highly effective vaccines was picking up speed in many places. Yet there was no big bang moment that led to C/T/As being able to open back up, and even the summer vacation months in the global North saw less of a seasonal lifting of restrictions relative to 2020. Across the year, the volume of travel measures remained mostly static, but the composition changed: health measures (especially testing and vaccination requirements) became more common, and governments expanded their use of exceptions (including in the form of exemptions for vaccinated passengers or children too young to be vaccinated).

A. Travel Measures and the Pandemic Response

To understand the course global mobility took in 2021, it is helpful to first briefly look back at how it changed following the onset of the pandemic in 2020. C/T/As approached travel measures in three distinct phases in 2020: total mobility restrictions, followed by a phased reopening, followed by diverse responses to new variants and outbreaks.⁵ In the process, C/T/As applied a variety of mobility management tools aimed at protecting public health while balancing economic and political considerations.

⁴ Meghan Benton, Jeanne Batalova, Samuel Davidoff-Gore and Timo Schmidt, *COVID-19 and the State of Global Mobility in 2020* (Washington, D.C., and Geneva: Migration Policy Institute [MPI] and IOM, 2021).

⁵ For an in-depth discussion of these three phases, see Benton, Batalova, Davidoff-Gore and Schmidt, *COVID-19 and the State of Global Mobility in 2020*.

Initially, governments and authorities aimed to prevent or delay the arrival of the virus through **travel restrictions**, primarily route restrictions limiting the entry of travellers arriving from, transiting through or having been to specified C/T/As. Many governments and authorities also changed their visa requirements, invalidated already issued visas and paused regional mobility agreements or internal movement. Subsequent research found that while these restrictions did not prevent the importation of the SARS-CoV-2 virus, they may have delayed its arrival and potentially reduced the number of infections and deaths that would otherwise have occurred.⁶ The benefits of travel restrictions dramatically reduce once the virus is circulating within a society, but C/T/As have continued to use them, often to prevent screening and quarantine capacities and public health systems from becoming overwhelmed.

In mid-2020, many C/T/As implemented a phased reopening, replacing travel bans with health and medical measures for authorized entry. Initially issued as a barrier to international mobility, over time health requirements have become critical for *facilitating* mobility, by lowering the risk of travellers bringing the virus into a C/T/A or infecting other travellers, as well as by enabling authorities to identify and track cases that nevertheless enter their territory. These **health requirements** generally fall into five categories: proof of a negative result on an approved COVID-19 test; quarantine requirements (i.e. a self-isolation period at home or in a government-run hotel); health screening upon arrival (e.g. a COVID-19 test at the airport); COVID-19 vaccination record or recovery certificate; and other health measures (e.g. a health declaration). Details on each type of health requirement can be found in Box 1.

By the end of 2020, governments and authorities largely pursued one of two public health strategies in response to the pandemic: eradication or mitigation. Eradication aims for zero virus transmission in the community and complete prevention of imported cases, whereas mitigation aims to minimize cases and deaths to lessen the strain on the public health infrastructure rather than to eliminate cases entirely. C/T/As were more fragmented in their mobility policies, with some dealing with second and third waves of infections and others opening for more travellers. Many C/T/As granted exceptions to entry restrictions to certain categories of travellers, such as their own nationals and permanent residents, diplomats and airline crew, while others imposed new restrictions in response to rising COVID-19 cases.

The first year of the pandemic was characterized by a steady increase in the number of travel measures, with more than 110,300 COVID-19-related travel measures in place as 2020 drew to a close. As 2021 began, C/T/As had more tools to safely open up for travel, from vaccines to expanded testing facilities, but they also faced new variants, public fatigue and limited international coordination.

6 See, for example, Timothy W. Russell et al., “Effect of Internationally Imported Cases on Internal Spread of COVID-19: A Mathematical Modelling Study”, *The Lancet* 6, no. 1 (2021); Karen Ann Grépin et al., “Evidence of the Effectiveness of Travel-Related Measures during the Early Phase of the COVID-19 Pandemic: A Rapid Systematic Review”, *BMJ Global Health* 6, no. 3 (2021); Sylvia Xiao Wei Gwee, Pearleen Ee Yong Chua, Min Xian Wang and Junxiong Pang, “Impact of Travel Ban Implementation on COVID-19 Spread in Singapore, Taiwan, Hong Kong and South Korea during the Early Phase of the Pandemic: A Comparative Study”, *BMC Infectious Diseases* 21, no. 799 (2021); Jacob Burns et al., “International Travel-Related Control Measures to Contain the COVID-19 Pandemic: A Rapid Review”, *Cochrane Database of Systemic Reviews* (2021).

BOX 1 Health Requirements

Health requirements took on an increasing role in pandemic management in late 2020 and 2021. These measures fall into the following categories:

- ▶ **Proof of testing:** Travellers must provide proof of a negative result on a test for SARS-CoV-2 (usually a nucleic acid amplification test, such as a polymerase chain reaction [PCR] test, or a rapid antigen test) taken within a certain time frame (usually 72 to 6 hours pre-arrival). The goal of these measures is to reduce the likelihood a traveller is carrying the virus, but it should be noted that since tests only capture infection status at a particular moment, they do not eliminate risk.
- ▶ **Quarantine requirements:** Travellers must quarantine at a designated or self-nominated location for a specific period (usually 7 to 21 days, with shortened quarantines after negative tests). Some C/T/As mandate quarantine in a hotel or medical facility. The goal of quarantine is to prevent transmission from symptomatic and asymptomatic travellers into the community, but it is difficult to enforce without being in an official facility, which can be burdensome and costly, deter travel and sometimes lead to transmission within the facility. Self-isolation requirements impose fewer burdens on travellers but are harder to enforce.
- ▶ **Health screening on arrival:** Upon arrival, travellers are screened with PCR or antigen tests to detect infection, blood sampling to confirm prior infection or vaccination, and temperature checks or thermal screenings to screen for symptoms. While symptom screening was well-established as an alternative to travel restrictions in previous epidemics, the prevalence of presymptomatic and asymptomatic transmission of SARS-CoV-2 has meant that symptom screenings have been largely ineffective.
- ▶ **Vaccination record or recovery certificate:** Travellers might be required to provide proof of full COVID-19 vaccination or recovery status. Vaccinated travellers are less likely to contract and spread the virus, thereby reducing the risk posed by any one traveller. These requirements became more common in the second half of 2021. Policy discussions are increasingly focused on the validity of vaccination certificates and the need for updates to accommodate boosters; for instance, as of 1 February 2022, the EU Digital COVID Certificate considered vaccination valid for nine months, and the validity of its recovery certificates had decreased to 180 days (and there are discussions about narrowing it further).
- ▶ **Other health measures:** Travellers may also be required to complete health declaration and/or travel history forms and participate in health surveillance programmes, such as downloading a mobile location/tracking application or providing location information to the destination C/T/A's authorities. These measures can be used as part of contact tracing efforts and can help travellers monitor their status.

Sources: World Health Organization (WHO), "Technical Considerations for Implementing a Risk-Based Approach to International Travel in the Context of COVID-19" (interim guidance, 2 July 2021); Jacob Burns et al., "International Travel-Related Control Measures to Contain the COVID-19 Pandemic: A Rapid Review", *Cochrane Database of Systemic Reviews* (2021); Leah Grout et al., "Failures of Quarantine Systems for Preventing COVID-19 Outbreaks in Australia and New Zealand", *Medical Journal of Australia* 215, no. 7 (October 2021): 320–324; Meili Li et al., "Estimating the Quarantine Failure Rate for COVID-19", *Infectious Disease Modelling* 61 (2021): 924–929; Moran Bodas and Kobi Peleg, "Self-Isolation Compliance in the COVID-19 Era Influenced by Compensation: Findings from a Recent Survey in Israel", *Health Affairs* 39, no. 6 (2020); Philip Dollard et al., "Risk Assessment and Management of COVID-19 among Travelers Arriving at Designated U.S. Airports, January 17-September 13, 2020" (morbidity and mortality weekly report, US Centers for Disease Control and Prevention [CDC], 13 November 2020); European Commission, "EU Digital COVID Certificate", accessed 6 February 2022.

The global epidemiological situation continued to evolve throughout 2021, with peaks and troughs in the number of confirmed COVID-19 cases driven by the spread of new variants as well as rising vaccination rates. Despite this variation, there was neither a return to the pre-pandemic norm nor a significant increase in the number of travel measures in response to new variants of concern. Continuing the trend that began in 2020, health requirements were more widely implemented than travel restrictions,⁷ which became even less common towards the end of 2021 (see Figure 1, top panel).

Continuing the trend that began in 2020, health requirements were more widely implemented than travel restrictions, which became even less common towards the end of 2021.

One reason the volume of travel measures remained relatively stable is that C/T/As offered more exceptions for certain groups of travellers, rather than lifting broader entry restrictions entirely. The number of exceptions to travel restrictions rose rapidly (see Figure 1, top panel), in large part driven by exceptions available to vaccinated travellers, as will be discussed later in this section. Additionally, while the broad categories of travel measures remained the same, C/T/As constantly adjusted the design and implementation specifications of various measures, such as adjusting the time period in which testing must happen, the length of quarantine required and the validity of vaccination certificates, which are not captured in the data.

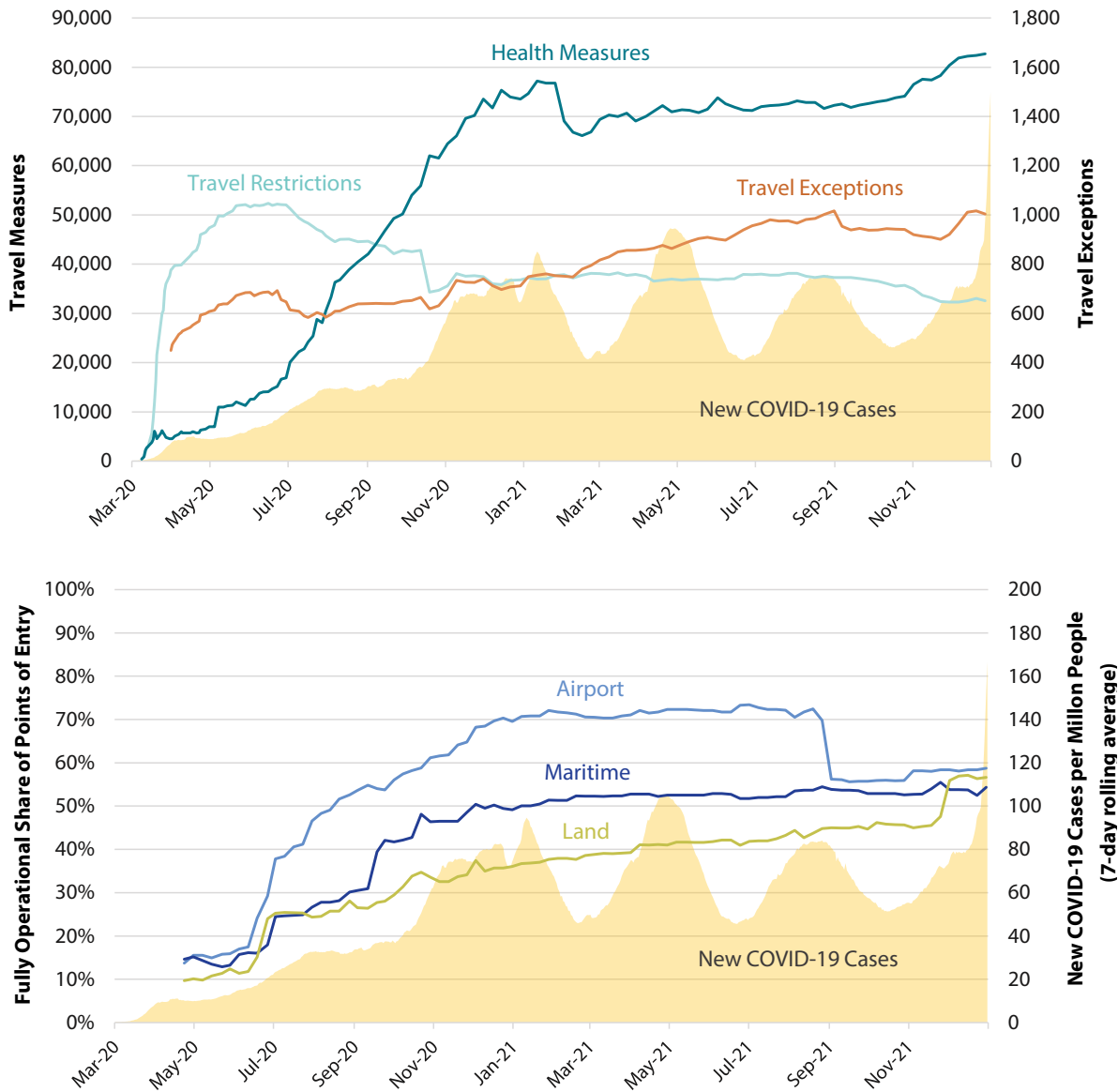
After their initial shutdown, many points of entry (PoEs) – airports and entry points along land and maritime borders – reopened in 2020 (see Figure 1, bottom panel). This trend continued through 2021, albeit slowly. By April 2021, more than 50 per cent of all PoEs were fully operational, and by the end of the year, only 10 per cent were fully closed (not shown in the figure). Airports were more likely to be open than land border or maritime crossing points, a function of more robust infrastructure and systems in place to screen passengers to ensure they were complying with various travel requirements.⁸ However, land borders saw the greatest amount of operational status change: the number of fully operational land PoEs increased by 68 per cent over the course of 2021.

⁷ As in 2020, route restrictions (that is, bans on passengers arriving from or transiting through specific countries, territories and areas [C/T/As]) were by far the most common type of travel restrictions, accounting on average for about 70 per cent of all travel restrictions. Although not as common as route restrictions, visa changes (such as visa invalidation and new visa requirements) and location surveillance were also used.

⁸ A majority of airports were fully operational as of August 2020. A majority of maritime points of entry (PoEs) were fully operational as of January 2021. Land PoEs, however, only reached a majority fully operational in December 2021. At the end of 2021, only 10 per cent of airports, 8 per cent of maritime PoEs and 12 per cent of land PoEs were fully closed.

FIGURE 1

Number of Travel Measures (Travel Restrictions and Health Measures) and Exceptions Issued Worldwide (top panel) and Fully Operational Share of Points of Entry by Type and COVID-19 Cases (bottom panel), March 2020 – December 2021



Notes: (1) Travel restrictions and health measures displayed here represent the sum of the individual measures for each reporting date. For a brief discussion of the indicators displayed in this figure, see this report’s Appendix A. (2) The shaded area chart in both panels shows the number of new COVID-19 cases per million people worldwide (7-day rolling average), and its scale can be seen in the figure’s bottom panel. Counts of newly confirmed COVID-19 cases are shaped to some extent by the accuracy and availability of testing, which vary depending on the C/T/A and the phase of the pandemic. Reporting of COVID-19 cases has fluctuated as the pandemic has continued, since some C/T/As have become less rigorous in their testing (i.e. testing rates have slowed, asymptomatic cases are being tested less frequently). (3) For regional data on travel measures, the operational status of points of entry, and COVID-19 cases, see this report’s Appendix B.

Sources: Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Travel Restrictions and Exceptions to Travel Restrictions)” (for additional information, see IOM, “Methodology for Monitoring Global Mobility Restrictions and Exceptions to Mobility Restrictions: IOM COVID-19 Mobility Tracking Database, Phase 4”, updated November 2021); Our World in Data, “Coronavirus Pandemic (COVID-19)”, University of Oxford, accessed 10 January 2022; authors’ analysis of the IOM dataset “IOM COVID-19 Country Points of Entry (PoE) Status Baseline Assessment” (for additional information, see IOM, “Methodology for IOM COVID-19 Impact on Points of Entry and Other Key Locations of Internal Mobility”, updated 19 October 2020).

While the overall number of travel measures remained fairly constant throughout the year, the declaration of the Omicron variant as a variant of concern on 26 November 2021 prompted a sharp though brief spike in mobility restrictions, as many were scrapped shortly after introduction (see Section 2.C.). By the very end of 2021, the volume of global travel restrictions returned to roughly the same level as before the Omicron announcement, suggesting that governments and authorities had learned from the experience in 2020 and become more flexible in adapting to new variants.

Growing Use of Travel Exceptions in Mobility Management

One of the main trends of 2021 was the expansion of exceptions to travel restrictions and health requirements, thus facilitating the entry of particular groups of travellers. Exceptions can serve important purposes, from protecting the rights of returning residents and ensuring they can unite with their family members, to facilitating the movement of essential workers, to allowing entry to vaccinated travellers. But exceptions also add considerable complexity to the system, often making it hard for travellers to know which restrictions apply to them and what conditions for entry they need to meet, all the while widening the gap between people who do and do not have mobility options available to them (e.g. between vaccinated and unvaccinated individuals).⁹

One of the main trends of 2021 was the expansion of exceptions to travel restrictions and health requirements, thus facilitating the entry of particular groups of travellers.

The number of exceptions to travel measures employed by C/T/As grew rapidly in 2021, from almost 750 at the start of the year to 1,004 by its end. Half of these exceptions applied to route restrictions, 44 per cent applied to health requirements, followed by 2 per cent for visa changes, 2 per cent for location surveillance and 2 per cent for other restrictions and conditions on entry. While many C/T/As exempted groups from route restrictions, exempt travellers often still needed to fulfil certain health requirements, such as testing or screening.

As in 2020, the groups of travellers most likely to receive exemptions were a C/T/A's nationals and residents, followed by diplomats and staff of international organizations, and airline and cargo/transit passengers. As can be seen in Figure 2, starting in mid-September, the "other exceptions" category, which includes vaccinated travellers and those with recovery certificates, grew rapidly. Furthermore, a considerable number of exceptions went to children, primarily exempting them from health requirements.¹⁰ Many C/T/As waived COVID-19 test requirements for young children because testing was often less available for young travellers.¹¹ Similarly, vaccination requirements were often waived for children accompanying fully vaccinated adults because many children were unable to get vaccinated.

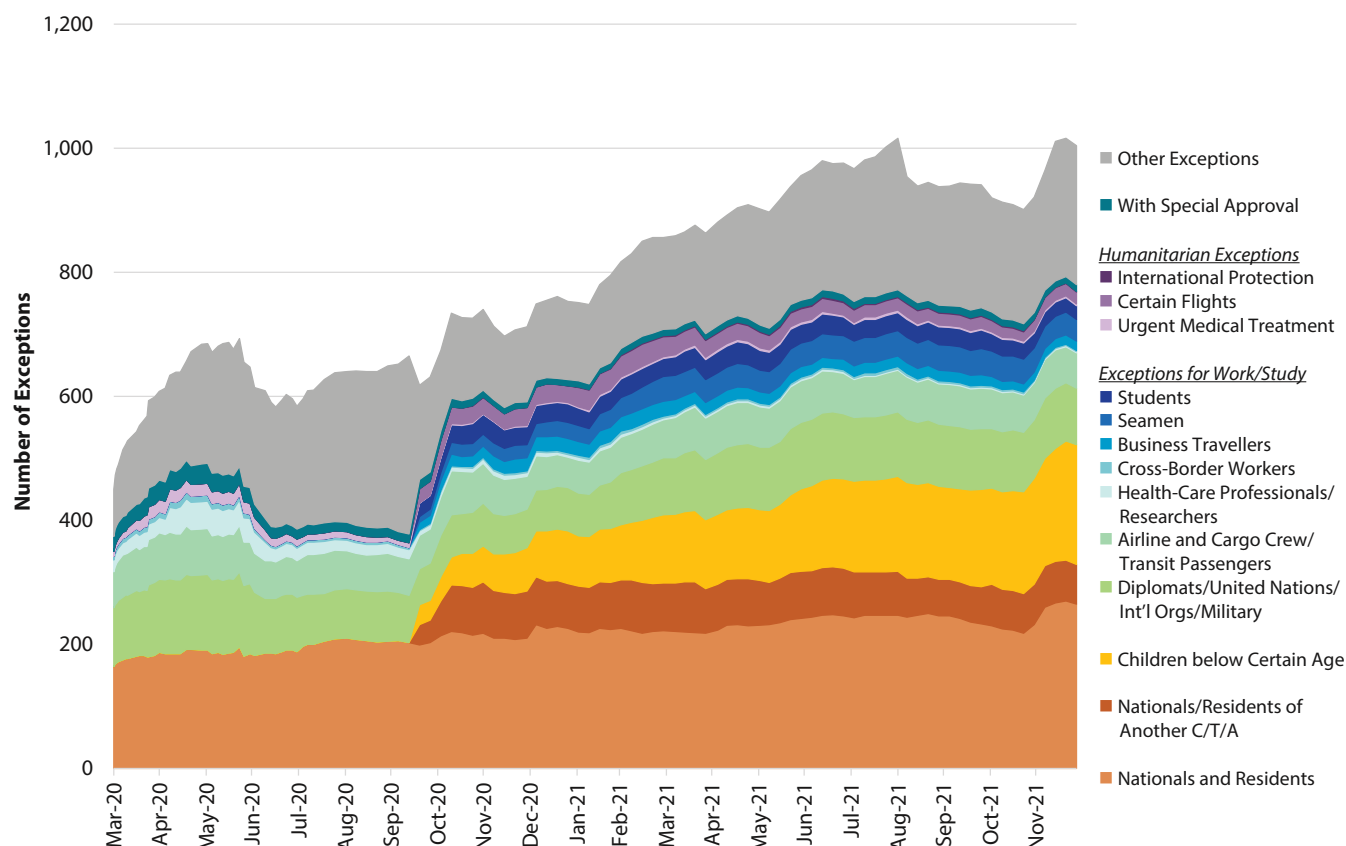
9 For instance, a British journalist researching travel restrictions in the United States of America only found out through doing so that he was eligible for an exception for his F-1 visa, having decided not to travel home to the United Kingdom of Great Britain and Northern Ireland for 18 months due to the risk of not being able to easily return. See Talib Visram, "There Was No Scientific Rationale for Keeping the U.S. Border Closed for So Long", Fast Company, 23 September 2021.

10 In 2021, 92 per cent of exceptions received by children were to waive health requirements such as proof of testing (69 per cent), followed by health screening upon arrival (8 per cent) and vaccination record or recovery certificate (7 per cent).

11 In some C/T/As, young children and babies are able to use fewer types of COVID-19 tests than adults, because fewer tests have been approved for children or because testing providers have more concerns around privacy or discomfort with young children. See Advisory Board, "Why It's So Hard to Get a Coronavirus Test for a Child", updated 10 September 2020; Sarah Kliff and Margot Sanger-Katz, "It's Not Easy to Get a Coronavirus Test for a Child", *New York Times*, 8 September 2020.

FIGURE 2

Number of Travel Exceptions Issued Worldwide, by Detailed Category, March 2020 – December 2021



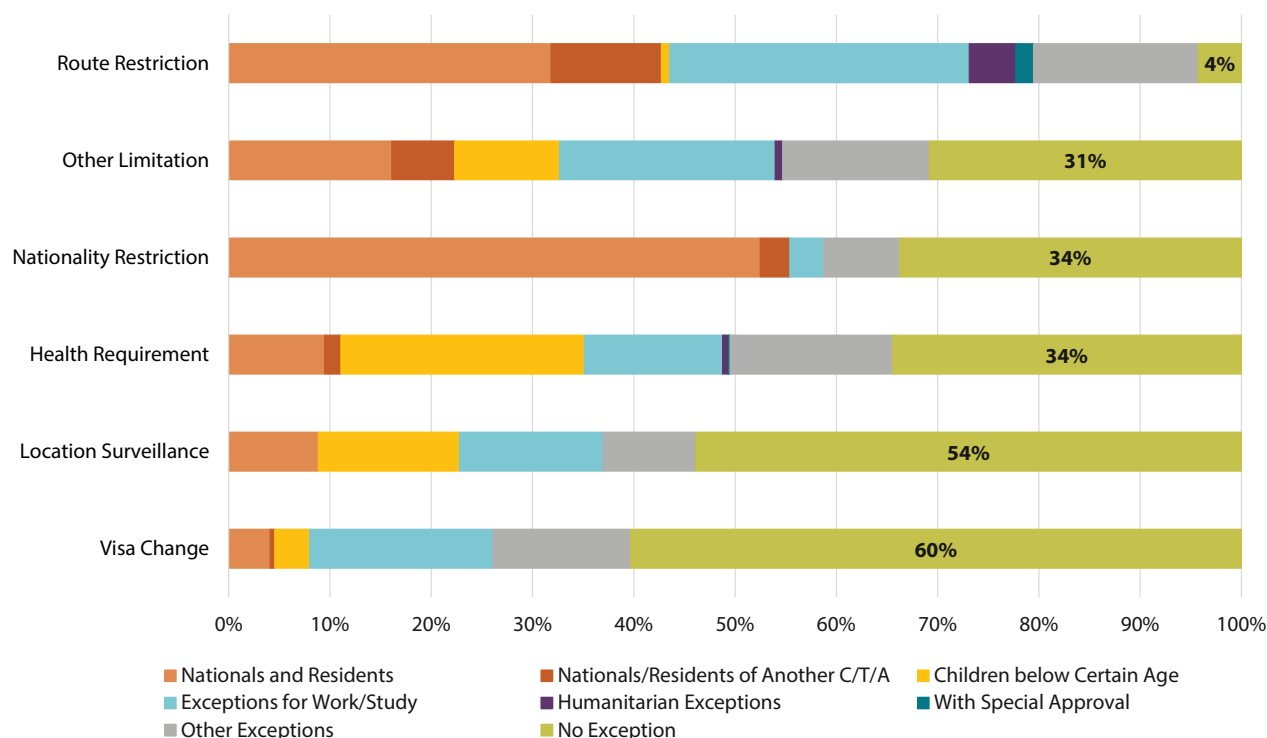
Notes: The “nationals and residents” group includes these individuals’ family members. The “diplomats/United Nations/int’l orgs/military” group consists of passengers with a diplomatic passport/visa; diplomats on duty station in the country, and their family members; passengers with a United Nations passport; personnel of international and humanitarian organizations; and military personnel or military forces of the North Atlantic Treaty Organization (NATO). The “health professionals/researchers” group refers to health professionals, and health researchers and collaborators. The group “with a special approval” includes passengers with a special approval/valid letter of prior approval issued by the destination-country government or other entity. The group “certain flights” includes humanitarian flights, flights in emergency and repatriation flights. “Other exceptions” includes those based on travellers’ vaccination records and recovery certificates. For more information about these groups of travellers, see IOM, “Methodology for Monitoring Global Mobility Restrictions and Exceptions to Mobility Restrictions”.

Source: Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Exceptions to Travel Restrictions)”.

As a sign of the extent to which mobility systems have become governed by exceptions, almost all route restrictions (96%) had some type of exception in 2021 (see Figure 3). Exceptions were also available for other types of travel restrictions, such as changes to visa requirements and location surveillance, although these were less common. Returning nationals and residents, for example, were frequently granted exceptions from route and nationality restrictions, since many C/T/As sought to ensure their right to return. This group received fewer exceptions from health requirements, such as testing or quarantine.¹² Measures that aimed to allow travel while mitigating public health risks had fewer exemptions: 34 per cent of health requirements and 54 per cent of location surveillance requirements included no exceptions.

12 This may reflect the time that different travel measures were introduced. Route and nationality restrictions were part of the first phase of the pandemic response, aimed to quickly limit in-flows and had to be accompanied by exceptions to protect the right to return for nationals and residents. In contrast, health requirements became common as part of the reopening process. Since nationality does not affect a travellers’ risk profile (as opposed to the C/T/As they visited or arrived from), allowing nationals and residents exceptions from travel restrictions – more than 50 per cent of exceptions went to this group – without additional screening or health measures raised public health risks.

FIGURE 3
Travel Exceptions, by Type of Travel Measure and Excepted Group, 2021



Notes: The “nationals and residents” group includes these individuals’ family members. The group “with a special approval” includes passengers with a special approval/valid letter of prior approval issued by the destination-country government or other entity. “Other exceptions” includes those based on travellers’ vaccination records and recovery certificates. For more information about these groups of travellers, see IOM, “Methodology for Monitoring Global Mobility Restrictions and Exceptions to Mobility Restrictions”.
Source: Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Exceptions to Travel Restrictions)”.

Health Requirements

The number of health measures, such as testing, vaccination requirements and mandated quarantine, had already overtaken the number of travel restrictions by mid-2020, and they were even more common by the end of 2021 (see Figure 1). By the end of 2021, only 5 C/T/As did not impose health requirements for incoming travellers, 31 C/T/As (14%) had one type of health requirement, 118 (52%) had two or three types, and 74 (32%) employed four to six types. There is a clear rationale for shifting from travel restrictions, such as entry bans, to health requirements. From a public health perspective, the entry of a vaccinated traveller with a negative test result may pose negligible additional risk, regardless of the traveller’s country of origin. Moreover, health requirements can be standardized for all travellers, which simplifies the complex system of country-by-country route restrictions and exceptions available only for certain groups of travellers.

Quarantine became a less common tool in 2021. While the number of requirements for proof of negative test results grew as 2021 progressed, travellers arriving in a C/T/A were less likely to be required to quarantine and more likely to undergo health screenings. Before the announcement of Omicron as a variant of concern in late November 2021, less than half of C/T/As required travellers to quarantine; those that did include the People’s Republic of China, Islamic Republic of Iran, and several Caribbean island nations. Yet

there were some important regional differences, including Australia's continued use of hotel quarantine.¹³ There were several reasons quarantine declined in salience. For one thing, it proved unable to entirely prevent transmission.¹⁴ Passenger compliance with self-quarantine was low, and the costs were high for travellers required to self-isolate¹⁵ and for countries that covered their returning nationals' stay in quarantine hotels (see Section 3.C.). At the same time, better and faster testing became available, which helped to reduce the number of days travellers were required to quarantine or to waive it altogether.

As vaccinations became more prevalent and an increasing number of people recovered from COVID-19, C/T/As began allowing the entry of these travellers. Data show that the number of "other medical restrictions and measures", most of which were requirements for vaccination records and recovery certificates, rose considerably since May 2021. Still, having proof of vaccination/recovery does not necessarily mean that travellers are exempt from testing or other health requirements before or after their arrival (see Box 2). For instance, in early November 2021, the United States of America opened its doors to vaccinated tourists and certain other travellers on temporary visas from the 33 C/T/As previously restricted from entry; however, these travellers still needed to present a negative pre-departure COVID-19 test. Such health requirements were also increasingly used not only as entry requirements but also for admission and stay processes. For example, as of October 2021, the United States required all immigrant visa applicants to get vaccinated as part of their medical exam, with waivers for people applying from areas with limited vaccine access.¹⁶

BOX 2 Spotlight on Vaccinated Travellers

Some countries granted exceptions for vaccinated travellers, exempting them from travel restrictions or allowing them to skip health measures such as quarantine or testing. Other countries required most travellers to be vaccinated – except for children and those with certain medical conditions. As of the end of 2021, Canada, Germany, Qatar and Uruguay were among 19 C/T/As that kept route restrictions but made exceptions for some vaccinated travellers. Ecuador, Fiji, Ghana and the United States were among 28 C/T/As that used vaccination as a health requirement for entry.

The relatively small number of C/T/As providing travel benefits to vaccinated travellers (only these 47 countries) may signal hesitance on the part of governments and authorities to make blanket changes in entry policy solely based on vaccination status, as well as limited vaccine access in many places. Vaccines also vary greatly in efficacy and do not offer full protection against contracting and transmitting the virus. Thus, as of the end of 2021, most C/T/As used vaccination/recovery certificates along with other health measures, rather than as the main tool to facilitate safe travel.

13 For example, in 2020, Australia transported all passengers directly from the airport to a hotel where they would quarantine for two weeks, but since then most States have lifted these requirements. As of 22 December 2021, New South Wales, Victoria and the Australian Capital Territory allowed home quarantine until first test. The Northern Territory and Tasmania did not require quarantine if vaccinated. Queensland and South Australia allowed home quarantine, and Western Australia required the 14-day hotel quarantine. Australian Government, "State and Territory Information: Information for Travellers", accessed 22 December 2021.

14 For example, strict hotel quarantine requirements in New Zealand and Australia were unable to prevent spread of the virus into the community. See Leah Grout et al., "Failures of Quarantine Systems for Preventing COVID-19 Outbreaks in Australia and New Zealand", *Medical Journal of Australia* 215, no. 7 (October 2021): 320–324. For a study of the United States, Canada and Hubei Province, China, see Meili Li et al., "Estimating the Quarantine Failure Rate for COVID-19", *Infectious Disease Modelling* 61 (2021): 924–929.

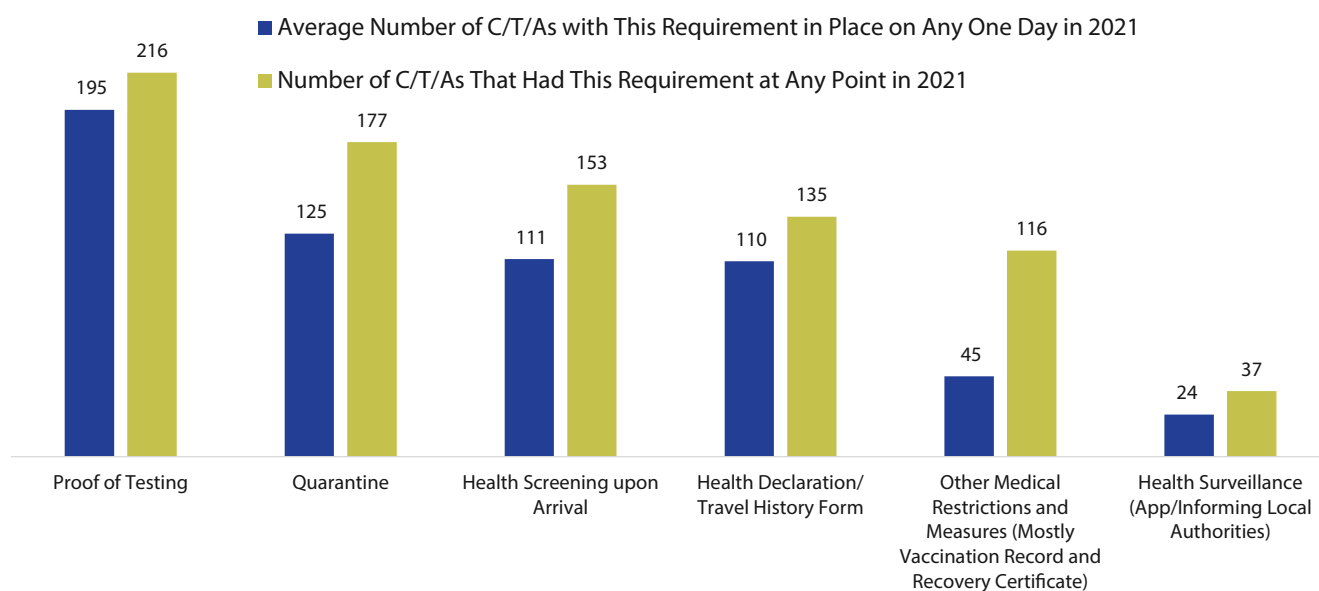
15 For instance, a study of compliance in Israel found that compliance was 57 per cent without compensation for lost wages but 94 per cent when lost wages were compensated for. See Moran Bodas and Kobi Peleg, "Self-Isolation Compliance in the COVID-19 Era Influenced by Compensation: Findings from a Recent Survey in Israel", *Health Affairs* 39, no. 6 (2020).

16 US Department of State, Bureau of Consular Affairs, "Changes to Vaccination Requirements for Immigrant Visa Applicants", updated 22 October 2021.

The consistency with which these health requirements were used varied throughout the year, as can be seen by comparing the number of countries using of a certain health measure on any given day in 2021 versus the number to use the measure at any point in 2021 (see Figure 4). A small difference between the two statistics implies that C/T/As used the measure consistently throughout 2021, while a large gap implies that most C/T/As used the measure for only part of the year. Almost all C/T/As required proof of testing throughout the year. Although C/T/As used health surveillance and health declarations much less frequently, their use also remained consistent throughout 2021.

Two sets of tools were used to respond to emerging trends. First, vaccination/recovery certificates along with “other” (unspecified) health requirements were the second least common health requirement in 2021, with only 45 C/T/As having this condition in place on an average day. However, 116 C/T/As employed this tool at some point throughout the year. Second, while quarantine requirements waned in their use or stringency, as described earlier, they were reintroduced quickly in response to the Omicron variant, although their resurrection was short lived.

FIGURE 4
Health Requirements Implemented Worldwide, by Frequency of Use, 2021



Note: The average number of C/T/As with a certain requirement on any one day was calculated by totalling the number of C/T/As that had this requirement in place on each observed date and then dividing it by the number of observed dates.
Source: Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Travel Restrictions)”.

B. Regional Trends

While at the global level, mobility was carefully opening up – often through the use of exceptions and measures focused on travellers’ characteristics, such as vaccination status – at the regional level, approaches diverged even more dramatically than in 2020.

One of the main regional differences was that 4 out of the 13 regions examined continued to rely on travel restrictions as their central policy tool, even as the world overall was shifting towards an increased use of

health requirements. The Association of Southeast Asian Nations (ASEAN), trans-Tasman countries (Australia and New Zealand), European Economic Area (EEA) and Gulf Cooperation Council (GCC) all continued to use entry restrictions (see Figure 5). Yet their reasons for doing so were different. Many C/T/As in ASEAN and the trans-Tasman region relied on eradication over mitigation strategies and continued to restrict travellers from most countries in 2021, while also relying on medical requirements to screen those travellers allowed in via exception categories. Rising domestic caseloads and the achievement of key vaccination targets prompted countries such as Singapore to review their approach and seek to open up to vaccinated foreign visitors in the second half of 2021 (for further discussion of this development, see Section 4.B.).¹⁷ Meanwhile, the number of health measures GCC countries had in place spiked in late 2021. And while many EEA countries continued to restrict the entry of travellers from certain C/T/As outside the region, they moved towards an exceptions-based system that allowed intraregional travel for vaccinated and tested people, which led to a sharp drop in the number of health requirements in February 2021 (see Figure 5).

Most other regions shifted to using health requirements, rather than blanket travel restrictions. For example, South Asia was on track to loosen travel restrictions and remove health measures in January 2021, but the emergence and swift spread of the Delta variant in India led health requirements to increase sharply (coinciding with the peak of reported new COVID-19 cases), and many stayed in place for the rest of the year. In the United States, Mexico and Canada (USMCA), the sudden drop in travel restrictions and spike in health requirements corresponded to the United States' shift from a system of country-based route restrictions to one based on traveller health requirements. Eastern and South-Eastern Europe is the only region in which the use of both travel restrictions and health measures increased in 2021, although health measures were still more common.

Most other regions shifted to using health requirements, rather than blanket travel restrictions.

The six countries comprising the GCC changed their approaches to health requirements most frequently. The region stopped using health measures entirely twice in 2021, instead temporarily increasing travel restrictions in both periods. Oman closed its border in April 2021 due to increased domestic infections, and in September 2021, the government reinstated medical requirements to facilitate the reopening of the border for travellers. Importantly, between April and September 2021, some groups of travellers were still allowed to enter if they were on the exceptions list and they met health-related requirements. The United Arab Emirates moved away from using route restrictions and opened its border to most visitors in August 2021, provided they fulfilled visa and health requirements. Dubai, the United Arab Emirates' largest city, experienced an economic boom in the months that followed, and saw open-border policies, high levels of vaccination and low COVID-19 infection rates.¹⁸

17 Aradhana Aravindan and Anshuman Daga, "Singapore Expands Quarantine-Free Travel, Eyes COVID-19 'New Normal'", Reuters, 10 October 2021.

18 Rory Jones and Stephen Kalin, "Sky-High Vaccination Rates and Zero Taxes Make Dubai a Pandemic Boomtown", *Wall Street Journal*, 10 December 2021.

FIGURE 5

Number of Travel Measures (Travel Restrictions and Health Measures) and Travel Exceptions Issued in Different World Regions, March 2020 – December 2021

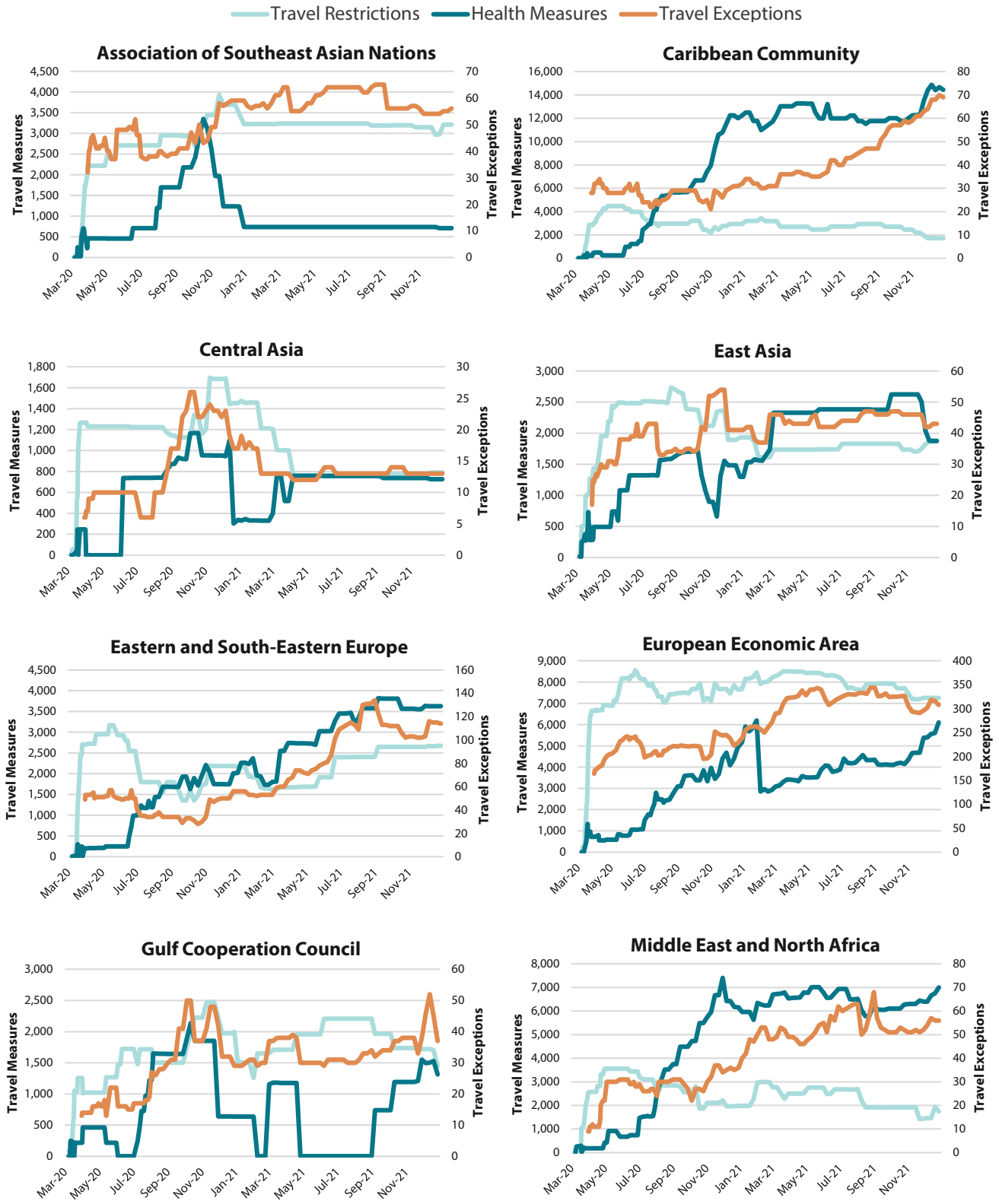
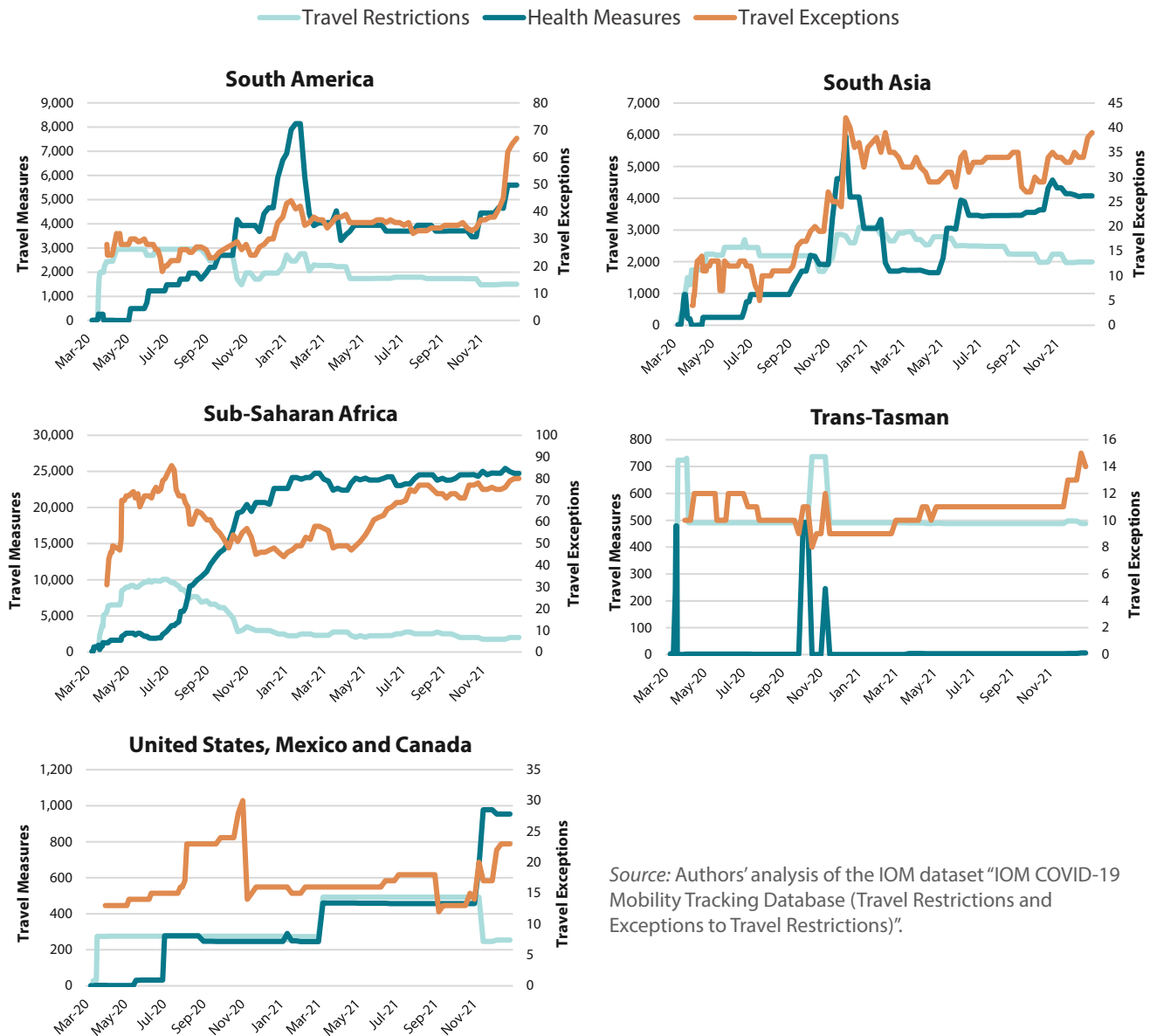


FIGURE 5 (cont.)

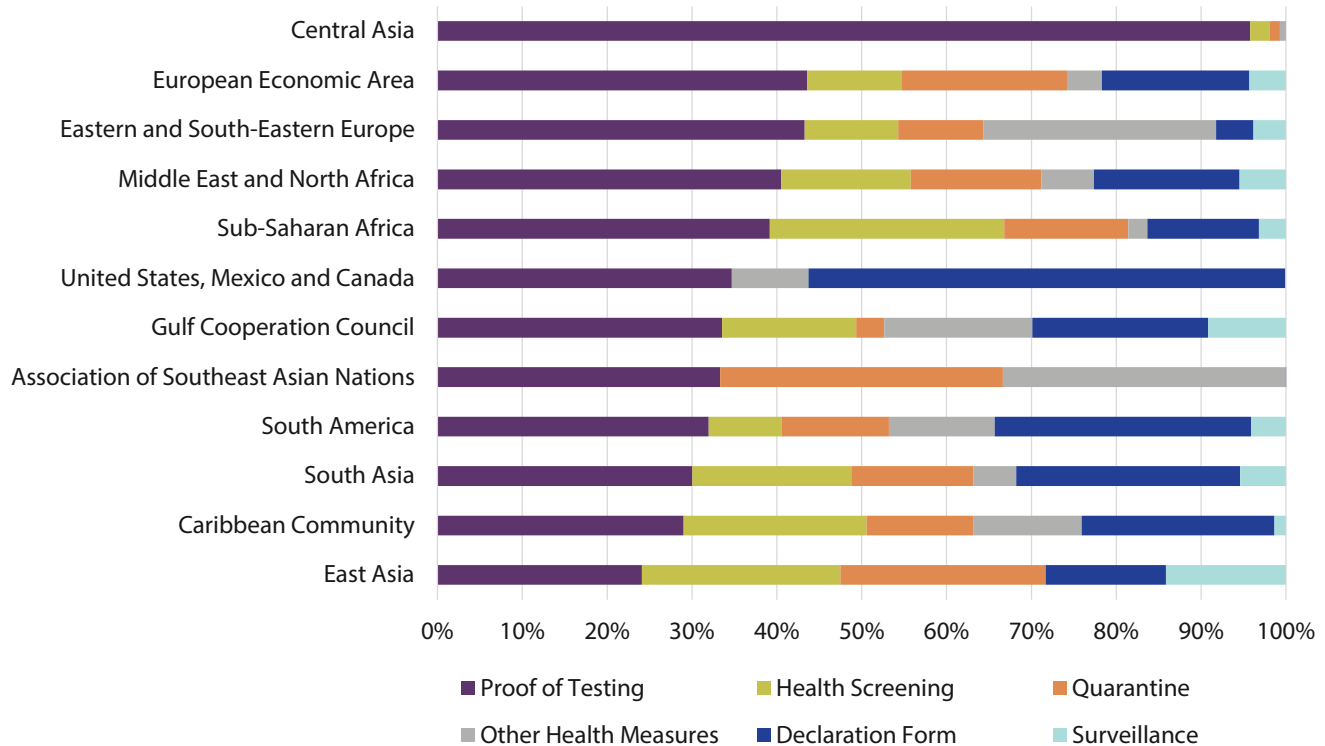
Number of Travel Measures (Travel Restrictions and Health Measures) and Travel Exceptions Issued in Different World Regions, March 2020 – December 2021



Source: Authors' analysis of the IOM dataset "IOM COVID-19 Mobility Tracking Database (Travel Restrictions and Exceptions to Travel Restrictions)".

Regions also differed in the types of health measures they used in 2021 (see Figure 6). In most regions, a plurality of all health measures implemented in 2021 were requirements that travellers provide proof of testing, generally ranging from 24 per cent in East Asia to 44 per cent in the EEA, but jumping to 96 per cent in Central Asia. Many regions also relied on health declaration forms as their second most implemented measure, although sub-Saharan African C/T/As preferred health screenings. Moreover, some regions, such as East Asia and ASEAN, layered risk mitigation tools by using multiple, reinforcing health measures at the same time, while regions such as Central Asia and USMCA relied much more heavily on only one or two kinds of health measures.

FIGURE 6
Types of Health Measures, by Selected World Region, 2021



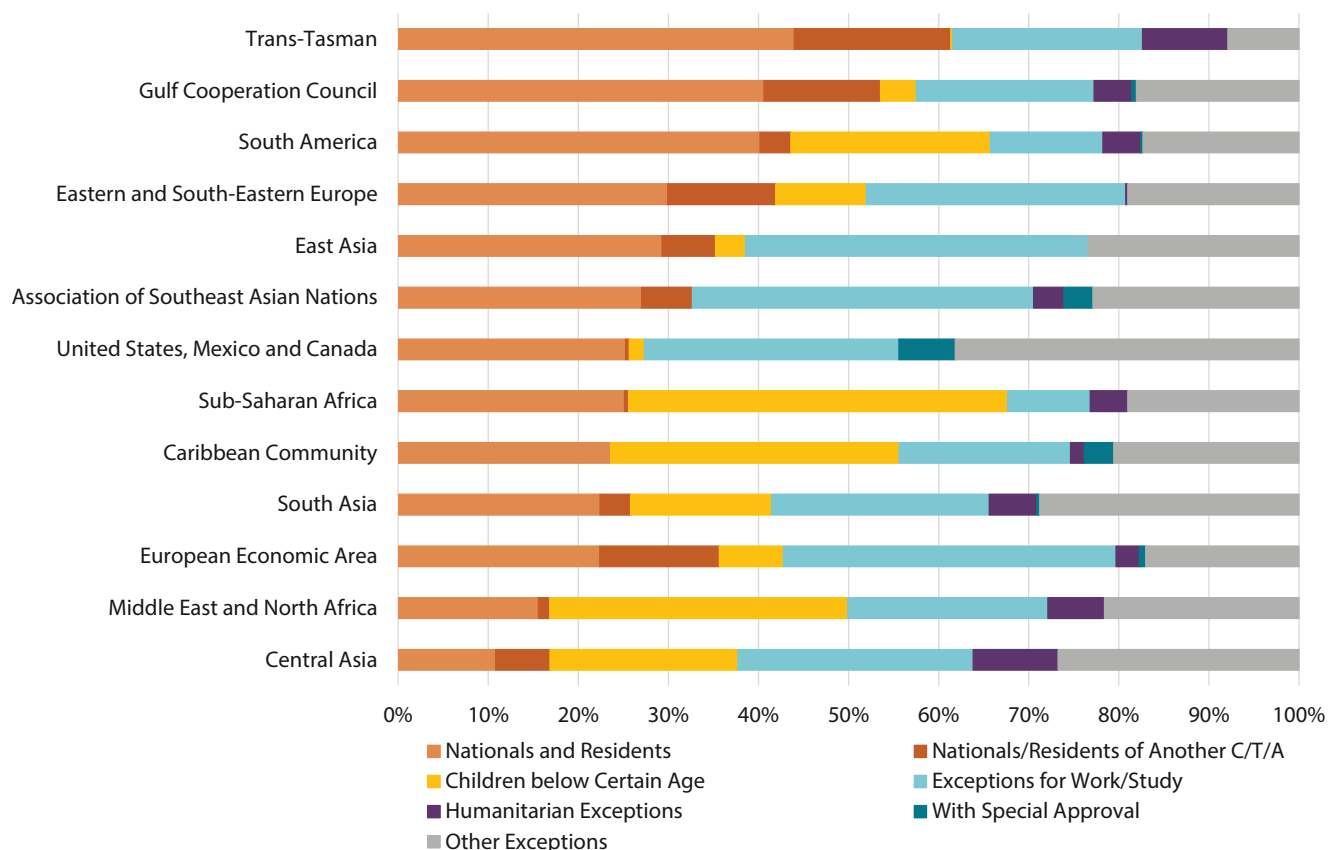
Notes: Each C/T/A can issue multiple health measures for travellers from different C/T/As. The trans-Tasman region is excluded from this graph because the two countries, Australia and New Zealand, only implemented 136 health requirements throughout 2021. By contrast, the next lowest number of measures, found in the United States, Mexico and Canada (USMCA) region, was more than 25,000. Source: Authors' analysis of the IOM dataset "IOM COVID-19 Mobility Tracking Database (Travel Restrictions)".

C/T/As in most regions issued an increasing number of travel exceptions throughout 2021, and this trend was particularly pronounced in the regions that changed their entry policies most frequently. Regions with consistent volumes of travel measures throughout most of 2021, such as the USMCA, trans-Tasman and Central Asia regions, also had relatively consistent levels of exceptions. In contrast, C/T/As in regions such as the EEA, Eastern and South-Eastern Europe, and the Caribbean Community (CARICOM) not only adjusted their entry policies frequently but also issued a substantial number of exceptions as they moved to exceptions-based systems. In some cases, this was the result of a coordinated effort, such as in the EEA, whereas others came as the result of the convergence of individual C/T/A policies, for example to encourage tourism in CARICOM.

Each region's policies also varied on *who* was granted an exception, setting different categories of exempted groups or individuals (see Figure 7). For example, C/T/As in all regions offered exceptions to travel restrictions for their nationals and residents, but ASEAN and the trans-Tasman region did not offer exceptions for children below a certain age, and the trans-Tasman countries offered many humanitarian exceptions while East Asia did not.

FIGURE 7

Types of Travel Exceptions by World Region, 2021



Source: Authors' analysis of the IOM dataset "IOM COVID-19 Mobility Tracking Database (Exceptions to Travel Restrictions)".

In addition, unlike in 2020, when most countries prioritized bringing back their own nationals and residents after the pandemic began, some regions in 2021 also prioritized the entry of businesspeople and other travellers. More than one third of exceptions in East Asia, ASEAN and the EEA were related to the travellers' work, while few such exceptions existed in sub-Saharan Africa. With growing vaccination rates worldwide, a plurality of exceptions in USMCA, South Asia and Central Asia were granted to vaccinated travellers or those with recovery certificates.

While C/T/As in most regions kept their airports fully or partially operational throughout 2021, they varied in how much they opened their land borders. In East Asia, where C/T/As have primarily taken an eradication strategy, there have been no fully operational land PoEs, and more than half have been fully closed throughout the pandemic. In South Asia, roughly half of land PoEs were fully closed throughout 2021, and in Central Asia, the numbers of fully closed and fully operational land PoEs were nearly equal. By contrast, land PoEs in ASEAN Member States were consistently partially operational, allowing some forms of cross-border mobility to continue throughout the year, while still limiting overall movement. South America adopted a similar posture, with very few land PoEs fully closed by the end of 2021 and the vast majority

partially operational. PoEs of all kinds in the EEA have been predominantly fully operational, in keeping with the region's internal reopening. Finally, in sub-Saharan Africa, land PoEs continued to reopen throughout the year, with more than half fully operational by the end of 2021, and an additional third partially operational. Within sub-Saharan Africa, Member States of the East African Community (EAC) and Southern African Development Community (SADC) kept their PoEs relatively more open than those in the Economic Community of West African States (ECOWAS), which only saw a substantial reopening in August 2021. (See Appendix B for more information on each region's PoE operational trends).

C. *Responses to New Variants*

Like any virus, SARS-CoV-2 is constantly mutating, and multiple strains are being monitored around the world. When a variant with a genetic mutation changing the virus' characteristics emerges in different parts of the world or in different groups, it may be designated as a variant of interest (VOI), which the World Health Organization (WHO) and its Member States then monitor and investigate further. When a VOI is understood to have worrisome properties such as increased transmissibility or increased virulence, or if mitigation and treatment methods are found to be less effective in combatting it, the variant may be reclassified as a variant of concern (VOC).¹⁹ As of December 2021, five strains of SARS-CoV-2 had been designated as VOCs by WHO (see Box 3).

While the evidence on how to use travel restrictions to prevent the spread of SARS-CoV-2 is now much richer, evidence is more limited on how to deal with its variants.

While the evidence on how to use travel restrictions to prevent the spread of SARS-CoV-2 is now much richer, evidence is more limited on how to deal with its variants. C/T/As have sought to use travel measures to prevent the spread of variants in several ways:

- ▶ **containment:** preventing the variant from arriving in or leaving the country entirely;
- ▶ **mitigation:** reducing the risk that passengers are carrying a particular variant, or reducing interaction between people at all while a variant is on the rise;
- ▶ **supporting other measures:** keeping the number of arrivals low enough to be able to implement health procedures; and/or
- ▶ **delaying arrival:** enabling governments to introduce genomic sequencing, enhance screening mechanisms and prepare health systems.

¹⁹ World Health Organization (WHO), "Tracking SARS-CoV-2 Variants," accessed 23 December 2021.

BOX 3 SARS-CoV-2 Variants of Concern

Health requirements took on an increasing role in pandemic management in late 2020 and 2021. These measures fall into the following categories:

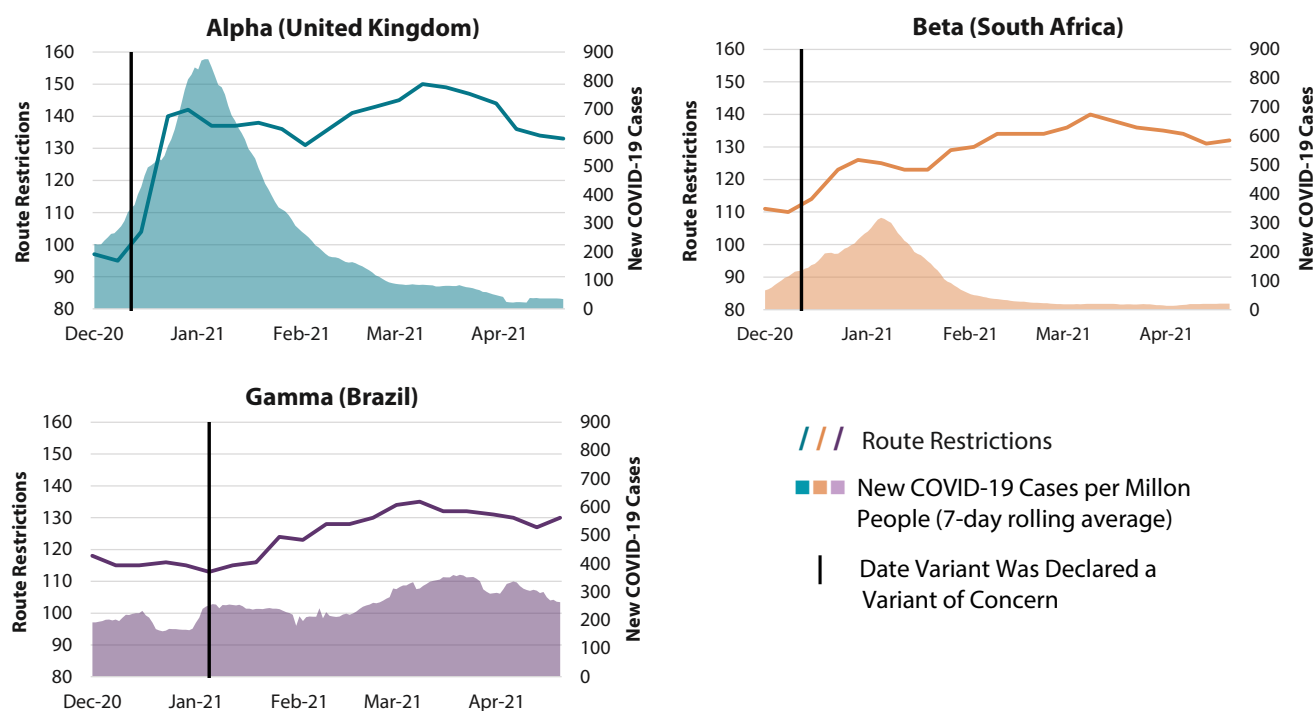
- ▶ **Alpha (designated a VOC on 18 December 2020).** First documented in the United Kingdom of Great Britain and Northern Ireland, the Alpha variant had been detected in nearly 200 C/T/As by 21 December 2021. The strain is about 50 per cent more transmissible and causes more severe cases of COVID-19 than the original form of the novel coronavirus, but vaccines are considered to offer an effective response.
- ▶ **Beta (18 December 2020).** First documented in South Africa, the Beta variant had been detected in more than 140 C/T/As by 21 December 2021. Like the Alpha strain, Beta is about 50 per cent more transmissible and causes more severe cases of COVID-19 than the virus' original form, but vaccines appear to be less effective against Beta than Alpha.
- ▶ **Gamma (11 January 2021).** First documented in Brazil, the Gamma variant had been detected in more than 100 C/T/As by 21 December 2021. It is more transmissible, with vaccines appearing to be slightly less effective against Gamma than against the original virus.
- ▶ **Delta (11 May 2021).** First documented in India, the Delta variant quickly became the most dominant variant globally, spreading to more than 200 C/T/As by 21 December 2021. Reported to be 50 per cent more contagious than the Alpha variant, the Delta variant has led to breakthrough cases in vaccinated populations.
- ▶ **Omicron (26 November 2021).** With no apparent consensus on the location of the earliest documented sample, the Omicron variant had been detected in more than 100 C/T/As by 21 December 2021. Because it has more mutations (more than 30) on its spike protein than earlier variants, it is considered to be highly transmissible. It also is more likely than other VOCs to infect individuals who have previously contracted COVID-19 or been immunized. At the same time, Omicron appears to lead to severe disease and hospitalization in a smaller share of cases relative to the Delta variant.

Sources: WHO, "Tracking SARS-CoV-2 Variants", accessed 23 December 2021; Live Science, "Coronavirus Variants: Facts about Omicron, Delta and Other COVID-19 Mutants", updated 10 December 2021; US CDC, "Global Variants Report", accessed 23 February 2022; Jacqueline Howard, "Early Studies Suggest a Reduced Risk of COVID-19 Hospitalization When Infected with Omicron Compared to Delta", CNN, 22 December 2021; WHO, "Weekly Epidemiological Update on COVID-19" (Emergency Situational Update No. 71, 21 December 2021).

C/T/As did not respond consistently to the first VOCs, although they largely first pursued containment goals. Following the designation of the Alpha and Beta variants as VOCs in December 2020, C/T/As responded by quickly introducing route restrictions on the United Kingdom and, less steeply, on South Africa, the two countries where the variants were first sequenced. Between 14 December 2020 and 4 January 2021, the number of C/T/As imposing route restrictions on the United Kingdom increased from 90 to 122, and from 103 to 115 for South Africa. The response to the Gamma variant was similar to the response to Beta: it took the same amount of time for the same number of C/T/As to impose route restrictions on Brazil as on South Africa (see Figure 8). For all three variants, reports confirmed the spread of the variants prior to the implementation of route restrictions, including in populations with no travel history, suggesting that these

newly imposed measures would not be able to contain the variants' spread.²⁰ By contrast, C/T/As already pursuing eradication strategies through strict border closures and entry restrictions, including Australia, China, Singapore and Viet Nam, only saw a few cases and no widespread outbreaks due to these variants.

FIGURE 8
Route Restrictions Imposed against the Countries in Which Selected SARS-CoV-2 Variants of Concern Were First Documented and Their COVID-19 Caseload, December 2020 – April 2021



Sources: Authors' analysis of the IOM dataset "IOM COVID-19 Mobility Tracking Database (Travel Restrictions)"; Our World in Data, "Coronavirus Pandemic (COVID-19)".

When it came to responding to the Delta variant, governments and authorities varied in their timelines for implementing route restrictions on India, the country where the variant was first documented. The number of new reported COVID-19 cases in India began to dramatically increase in April 2021, at the same time as Delta was designated as a VOI and after India first acknowledged the mutation on 24 March 2021.²¹ Many C/T/As began imposing route restrictions on travellers from India in response to this changing epidemiological situation; between its designation as a VOI on 4 April 2021 and its designation as a VOC on 11 May 2021, the number of route restrictions imposed on India increased by 21 per cent. By the time of the VOC designation, however, the highly transmissible variant was already present in many C/T/As around the world, and case counts in India were in fact returning to pre-Delta levels. And yet, C/T/As maintained their route restrictions against India, only beginning to lower them in August 2021.

20 See, for example, Michael Birnbaum and Martin Selsoe Sorensen, "Denmark Is Sequencing All Coronavirus Samples and Has an Alarming View of the U.K. Variant", *The Washington Post*, 22 January 2021; Carolyn Y. Johnson and Joel Achenbach, "Coronavirus Variant First Seen in South Africa Identified in South Carolina", *The Washington Post*, 28 January 2021.

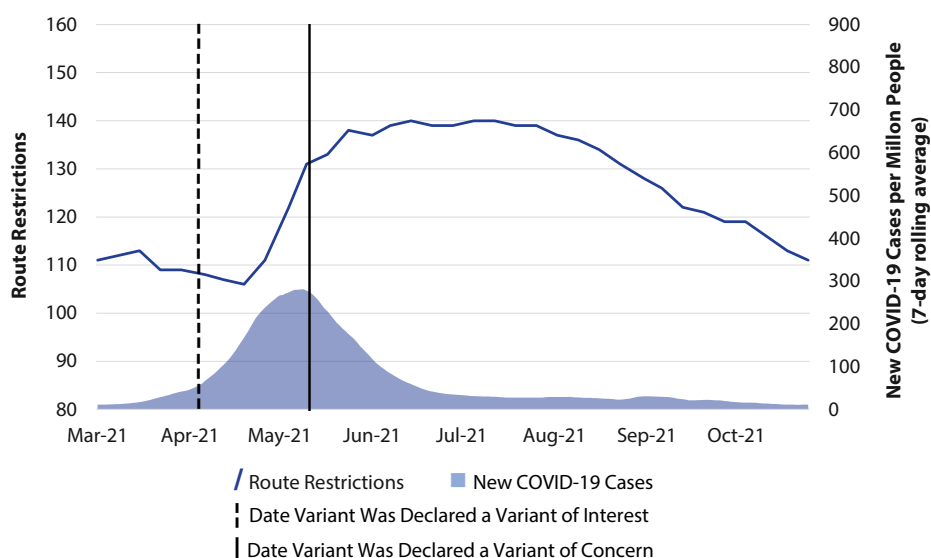
21 A January 2021 outbreak in Amravati, India, prompted local concern that led to the sequencing of the Delta variant's parent mutations. The sequencing and internal reporting in India about the variant occurred in February 2021, at least a month before the 24 March 2021 announcement. See Chris Kay and Dhvani Pandya, "How Errors, Inaction Sent a Deadly Covid Variant around the World", *Bloomberg*, 29 December 2021.

Meanwhile, many C/T/As that had largely locked down or pursued an eradication strategy found themselves unable to maintain such a strategy in the face of Delta’s added transmissibility, and it (perhaps counter-intuitively) became one factor in opening up (see Section 4). For example, in Australia, Delta led to outbreaks in major cities starting in July 2021 and continued to grow throughout the rest of the year.²² Singapore fared similarly, seeing a small increase in cases in July 2021 with the first reports of Delta, followed by a spike in September.²³ And in Viet Nam, Delta fuelled a massive outbreak in July 2021.²⁴ For perhaps the first time in the pandemic, these C/T/As had to not only weigh the economic and social costs of this strategy, but also a diminishing return on these investments.

C/T/As’ use of travel restrictions in response to new variants echoed their use in the first months of the pandemic: these restrictions often came too late and stayed in place for too long. While entry restrictions may be able to prevent or delay a variant’s importation, there is a narrow window of time for this to successfully occur. This window usually passes before the variant is noticed, however, and there is no efficient, evidence-based way of pre-emptively imposing restrictions prior to a variant’s emergence,²⁵ particularly because

restrictions on travellers from specific countries become ineffective if the variant has already spread more widely. And when a more transmissible variant has arrived in a C/T/A, it will eventually outcompete all other variants, meaning the importation of one case can seed its spread throughout an entire C/T/A.²⁶ Still, travel restrictions, especially when used with other health measures, may give policymakers crucial time to prepare by delaying arrival, lowering importation rates and reducing the speed and magnitude of an initial wave. C/T/As can use this “power of delay” by increasing their supply of rapid tests; surging testing staff; increasing hospital capacity; and reviewing quarantine, sick pay and furlough rules to ensure a balance

FIGURE 9
Route Restrictions Imposed against India as a Result of the SARS-CoV-2 Delta Variant and India’s COVID-19 Caseload, March – October 2021



Sources: Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Travel Restrictions)”; Our World in Data, “Coronavirus Pandemic (COVID-19)”.

22 Nick Baker, “How Australia Went from Being a ‘COVID-Free Paradise’ to ‘a Mess’”, NBC News, 23 August 2021.
 23 Ben Wescott, “Delta Variant Outbreak Threatens Singapore’s ‘Living with Covid’ Model”, CNN, 7 September 2021; Aradhana Aravindan, “Analysis: Vaccinated Singapore Shows Zero-COVID Countries Cost of Reopening”, Reuters, 22 October 2021.
 24 Huong Le Thu, “Delta Variant Outbreak Challenges Vietnam’s COVID-19 Response Strategy”, Brookings Institution, 11 August 2021.
 25 Julien Arino, Pierre-Yves Boëlle, Evan Milliken and Stéphanie Portet, “Risk of COVID-19 Variant Importation – How Useful Are Travel Control Measures?”, *Infections Disease Modelling* 6 (2021): 875–897.
 26 Meghan Benton, “Can Omicron Finally Get the World to Cooperate on Pandemic Mobility Management?” (commentary, MPI, Washington, D.C., December 2021).

between incentivizing workers to quarantine when necessary and not crippling workforce capacity through arduous rules for returning to work. Over time, some policymakers have begun to mention this power of delay. For example, health officials in the United States explicitly communicated that Omicron-related travel measures would be temporary but were needed to “buy some time to be able to prepare.”²⁷

Many route restrictions imposed in response to emerging variants remained long after their costs outweighed any potential benefits.

Despite community transmission of these variants occurring in C/T/As around the globe, many route restrictions imposed in response to emerging variants remained long after their costs outweighed any potential benefits. When they were removed, the timing was inconsistent. Route restrictions imposed against the United Kingdom, South Africa and Brazil all peaked on 15 March 2021; however, despite South Africa having lower case counts and returning to pre-Beta-variant levels earlier than the United Kingdom did from the Alpha variant, the number of route restrictions imposed against the United Kingdom began to decrease after mid-March 2021 while the number of restrictions against South Africa remained roughly the same until August 2021. The stickiness of route restrictions on certain C/T/As suggests these decisions were not solely driven by public health goals and instead may have had political, diplomatic or economic reasons as well.

While it is clear that some C/T/As used travel measures to try to stop the importation of variants, it is less clear whether C/T/As consistently used them in response to variant-driven domestic waves of infection, both to prevent exportation and to reduce pressure on health systems. There are examples of this occurring, with Chile shutting its border to arrivals in April 2021 in response to its variant-driven high domestic infection rate, while also limiting outbound travel.²⁸ Similarly, Oman restricted incoming travel in March and April 2021 due to a domestic outbreak. However, these cases are not necessarily representative. For example, the countries in which VOCs were first documented did not seem to adjust their own entry measures when their COVID-19 caseloads peaked; the number of travel measures they implemented remained relatively consistent despite increases in the stringency of their domestic measures.²⁹

The response to the emergence of the Omicron variant shows that C/T/As have begun to incorporate their experiences of previous VOCs into their responses, though some showed an almost involuntary response to impose route restrictions to this variant as well. The Omicron variant was identified by South African researchers, and route restrictions were swiftly imposed on South Africa and other southern African nations (see Figure 10). These restrictions were imposed almost immediately after Omicron’s designation as a VOC, perhaps reflecting a lesson learned from the slow Delta response.³⁰ Nonetheless, the variant was thereafter

27 Josh Wingrove and Jenny Leonard, “Fauci Says Southern Africa Travel Ban on Omicron ‘Temporary’”, Bloomberg, 2 December 2021. Whether this policy successfully achieved these goals has not been studied, as of this writing.

28 Aislinn Laing, “Chile Reopens Borders to Visitors Ahead of Summer Tourism Season”, Reuters, 15 September 2021.

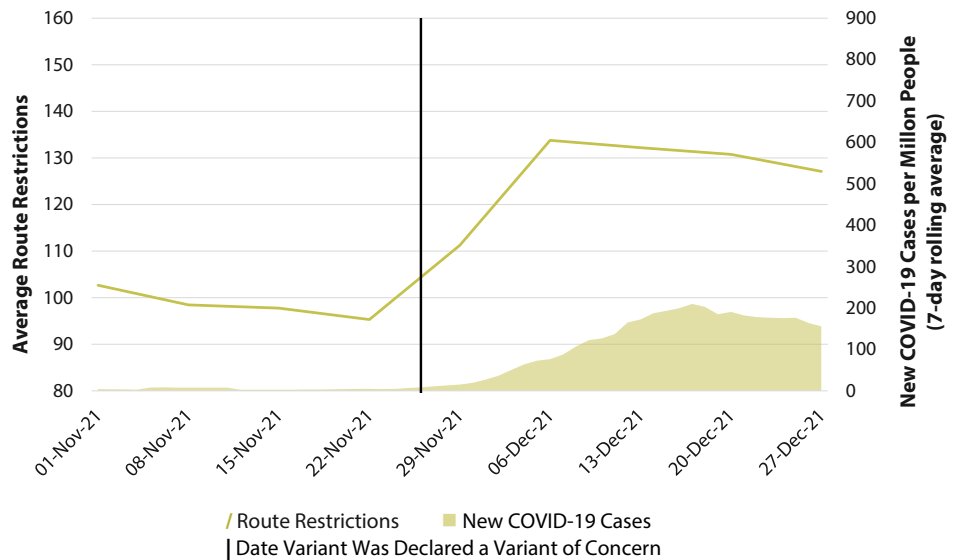
29 Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Travel Restrictions)”; Thomas Hale et al., “Oxford COVID-19 Government Response Tracker”, University of Oxford, Blavatnik School of Government, accessed 10 January 2022.

30 For example, flight suspensions jumped after the Omicron variant’s designation as a variant of concern, but not after the Delta variant’s. See IOM, “Impact of COVID-19 on International Flights – Omicron Variant” (weekly update, 31 January 2022).

identified in 19 C/T/As,³¹ and it became clear that Omicron was already being transmitted locally in multiple C/T/As around the world by the time South Africa identified it, meaning route restrictions would not contain the variant.³² Some C/T/As lifted their route restrictions relatively quickly once community transmission negated potential containment benefits,³³ while others, such as the United States, waited up to a month.³⁴

As of the end of 2021, an average of 127 C/T/As had route restrictions on the targeted southern African countries, higher than the 95 prior to the Omicron announcement but down from the 6 December 2021 peak of 134. It is unclear, however, how many of these route restrictions were Omicron-specific; while 2021 ended with 123 C/T/As maintaining travel measures specifically introduced in response to the Omicron variant, these included both travel restrictions and health requirements.³⁵ In fact, many of these measures were health requirements, pointing to a shift towards mitigating the risk of a variant's spread through testing and quarantine, rather than trying to eliminate it with travel restrictions. The quicker lifting of travel restrictions and use of health measures may point to policymakers learning from earlier variants, as well as greater community immunity in some C/T/As driven by vaccination. And while the efficacy of different health requirements in mitigating variants' spread remains less well studied than travel restrictions, this shift is nevertheless a positive sign that governments and authorities are implementing clearer policies targeting specific risks.

FIGURE 10
Average Route Restrictions Imposed against Targeted Southern African Countries in Response to the SARS-CoV-2 Omicron Variant and Their COVID-19 Caseload, November – December 2021



Note: The figure shows the average number of total route restrictions for the nine targeted countries: Botswana, Eswatini, Lesotho, Mozambique, Malawi, Namibia, South Africa, Zambia and Zimbabwe.

Sources: Authors' analysis of the IOM dataset "IOM COVID-19 Mobility Tracking Database (Travel Restrictions)"; Our World in Data, "Coronavirus Pandemic (COVID-19)".

31 These C/T/As were Australia, Austria, Belgium, Botswana, Canada, China, Czechia, Denmark, Germany, Israel, Italy, Japan, Netherlands, Portugal, Réunion, South Africa, Spain, Sweden and the United Kingdom. See WHO, "Weekly Epidemiological Update on COVID-19" (Emergency Situational Update No. 68, 30 November 2021).

32 Bill Chappell, "The Omicron Variant Was in Europe a Week before South Africa Reported It", NPR, 30 November 2021.

33 Kylie MacLellan and Elizabeth Piper, "UK to Remove All Countries from COVID Travel Red List on Wednesday", Reuters, 14 December 2021; David Ljunggren and Ismail Shakil, "Canada's Trudeau Says Omicron Spike 'Scary,' Ottawa to Lift Africa Travel Ban", Reuters, 18 December 2021. One study of the United Kingdom's implementation of travel measures in response to the Omicron variant suggests that they likely had little impact on the variant's spread. See Oxera and EdgeHealth, "Impact of Travel Restrictions on Omicron in the UK", updated 5 January 2022.

34 See, for example, Dan Diamond, "Biden to Lift Travel Restrictions on Southern African Countries", *The Washington Post*, 24 December 2021.

35 IOM, "COVID-19 Mobility Restrictions-Special Focus-Omicron Variant 31 December 2021" (email update, 31 December 2021).

As the pandemic continues, there may be variants that are even more transmissible than Omicron. At the very least, new variants are expected and will pose uncertain risks. The experience in 2021 calls into question the use of route restrictions as a method of containment in response to such variants. However, targeted travel measures may be able to delay their arrival long enough to prepare for the next wave of infections – if C/T/As use the time to prepare. The question policymakers must answer is: at what point do the costs of travel restrictions outweigh the benefits? In the case of Omicron, it seems that this point may have come soon after discovery.

3 Impact on Migration and Mobility

Shifting travel measures and border restrictions continued to shape migration and mobility in 2021. In the first year of the pandemic, the harmful effects of mobility restrictions were clear: travellers were left stranded and unable to continue their journeys or return home, migrants were cast into perilous conditions as they lost livelihoods and housing opportunities, and many groups of people on the move struggled to access support or have humanitarian protection needs met. Many of these trends continued in 2021 as constantly changing restrictions and sudden border closures continued to strand travellers abroad as well as prevent migrant workers from leaving their countries of origin.³⁶ Movement of all forms remained low compared to pre-pandemic levels. Among the myriad reasons for this were increased bureaucratic hurdles, cost and reduced job opportunities. Irregular and unsafe movement grew, dipped and changed routes in different contexts as various drivers of irregular migration interacted with pandemic border policies.

A. Regular Movement

Most types of regular movement have begun to slowly recover, but they often remain below pre-pandemic levels, as travel measures continue to restrict some migration, make travel more costly and unreliable, and undermine confidence in travel. In many corners of the world, regular movement has not fully rebounded, even when governments have lifted travel measures and actively worked to restart mobility. This speaks not only to the pandemic's impact on individuals' ability to move, and on admission and stay processes and their requirements, but also to the different factors would-be movers consider when making mobility decisions. Because comprehensive data on different forms of movement during the pandemic are limited, this analysis relies on snapshots of data in different contexts.

In many corners of the world, regular movement has not fully rebounded, even when governments have lifted travel measures and actively worked to restart mobility.

³⁶ For example, these include thousands of foreign students stranded in India unable to return home due to mobility restrictions implemented in response to the Delta variant; French and Spanish travellers stranded in Morocco; migrant workers from Tajikistan unable to return to the Russian Federation, where they live and work; and citizens from New Zealand stuck abroad because there were insufficient spaces in quarantine facilities. See Tarek Abd El-Galil, "Arab Students in India Are Stranded by the Country's New Covid-19 Crisis", Al-Fanar Media, 12 May 2021; Fadel Senna, "Spain, France Bring Home Thousands Stranded in Morocco", ENCA, 6 April 2021; Khiradmand Sheraliev, "A Critical Lesson for Tajikistan: The State of Migrant Workers in 2020", The Diplomat, 6 January 2021; RadioFreeEurope/RadioLiberty, "Many Stranded as Flights from Tajikistan to Russia Delayed", RFERL, 17 May 2021; John Power, "No Way Home: Overseas New Zealanders Despair at Tightened Borders", Al Jazeera, 22 December 2021.

International tourist travel was deeply affected by pandemic travel measures. Because tourism is less “essential” than other forms of migration, tourists are often one of the last groups permitted to enter a country when it begins to reopen, reflecting the most direct impact of these measures. Tourist travel increased in 2021 relative to 2020, but it remained below pre-pandemic levels; in 2021, international tourist arrivals were 72 per cent below 2019 levels, a slight increase over the first nine months of the pandemic (April to December 2020), when arrivals were 85 per cent below pre-pandemic levels.³⁷ In many cases, tourist travel levels reflect the extent to which C/T/As chose to prioritize facilitating tourism via exceptions or fewer restrictions: tourist flows in CARICOM – where tourism is a vital economic sector – were actually 1 per cent higher in 2021 than 2019, while they were 94 per cent lower in the Asia-Pacific.³⁸ Most countries in the Asia-Pacific either did not allow tourists to enter in 2021, or only allowed small numbers to enter with very strict conditions. For example, Thailand allowed some tourists to bypass quarantine if they stayed in specific cities,³⁹ but the country received visitors orders of magnitude below pre-pandemic levels.⁴⁰ But, just as travel restrictions stifled tourist travel, lifting those restrictions may have boosted these flows. In the United States, for example, issuance of tourist visas resumed slowly throughout 2021 until November, when it jumped from 74 per cent below pre-pandemic levels to 54 per cent below, as the country switched from country-specific route restrictions to traveller health requirements.⁴¹

Similar trends are evident in international air travel, which saw stronger recovery in regions with less restrictive travel measures. International air passenger traffic in 2021 was still 42 per cent of 2019 levels, but this was an improvement from 34 per cent in 2020.⁴² The European Union contributed substantially to this trend, as international air travel rebounded slightly from July to September 2020, corresponding with European summer vacation, and then picked up substantially starting in July 2021 as the EU Digital COVID Certificate was rolled out. Yet most of this recovery has been within the bloc.⁴³ Similarly, air arrivals in the United Kingdom rebounded slightly in August and September 2020 and in 2021 for summer vacations, and then continued to increase in October 2021 as the country reopened.⁴⁴ Meanwhile, countries and regions that maintained stricter travel measures saw considerably less growth in air travel: international air traffic in the Asia-Pacific in November 2021 was at 12 per cent of November 2019 levels, while Europe had rebounded to 56 per cent.⁴⁵ International flights also remained vulnerable to the introduction of new travel measures and to flight cancellations. For example, flight passenger traffic in Africa was consistently growing throughout 2021 until travel measures adopted in response to the Omicron variant reversed this growth

37 UN World Tourism Organization (UNWTO), “International Tourism and COVID-19”, accessed 31 January 2022. The comparison in 2020 excludes January to March, when many C/T/As had not yet imposed travel measures.

38 UNWTO, “International Tourism and COVID-19”.

39 Steve Saxon, Jan Sodprasert and Voramon Sucharitakul, “Reimagining Travel; Thailand Tourism after the COVID-19 Pandemic”, McKinsey & Company, 30 November 2021.

40 UNWTO, “International Tourism and COVID-19”.

41 Authors’ analysis of US Department of State, “Monthly Immigrant Visa Issuance Statistics”, accessed 23 February 2022; US Department of State, “Monthly Nonimmigrant Visa Issuance Statistics”, accessed 23 February 2022.

42 International Air Transport Association (IATA), “Passenger Demand Recovery Continued in 2021 But Omicron Having Impact” (press release, 25 January 2022).

43 Within the bloc, the specific countries rebounding the most include vacation destinations Croatia, Cyprus and Spain; economic hubs Germany, Luxembourg and the Netherlands; and Bulgaria. Authors’ analysis of Eurostat, “International Intra-EU Air Passenger Transport by Reporting Country and EU Partner Country [AVIA_PAINCC]”, accessed 31 January 2022; authors’ analysis of Eurostat, “International Extra-EU Air Passenger Transport by Reporting Country and Partner World Regions and Countries [AVIA_PAEXCC]”, accessed 31 January 2022.

44 Authors’ analysis of UK Home Office, “Air Passenger Arrivals, October 2021”, updated 25 November 2021.

45 IATA, “Passenger Traffic Improved in November; Omicron Restrictions Likely to Affect Period Ahead” (press release, 12 January 2022).

and air traffic dropped in Africa while still increasing in other regions that were generally not subject to Omicron-related travel restrictions.⁴⁶

International student mobility quickly rebounded when travel restrictions were lifted in some C/T/As. New student visas to Canada, the United Kingdom and the United States all dropped dramatically in 2020, but they exceeded pre-pandemic levels in 2021. In contrast, new student visas continued to drop throughout 2021 in Australia and New Zealand, where stringent travel restrictions were in place for almost the entire year.⁴⁷ C/T/As with the most restrictive border measures often barred international students from entry – most international students remain unable to enter China,⁴⁸ for example – but others have implemented exceptions or targeted programmes to facilitate international student mobility, given students' important financial contributions.⁴⁹ These data point to a potential unintended consequence of travel measures: changing mobility patterns and geographies. For example, India has overtaken China as the largest country of origin for international students in five major destination countries, but new Indian student arrivals are now 62 per cent lower in Australia and 174 per cent higher in the United Kingdom than before the pandemic.⁵⁰

Labour migration has also been slowly recovering, although to the extent that data are available, it appears to remain well below pre-pandemic levels in many C/T/As.⁵¹ The impact of travel measures on labour migration has varied across C/T/As. Some countries, such as Australia and Germany, saw significant declines in new labour migrants, leading to concerns about this trend's demographic and labour market impacts.⁵² In the United States, the number of new temporary foreign worker visas issued varied by visa class: temporary agricultural workers were exempt from travel restrictions, so their number continued grow through the pandemic, but special occupation workers, who were not exempt, received less than one third the number of visas in fiscal year 2021 as in fiscal year 2019.⁵³ However, some countries have seen a return to pre-pandemic levels (or did not see much of a dip in 2020): in Czechia, temporary and permanent visa issuances were up year on year,⁵⁴ and in the United Kingdom, the total number of work visas cleared was up 51 per cent in the second half of 2021 relative to 2019, in part because of Brexit and the end of free

46 IATA, "Passenger Traffic Improved in November". Omicron-related restrictions had sizeable socioeconomic costs for the airline and tourism industries of targeted countries; South Africa, for example, saw an almost 85 per cent drop in flight bookings. See Luke Daniel, "Omicron Saw Flight Bookings to SA Drop 85% in December – But Travel Is Slowly Recovering", Business Insider South Africa, 11 January 2022.

47 Peter Hurley, Melinda Hildebrand and Rachel Brisbane, *Student, Interrupted: International Education amid the Pandemic* (Melbourne, Australia: Mitchell Institute, Victoria University, 2021).

48 For example, see Suniva Chitrakar and Aneka R. Rajbhandari, "China's Nepali Students in Limbo", Nepali Times, 4 October 2021.

49 International student fees represent an important revenue stream both for higher education institutions and economies as a whole. For example, Australian universities reported an AUD 800 million drop in international student revenue in 2020, with estimates that revenues would continue to drop by AUD 1 billion every six months the country remained closed. See Peter Hurley, Cuong Hoang and Melinda Hildebrand, *Australian Investment in Higher Education* (Melbourne, Australia: Mitchell Institute, Victoria University, 2021).

50 Hurley, Hildebrand and Brisbane, *Student, Interrupted*, 13.

51 Relative to data on irregular migration, data on labour migration often tend to have a lag of a year or more, thus comprehensive data on visa issuance or labour migration arrivals are not yet available for 2021.

52 In Germany, the coalition government wants to bring in 400,000 new workers following a period of low immigration and population stagnation, in response to estimates that the working population will shrink by 300,000 people in 2022. See Reuters, "Germany Wants to Attract 400,000 Skilled Workers from Abroad Each Year", Reuters, January 21, 2022.

53 Madeline Zavodny, "The Impact of the Covid-19 Drop in International Migration on the U.S. Labor Market" (policy brief, National Foundation for American Policy, February 2022).

54 Czech Ministry of the Interior, "Foreigners with a Residence Permit", updated December 2021.

movement.⁵⁵ Travel measures, from travel restrictions to vaccination requirements, continued to prevent would-be migrant workers from leaving their countries of origin. For example, in May 2021, thousands of Nepali youth were unable to leave the country to start new jobs due to flight suspensions,⁵⁶ while border closures prevented thousands of Vietnamese migrant workers from travelling to take up positions abroad.⁵⁷ Broadly, in South Asia, while outflows dropped substantially in the first months of the pandemic, they have steadily begun to increase.⁵⁸ India, for example, saw a 91 per cent decrease in emigration clearances, which are required for some migrant workers to depart, during the first year of the pandemic (April 2020 – March 2021); in the second year, the country had already issued more than triple the number of clearances from April to December 2021, although this was still 70 per cent fewer than the last pre-pandemic year.⁵⁹

The Mixed Results of Efforts to Restart Regular Movement

Even when governments and authorities have lifted travel measures, regular migration has sometimes been constrained by limited capacity to restart and streamline visa and travel processes. Many top destination C/T/As, especially high-income countries, have been slow to reopen consular operations, and physical distancing requirements have reduced the capacity of those that have reopened. Some C/T/As have innovated, using remote interviewing software to keep the system moving. Others, such as the United States, have not, with US visa processes facing delays, ballooning wait times for consular appointments and growth in existing backlogs.⁶⁰ This contributed to a dramatic reduction in the number of high-skilled temporary labour visas issued in both 2020 and 2021,⁶¹ and because foreign workers must renew their visas from their home countries, it left many of those already in the United States unsure if they would be able to re-enter following travel abroad.⁶² To address this backlog, the US Department of State announced in December 2021 that it would allow consulates to waive interview requirements for a large set of visa applicants through December 2022.⁶³ Family reunification visas have been similarly affected. For example, Germany issued fewer than half of its allotted family reunification visas in 2021 due to COVID-19-related

-
- 55 Authors' analysis of UK Home Office, "Entry Clearance Visa Applications and Outcomes – Vis_D02", accessed 24 February 2022. There are two reasons why Brexit has led to an increase in visa issuances: first, the number of EU citizens arriving in the United Kingdom has dramatically fallen (so employers are turning to non-EU workers), and second, because EU citizens now need a visa. See Madeleine Sumption, "Work Visas and Migrant Workers in the UK", The Migration Observatory at the University of Oxford, 17 September 2021.
- 56 Chandan Kumar Mandal, "Around 25,000 Outbound Nepali Youths Stuck Due to Flight Suspension", *The Kathmandu Post*, 24 May 2021.
- 57 Tomoya Onishi, "Vietnamese Migrant Workers Fall Sharply amid COVID-19 Pandemic", *Nikkei Asia*, 31 May 2021; Reuters, "Philippines Offers to Let Nurses Work in Britain and Germany in Exchange for Coronavirus Vaccines", CNN, 24 February 2021.
- 58 Nilim Baruah et al., "Trends in Labor Migration in Asia", in *Labor Migration in Asia: Impacts of the COVID-19 Crisis and the Post-Pandemic Future* (Tokyo, Paris and Bangkok: Asian Development Bank Institute [ADB], Organisation for Economic Co-operation and Development [OECD] and International Labour Organization [ILO], 2021).
- 59 Authors' analysis of India Ministry of External Affairs, Overseas Employment Division, "eMigrate—PoE-wise, Month-Wise Emigration Clearances (ECs) Obtained by Ras, Pes and under Direct Recruitment by Fes", accessed 14 January 2022. Lower-skilled migrants and migrant workers in certain professions are required to get immigration clearance for work in specified countries, including in the Gulf and Middle East. See Embassy of India, Riyadh, "FAQs on ECR & non-ECR(ECNR)", accessed 23 February 2022.
- 60 Célia Belin, "Travel Is Resuming, but Not for Everyone", Brookings Institution, 8 November 2021.
- 61 There was a 73 per cent decrease in 2020 and a 54 per cent reduction in 2021. Authors' analysis of US Department of State, "Monthly Nonimmigrant Visa Issuance Statistics".
- 62 Foreign workers in the United States are able to renew their work authorizations domestically, but they must renew their entry visas at consulates in their home countries. As such, any worker with an expired visa could not travel abroad without risking an extended delay in visa renewal and re-entry. See Suzanne Monyak, "Limited Operations at US Consulates Keep Visa Holders on Edge", Roll Call, 22 December 2021.
- 63 US Department of State, Bureau of Consular Affairs, "Important Announcement on Waivers of the Interview Requirement for Certain Nonimmigrant Visas", updated 23 December 2021.

processing limitations,⁶⁴ and in the United Kingdom, the number of visas issued for families and dependents was 20 per cent lower in 2021 than 2019.⁶⁵

Even when C/T/As have been able to get visa issuance back up to speed, this does not mean people are able to move. Canada, for example, raised its immigration targets in 2021, opened new pathways and lowered the minimum requirement in its points-based system for entry.⁶⁶ To reach its targets, however, the government converted many more temporary residents already in Canada to permanent residents than in previous years, since the country would not be able to attract such a large number of newcomers in the short term.⁶⁷ Other C/T/As, such as the Taiwan Province of the People's Republic of China, renewed visa extension periods for foreign nationals within their borders through much of 2021, as the state of emergency continued.⁶⁸

Governments and authorities have, however, sought to facilitate movement deemed essential. Seasonal migration, particularly for agricultural work, has continued throughout the pandemic, with exceptions from travel restrictions or specifically designed pathways ensuring the labour supply does not diminish. For example, Costa Rica designed and implemented a new programme starting in November 2020 to allow Nicaraguans to enter as temporary workers to harvest seasonal crops, and this was extended for an additional seven months in September 2021.⁶⁹ The United States has issued temporary agricultural visas throughout the pandemic, and in December 2021 announced it would be increasing the number of temporary non-agricultural visas.⁷⁰ Canada maintained its temporary foreign worker programme, with 2021 figures matching those in 2019.⁷¹ And other countries have announced new pathways to attract labour migrants. For example, the United Kingdom announced a visa scheme to attract health-care workers,⁷² while the United Arab Emirates created new visa categories for freelancers, skilled migrants and entrepreneurs.⁷³ These new programmes, however, may have limited short-term uptake. The United Kingdom implemented an emergency visa programme for truck drivers to meet pandemic-related labour shortages, but the programme lacked the necessary infrastructure, dissemination and incentives and approved only 20 visas in its initial phases.⁷⁴

64 Benjamin Bathke, "Family Reunions in Germany in 2021 again Fall Short of Maximum Quota", *InfoMigrants*, 7 January 2022.

65 Authors' analysis of UK Home Office, "Entry Clearance Visa Applications and Outcomes".

66 Amanda Coletta, "Canada Wants Immigrants but the Pandemic Is in the Way. So It's Looking to Keep People Already There", *The Washington Post*, 7 August 2021.

67 Typically, 30 per cent of landed new permanent residents in Canada are conversions from temporary status. In 2021, it was 70 per cent. See Kareem El-Assal and Shelby Thevenot, "Canada Breaks All-Time Immigration Record by Landing 401,000 Immigrants in 2021", *CIC News*, 23 December 2021.

68 Taiwan Province of the People's Republic of China, Ministry of the Interior, National Immigration Agency, "NIA Announces Authorized Residence or Stay Relief Measures due to COVID-19" (news release, May 31, 2021).

69 Cristobal Ramón, Ariel G. Ruiz Soto, María Jesús Mora and Ana Martín Gil, *The Role of North and Central American Seasonal Worker Programs in Managing Migration* (Washington, D.C.: MPI, forthcoming); Alejandro Zúñiga, "Costa Rica, Nicaragua Renew Migrant Labor Agreement", *The Tico Times*, 24 September 2021.

70 US Department of State, "Monthly Nonimmigrant Visa Issuance Statistics"; Ted Hesson, "Biden to Raise Number of Guest Worker Visas, with More for Haiti, Central America", *Reuters*, 20 December 2021.

71 Authors' analysis of Immigration, Refugees and Citizenship Canada (IRCC), "Temporary Residents: Temporary Foreign Worker Program (TFWP) and International Mobility Program (IMP) Work Permit Holders – Monthly IRCC Updates – Canada – Temporary Foreign Worker Program Work Permit Holders by Gender, Occupational Skill Level and Year in Which Permit(s) Became Effective", accessed 19 December 2021.

72 UK Home Office, Department of Health and Social Care, "Government Launches Health and Care Visa to Ensure UK Health and Care Services Have Access to the Best Global Talent" (news release, 14 July 2020).

73 Al Jazeera, "UAE Announces Plan to Boost Economy, Attract Workers", *Al Jazeera*, 5 September 2021.

74 Aubrey Allegretti, "Just 20 UK Visas Issued to Foreign Lorry Drivers, Government Admits", *The Guardian*, 13 October 2021. The United Kingdom, however, issued more temporary work visas in the first three quarters of 2021 than it did over the same period in 2019. See UK Home Office, "Entry Clearance Visa Applications and Outcomes".

C/T/As have generally not given the same level of priority to refugee resettlement. While some have successfully gotten their resettlement programmes back up to speed,⁷⁵ many of the largest resettlement destinations including the United States and Australia have not. The dynamics at play are the same as with other forms of regular movement: Australia, having pursued an eradication strategy and halted most in- and out-bound movement for much of the pandemic, has allowed very few refugees to be resettled.⁷⁶ For many countries, a factor behind this delay has been difficulties completing standard procedures, including conducting interviews and biometric collection in the countries where refugees are.⁷⁷ And while some countries have switched to using remote interviews, local capacity limitations linked to COVID-19 mitigation measures may still slow this process.⁷⁸ These delays and backlogs affect all resettlement countries as well as refugees themselves, as the increased waiting time may prompt some to try to seek protection via other means, including irregular movement to claim asylum.

BOX 4 The Afghanistan Evacuation and the Pandemic

The August 2021 evacuation of thousands of Afghans during and following the fall of Kabul to the Taliban required trade-offs in terms of waiving certain COVID-19 protocols in the interest of quickly facilitating large-scale movements by air. Limited operational capacity on the ground, coupled with the chaos at the Kabul airport, led the United States, for example, to waive its requirement of a negative SARS-CoV-2 test for evacuation, instead screening only symptomatic evacuees. Early in the evacuation efforts, transit sites such as Camp As Sayliyah in Qatar and Ramstein Air Base in Germany were not systematically testing evacuees, though testing protocols were subsequently implemented for evacuees prior to their final departure to the United States. Upon arrival in destination countries, including Canada, France, Japan, the United Kingdom and the United States, evacuees are now tested, isolated or quarantined if they test positive, and offered vaccination.

Because authorities were largely able to sidestep the normal pre-departure processes used in routine visa issuance and refugee resettlement, the evacuations occurred on a much faster timeline. And while there were some concerns that this expedited process would increase the risk of COVID-19 transmission, there have been few outbreaks among evacuees. There have been instances of some evacuees testing positive and having to be grounded, along with their relatives, but otherwise COVID-19-related delays have been minimal.

Sources: Zach Montague, “The Last U.S. Diplomat to Leave Kabul Has Tested Positive for the Virus”, *The New York Times*, 2 September 2021; Elizabeth Crisp, “U.S. Doesn’t ‘Have the Capacity to Test’ for COVID-19 as Thousands Evacuate Afghanistan”, *Newsweek*, 19 August 2021; The Associated Press, “The Latest: US Says Kabul Evacuees Don’t Need COVID Tests”, *AP News*, 19 August 2021; Ellen Mitchell, “US Military Screening Evacuees for COVID-19 at Kabul Airport”, *The Hill*, 23 August 2021; Michael D. Shear, Lara Jakes and Eileen Sullivan, “Inside the Afghan Evacuation: Rogue Flights, Crowded Tents, Hope and Chaos”, *The New York Times*, 3 September 2021; Will Reeve, “Uncertain Future Awaits Afghan Evacuees Passing through Ramstein Air Base: Reporter’s Notebook”, *ABC News*, 29 August 2021; Reuters, “Qatar Offering COVID Vaccines to Afghanistan Evacuees Yet to Transit”, *Reuters*, 26 August 2021; Jennifer H. Svan, “Positive Coronavirus Tests Delay Sendoff of Last Afghans from Ramstein”, *Stars and Stripes*, 18 October 2021; Anita Kumar, “As Biden Ends Mission in Afghanistan, a Refugee Backlash Looms at Home”, *Politico*, 30 August 2021; Antonio Olivo, “Coronavirus Vaccinations Underway for Afghan Evacuees Arriving in Virginia, Gov. Northam Says”, *The Washington Post*, 27 August 2021; French Ministry of Europe and Foreign Affairs, “Welcoming People Evacuated from Afghanistan to France” (news release, 24 August 2021); Greg Heffer, “Afghanistan: All Those Arriving in UK after Fleeing Taliban to Be Offered COVID Vaccine”, *Sky News*, 20 August 2021; Craig McCulloch, “First Afghan Refugees Settle in Canada amid COVID Fourth Wave”, *Voice of America*, 6 October 2021; Kyodo News, “10 Afghan Evacuees Arrive in Japan, More Expected to Come”, *Kyodo News*, 13 September 2021; Ben Fox, “US Resumes Afghan Refugee Flights after Measles Shots”, *AP News*, 4 October 2021.

75 Finland, for example, has continued to resettle refugees during the pandemic and has used remote interviews instead of in-country visits for resettlement selection. See Finnish Ministry of Interior, “Kiintiöpakolaisten vastaanottaminen on yksi tapa auttaa Afganistanin vaikeassa tilanteessa”, updated 6 September 2021.

76 UN High Commissioner for Refugees (UNHCR), “Resettlement Data Finder”, accessed 28 December 2021.

77 Nicole Narea, “Biden Finally Raised the Refugee Cap. Now Comes the Hard Part”, *Vox*, 10 May 2021.

78 These measures limit the number of refugees who can be brought to an interviewing site at any one time and the number of people allowed to be in each room. As such, fewer interviews can be conducted.

B. Irregular Movement

The first months of the pandemic, with their plethora of strict travel restrictions and border closures, saw a steep decline in recorded irregular migration. In 2021, irregular movements appear to have resumed in some contexts, though their volume and direction have not uniformly followed pre-pandemic patterns.

Irregular migration may be less affected by pandemic mobility policies – from closures at points of entry to travel restrictions and health measures – depending on the porousness of a C/T/A's borders. Meanwhile, the economic, social and environmental conditions driving people to migrate have persisted, and some have been exacerbated by the pandemic, even as there are fewer opportunities to move through regular channels.

In 2021, irregular movements appear to have resumed in some contexts, though their volume and direction have not uniformly followed pre-pandemic patterns.

The pandemic's diverse impacts on irregular migration are evident in the movement of asylum seekers and irregular migrants attempting to enter the European Union. Movement along the Central Mediterranean route, particularly to Italy, consistently exceeded pre-pandemic levels,⁷⁹ and Spain saw large spikes in arrivals, primarily in the Canary Islands. Arrivals to Greece, on the other hand, largely halted (see Figure 11).

These divergent trends are due to a combination of factors. In Tunisia, Algeria, Morocco and across West Africa, increasing vulnerability and precarity – in the form of economic crises and unemployment, political instability and human rights concerns – have been compounded by the pandemic and driven people to leave.⁸⁰ At the same time, travel measures have restricted regular migration channels, including labour pathways, specialized visa schemes and family reunification, which may have led some migrants to turn towards irregular travel, with some groups of irregular migrants pooling their resources to purchase necessary supplies and equipment and to navigate their own way across the Mediterranean.⁸¹

While increased drivers of migration and fewer regular pathways help explain the rise in arrivals in Italy and Spain, the drop in arrivals in Greece was caused by changes in Greek policies. Following Turkey's decision in February 2020 to stop enforcing its agreement with the European Union to regulate the movement of

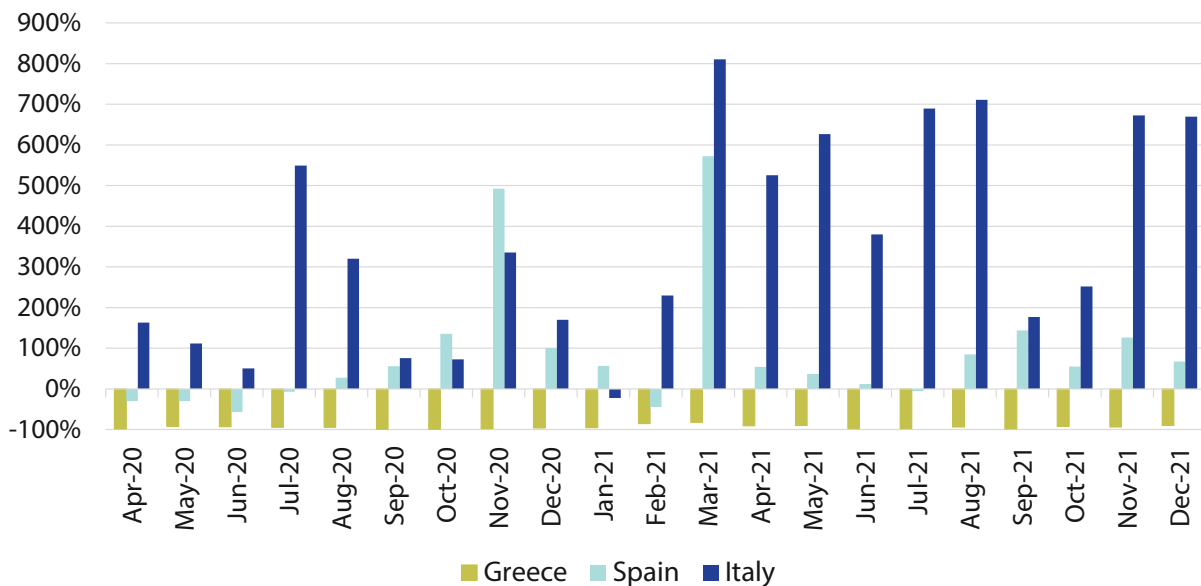
79 Data on arrivals should be interpreted in conjunction with data on apprehensions and returns to departure countries. For Italy, the trends in arrivals aligns with the trends in apprehensions and returns to Libya and Tunisia, the two main departure points for the Central Mediterranean route. Both saw large increases from pre-pandemic levels throughout the pandemic, barring a few months when apprehensions and returns to Libya fell. Authors' analysis of data from IOM DTM on apprehensions/returns to North Africa, received from IOM in February 2022.

80 In both 2020 and 2021, the four top nationalities for migrants arriving in Europe were Algerian, Moroccan, Tunisian and Unidentified Sub-Saharan African. See IOM DTM, "Flow Monitoring – Europe Arrivals", accessed 2 February 2022. For example, Tunisia experienced an economic crisis and political instability. See Matt Herbert, *Losing Hope: Why Tunisians Are Leading the Surge in Irregular Migration to Europe* (Geneva: Global Initiative Against Transnational Organized Crime, 2022); Mixed Migration Centre (MMC), *Mixed Migration Review 2021: Reframing Human Mobility in a Changing World*, eds. Chris Horwood and Bram Frouws (Geneva: MMC, 2021). Some of these economic hardships are the direct result of Tunisia's pandemic-related border closures with its neighbours, in particular Libya, which have devastated communities reliant on cross-border trade and compelled some to attempt the journey to Europe. See Sam Kimball, "Tunisian Border Traders, Smugglers Struggle to Survive amid COVID", Al Jazeera, 24 January 2021. In Morocco, pandemic-related increased enforcement has contributed to an increase in arrivals to the Canary Islands. See MMC, *Mixed Migration Review 2021*; Europol, *European Migrant Smuggling Centre – 5th Annual Report* (Luxembourg: Publications Office of the European Union, 2021).

81 This approach to irregular migration, sometimes called "self-smuggling", is perceived as less risky than using smugglers, who may trick, extort or abandon migrants for their own gain. See Herbert, *Losing Hope*.

asylum seekers to the Greek border, Greece strengthened its land and maritime border security, suspended its asylum system and reportedly began engaging in pushbacks into Turkish waters and across its land borders with Turkey.⁸² While some asylum seekers have continued to depart Turkey for Greece⁸³ despite Greek territory becoming largely inaccessible for them, others are taking the longer journey to Italy, which has allowed migrants to disembark following a quarantine period.⁸⁴ Finally, some migrants travelling towards Europe have resorted to long land routes through Eastern Europe and the Western Balkans, with movement returning to or exceeding pre-pandemic levels in Bulgaria, Croatia, Serbia and Slovenia.⁸⁵

FIGURE 11
Maritime Migrant Arrivals to Greece, Italy and Spain as a Percentage Change from Pre-Pandemic Levels, April 2020 – December 2021

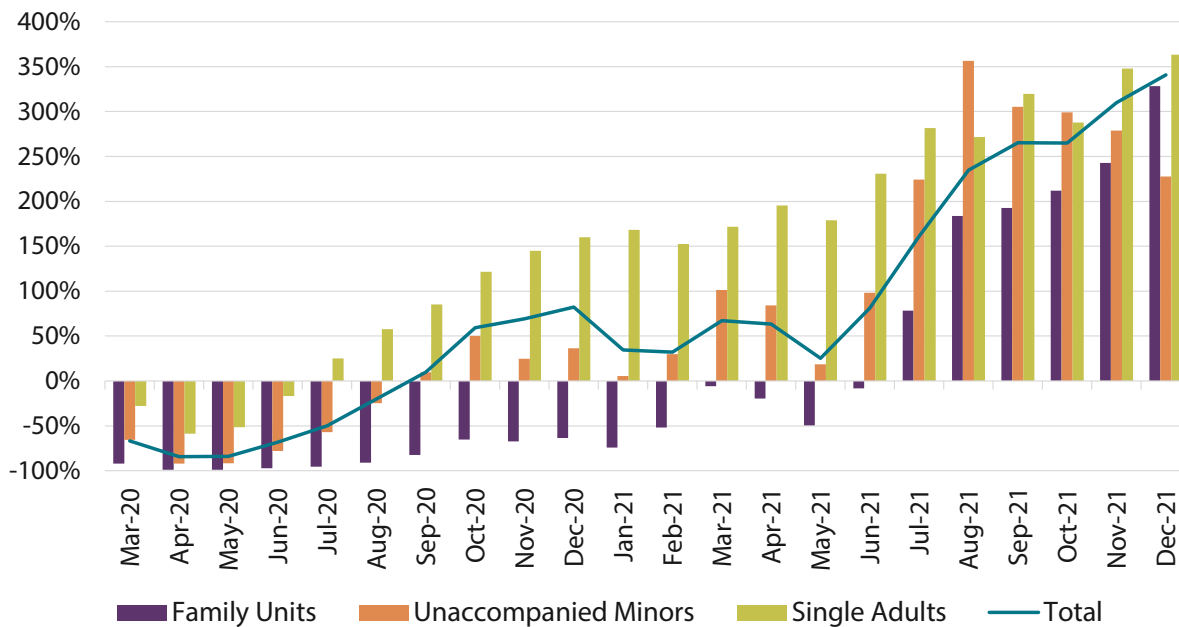


Note: The percentages shown here are calculated by taking the difference in the number of arrivals in a specific pandemic-era month from the same month in the year prior to the declaration of COVID-19 as a pandemic in March 2020 (i.e. March 2019 to February 2020), and then dividing that by the number for the corresponding pre-pandemic month.
 Source: Authors' analysis of IOM DTM, "Flow Monitoring – Europe Arrivals", accessed 23 February 2022.

82 Bradley Secker, "Adrift in Uncertain Waters: Migrant Pushbacks in the Aegean", Politico EU, 21 July 2021; Roberto Cortinovis, *Pushbacks and Lack of Accountability at the Greek-Turkish Borders* (Brussels: Centre for European Policy Studies, 2021); MMC, *Mixed Migration Review 2021*.
 83 While apprehensions of asylum seekers by Turkish authorities and returns to Turkey have remained below pre-pandemic levels, they have come much closer to matching them, as have the number of arrivals in Greece. Authors' analysis of data from IOM DTM on apprehensions/returns to Turkey, received from IOM in February 2022.
 84 Sertan Sanderson, "Migrant Departures on Sea from Turkey back to Pre-COVID Levels", InfoMigrants, 6 September 2021; Sabina Castelfranco, "As Pandemic Subsides, Migrants Resume Unsafe Journeys to Europe", Voice of America, 18 May 2021; Frances d'Emilio, "Italy Letting Rescue Ship with 306 Migrants go to Sicily", AP News, 10 November 2021. Migrants have been kept on quarantine boats anchored offshore before being allowed to disembark, sometimes only to be repatriated directly thereafter. Some migrants have reportedly jumped off boats to try to escape or commit suicide. See Layli Foroudi and Federica Marsi, "Tunisians Risking Their Lives to Escape Italy's Quarantine Boats", Al Jazeera, 15 April 2021.
 85 Arrivals to Bulgaria and Serbia began to exceed pre-pandemic levels in July and June 2020, respectively, and have generally remained so since. Croatia saw increases from May 2020 to the end of 2020, but they were muted in 2021. And Slovenia saw a level in 2021 that was roughly equal to 2019. See IOM DTM, "Flow Monitoring – Europe Arrivals".

FIGURE 12

Encounters at the US South-West Border as a Percentage Change from Pre-Pandemic Levels, March 2020 – December 2021



Note: The percentages shown here are calculated by taking the difference in the number of encounters in a specific pandemic-era month from the same month in the year prior to the declaration of COVID-19 as a pandemic in March 2020 (i.e. March 2019 to February 2020), and then dividing that by the number for the corresponding pre-pandemic month.
 Source: Authors' analysis of US Customs and Border Protection, "Southwest Land Border Encounters", accessed 31 January 2022.

Irregular migration to the United States seems to have increased, reflecting a complex set of factors. Total encounters at the US south-west border had more than doubled in 2021 compared to pre-pandemic numbers (see Figure 12). Pandemic- and climate-change-related economic pressures, natural disasters, political instability and corruption in Central America, along with a perception that the change in the US presidential administration would lead to more lenient treatment of migrants, all contributed to migrants' decisions to move northwards.⁸⁶ Some of this increase also results from the United States' own pandemic border policies. Since March 2020, the United States has immediately expelled migrants, including asylum seekers, who arrive at border crossings without proper documentation or who cross the border illegally, under a US health law referred to as Title 42. In US fiscal year 2021, two thirds of encounters between US border authorities and irregular migrants resulted in migrants being immediately expelled under Title 42.⁸⁷ However, unlike before the pandemic for single adult migrants, those expelled under Title 42 after crossing the border generally do not face potential criminal charges or formal removal procedures, which has created an incentive for some to attempt to cross the border multiple times until they are successful. As such, the increase in border encounters is partly a reflection of this higher rate of recidivism. Encounters of single adults were the first to exceed pre-pandemic levels in July 2020, encounters of unaccompanied minors did so in September 2020 and increased over the next couple months, and those of family units did not exceed

86 Priscilla Alvarez, "November Border Arrests up 5% after Trending Downward in Recent Months", CNN, 17 December 2021; María Jesús Mora and Diego Chaves-González, "Increasingly Hemispheric Nature of Migration through Americas Demands Regional Cooperation", MPI Latin America and the Caribbean Migration Portal, December 2021.
 87 Jessica Bolter, "It Is Too Simple to Call 2021 a Record Year for Migration at the U.S.-Mexico Border" (commentary, MPI, Washington, D.C., October 2021).

pre-pandemic levels until June 2021. Encounters of unaccompanied minors and family units seemed to pick up after the threat of expulsion under Title 42 subsided due to court rulings as well as changes in Mexican and US policy, although it is unclear how much Title 42 deterred these movements.⁸⁸

Further south, routes through Central America have numerous chokepoints, making even irregular migration responsive to changes in border policies. Throughout much of Central America, irregular migrants travel well-known routes that rely on facilitation from national security forces, both at borders and to transit through each country.⁸⁹ Thus, when Panama closed its border with Colombia at the start of the pandemic, the number of migrants encountered by Panamanian forces while attempting to cross the dangerous stretch of jungle known as the Darién Gap dropped to zero.⁹⁰ When Panama and Colombia agreed to start letting migrants through and began to cooperate to facilitate this movement in April 2021, apprehensions soared, eventually reaching a level in 2021 that was nearly 450 per cent more than the level in 2019.⁹¹ The stopping and starting of migration throughout Central America is reflected in data on the number of irregular migrants apprehended by Mexican security forces, which returned to pre-pandemic levels in October 2020, fluctuated for several months, before consistently exceeding them starting July 2021. By the end of 2021, total apprehensions for the year represented a 68 per cent increase over 2019 levels.⁹²

Meanwhile, in South America, some governments and authorities found it difficult to reimpose border restrictions after they had been relaxed. The Chilean-Bolivian land border was closed from the beginning of the pandemic until November 2020, with many migrants, especially seasonal workers, stuck in camps waiting to cross.⁹³ When the border reopened, migrants, particularly Venezuelans, began travelling from the Plurinational State of Bolivia to Chile. Even though Chile closed its border again in April 2021, this irregular movement continued throughout the year.⁹⁴ And in late 2021, irregular migration increased further

88 Bolter, "It is Too Simple to Call 2021 a Record Year"; William A. Kandel, *Unaccompanied Alien Children: An Overview* (Washington, D.C.: Congressional Research Service, 2021). In November 2020, a federal judge halted the expulsion of unaccompanied minors under Title 42, a position the Biden administration adopted after taking office in January 2021. See Nick Miroff, "Judge Stops Trump Policy of 'Expelling' Child Migrants, Questioning Legality of Border Controls Linked to Covid Crisis", *The Washington Post*, 18 November 2020; Kandel, *Unaccompanied Alien Children*; Mark Greenberg, "Hampered by the Pandemic: Unaccompanied Child Arrivals Increase as Earlier Preparedness Shortfalls Limit the Response" (commentary, MPI, Washington, D.C., March 2021). The exemption for children also had adverse consequences, with reports of families separating themselves before they reached the border to enable at least the children to cross. See, for example, Nicole Sganga and Camilo Montoya-Galvez, "Over 2,100 Children Crossed Border Alone after Being Expelled with Families to Mexico", CBS News, 7 May 2021; American Immigration Council, "Rising Border Encounters in 2021: An Overview and Analysis" (fact sheet, 2 August 2021); Nick Miroff and Maria Sacchetti, "Family Groups Crossing Border in Soaring Numbers Point to Next Phase of Crisis", *The Washington Post*, 28 March 2021.

89 Caitlyn Yates, "Haitian Migration through the Americas: A Decade in the Making", *Migration Information Source*, 30 September 2021; Caitlyn Yates and Jessica Bolter, *African Migration through the Americas: Drivers, Routes, and Policy Responses* (Washington, D.C.: MPI, 2021).

90 Yates and Bolter, *African Migration through the Americas*.

91 Authors' analysis of Panamanian Migration Ministry, "Estadísticas—Irregulares en tránsito fronterea Panamá-Colombia", accessed 13 January 2022; Mora and Chaves-González, "Increasingly Hemispheric Nature of Migration."

92 Authors' analysis of Mexican Ministry of the Interior, Migration Policy Unit, "Boletines Estadísticos—Extranjeros presentados y devueltos", accessed 8 February 2022. Following a policy that started in 2020, administrative tracking in 2021 counted two different types of apprehensions separately, whereas data prior to 2021 only show one type of apprehension. For the purpose of this analysis, total apprehensions for 2021 include both types of apprehensions.

93 Aislinn Laing, "COVID Impasse: Bolivian and Peruvian Migrants Trapped at Chilean Border", Reuters, 16 April 2020; International Federations of Red Cross and Red Crescent Societies (IFRC), "Chile: Return Migration to Bolivia (COVID-19 Context) Information Bulletin No. 1" (situation report, 25 May 2020); IFRC, "Human Mobility along the Chilean-Bolivian Borders: Information Bulletin No. 1" (situation report, 10 February 2021).

94 Charis McGowan, "Humanitarian Crisis Looms on Chile-Bolivia Border as Migrants Cross on Foot", *The Guardian*, 9 March 2021; MercoPress, "Irregular Migration and Drug Trafficking Alongside Bolivia-Chile Border Keeps Drawing Concern", MercoPress, 1 October 2021.

as a candidate in Chile's presidential election promised to fully close the border to irregular migrants and increase enforcement if elected, prompting people to attempt to cross the border before the election.⁹⁵

Some regions never fully shut their borders, and cross-border movements have continued apace. In sub-Saharan Africa, mixed migration did not decline to the same extent as in other regions, though data are limited. Data collected by the IOM's Displacement Tracking Matrix (DTM) along East African migration routes indicate total movements were just below pre-pandemic levels, with January, November and December 2021 seeing particularly large increases (exceeding pre-pandemic levels by 59%, 89% and 70%, respectively).⁹⁶ Concurrently, land PoEs in East Africa were fairly operational throughout the pandemic, with a majority being at least partially operational by December 2020 and fully operational by February 2021. In the Sahel, Mali saw robust mobility throughout the pandemic, with each month since April 2021 seeing an average 137 per cent increase in migrants at DTM flow monitoring points entering Mali and 282 per cent increase in those leaving Mali.⁹⁷ The numbers of migrants entering and leaving the Niger were more muted, only exceeding pre-pandemic levels in October and September 2020, respectively.⁹⁸ Throughout the pandemic, Mali has had consistently more open land borders than the Niger, which could explain this difference. Finally, land PoEs in Southern Africa have been predominantly operational since December 2020 and mobility was robust in 2021, with DTM recording a general increase in the monthly number of cross-border movements throughout the year.⁹⁹

While irregular migration has long been dangerous in many regions, data suggest that it has become even more unsafe since the pandemic began. IOM's Missing Migrants Project estimates that, worldwide, the number of dead and missing migrants was 8 per cent higher in 2021 than in 2019. The routes driving this increase correspond with the trends discussed above: the number of migrants who died or went missing while crossing the Mediterranean increased 9 per cent in 2021 over 2019, in Western Africa and to the Canary Islands (a more dangerous route) the number was 334 per cent higher in 2020 and 482 per cent higher in 2021, and the US-Mexico border region saw a 31 per cent increase in 2021.¹⁰⁰ Southern Asia saw a substantial increase in deaths and estimated missing (315%), driven by violence in Afghanistan.¹⁰¹ By contrast, the number of migrants recorded as having died or gone missing while attempting to cross the Sahara Desert was down 86 per cent in 2021.

While irregular migration has long been dangerous in many regions, data suggest that it has become even more unsafe since the pandemic began.

95 Matías Delacroix and Patricia Luna, "Chile Sees Migrant Crossings Rise Ahead of Presidential Vote", AP, 14 December 2021.

96 IOM Regional Office for East and Horn of Africa, "Regional Data Hub—Flow Monitoring Networks", accessed 14 January 2022.

97 Authors' analysis of IOM DTM flow monitoring data from Mali, received from IOM in January 2022.

98 Authors' analysis of IOM DTM flow monitoring data from the Niger, received from IOM in January 2022.

99 Authors' analysis of IOM DTM flow monitoring data from South Africa, received from IOM in January 2022.

100 Authors' analysis of IOM Missing Migrants Project, "Data", accessed 8 February 2022.

101 In Southern Asia, 24 per cent of the total estimated dead and missing in 2021 is accounted for by the 27 August 2021 suicide bombing at the Hamid Karzai International Airport in Kabul. Authors' analysis of IOM Missing Migrants Project, "Data".

C. *Increasing Inequalities in Mobility and the Pandemic Response*

The pandemic and its associated mobility restrictions have had unequal impacts, making travel more costly and exacerbating existing inequalities between who can move and who cannot. These inequalities have been further compounded by policies and practices that have excluded many people on the move from vaccination campaigns, health care, basic services and economic support during the pandemic. Often, these measures do not intentionally exclude migrants and refugees, but governments and authorities have frequently failed to consider their potential and disproportionate consequences for these groups. In many contexts, the result has been an increase in the vulnerability of migrant populations that were already in a precarious situation and further pressure on receiving communities to provide support.

The Unequal Costs of Travel Measures

The financial, psychosocial and opportunity costs of travel have vastly increased, and while affluent migrants, tourists and business travellers may be able to absorb these costs, this is not true of many other groups of people seeking to move. This has the potential to widen the socioeconomic gulf between movers and non-movers for the foreseeable future.

These costs include:

- ▶ **Testing.** A negative SARS-CoV-2 test result has been one of the most consistent health measures required for authorized entry throughout the pandemic (required by 195 C/T/As on an average day in 2021, see Section 2 for more information). The costs and availability of these tests can vary widely, ranging from being free to almost USD 400 – a price that can be more expensive than a plane ticket.¹⁰² Especially when multiple tests are required, and in a short time frame, testing can make travel prohibitively expensive for low-income travellers and inaccessible to those coming from C/T/As with less testing capacity.¹⁰³ Some C/T/As have taken steps to address this, with Australia exempting travellers in areas with low-PCR availability from pre-departure testing requirements,¹⁰⁴ while other actors have called for C/T/As to harmonize testing protocols.¹⁰⁵
- ▶ **Mandatory quarantine.** While quarantine requirements have become less common as the pandemic has gone on, they pose significant financial and time burdens that may put travel out of reach for some people. Travellers may be required to quarantine anywhere from a few hours or days until they receive a negative COVID-19 test result to the 21 days required for travellers arriving in certain areas of

102 Miriam Berger, “Coronavirus Tests Are Needed for International Travel. But They Can Cost More Than a Flight”, *The Washington Post*, 9 December 2021.

103 For example, the United Arab Emirates required multiple PCR tests for travellers departing from specific countries, including Bangladesh, Ethiopia, India, Pakistan and South Africa – C/T/As that send many temporary, low-skilled workers to the Gulf region. Travellers from these countries only have 48 hours to have a sample taken and must also take a rapid PCR test at the airport prior to departure. Travellers from these countries, as well as many others, must also take a rapid PCR test upon arrival and quarantine until they receive a result, meaning they will need to take three PCR tests in total, compared with a traveller from the United States, who only needs to take one, despite the epidemiological situations in the former often being better than in the latter. See Emirates, “Tourists Travelling to, from, and through Dubai”, updated 30 November 2021.

104 Australian Government Department of Health, “Inbound International Travel”, updated 12 January 2022.

105 Global actors such as the UNWTO and regional actors such as the Economic Community of West African States (ECOWAS) have called for harmonization of testing procedures, while the International Civil Aviation Organization (ICAO) has produced guidance on this topic. But there has been limited international dialogue and coordination on testing for international travel. See ICAO, *Manual on Testing and Cross-Border Risk Management Measures* (Montreal, Canada: ICAO, 2020).

China. While some governments cover the cost of quarantine or allow travellers to quarantine at home, others require travellers to bear many or all of the costs – typically USD 1,000 to 2,000 per person for hotel quarantine alone,¹⁰⁶ not to mention the lost income and opportunity cost of prolonged travel. These costs disincentivize many forms of movement, from families trying to reunite to business travel and labour migration (the quarantine costs for labour migrants may fall on either the employer or worker in different contexts).¹⁰⁷ Given these burdens, WHO's July 2021 policy considerations for international travel recommended that quarantine requirements be lifted for vaccinated or recovered travellers, and that these requirements be regularly reviewed and lifted when they are no longer necessary.¹⁰⁸

- ▶ **Financial costs.** Travel measures may also increase costs indirectly. Travellers may need to undergo a de facto two-week third-country quarantine to circumvent country-specific route restrictions, as in early 2021, when some Europeans stayed in a third country for two weeks so they could enter the United States.¹⁰⁹ Similarly, airlines may run fewer flights with fewer passengers, given route restrictions and physical distancing requirements, which may in turn make flights less frequent or more expensive. Especially in emergency situations, when C/T/As impose sudden travel restrictions in response to new variants, travellers have flocked to airports to book last-minute flights home – and those able to pay for more expensive flights are more likely to be able to return.¹¹⁰ These increased costs, along with more expensive travel insurance, buying masks and tests for self-use, and travelling to more distant PoEs because nearby PoEs are closed, are not directly caused by travel measures, but they nonetheless add barriers to travel that affect some people more than others.
- ▶ **Psychosocial costs and difficult decisions.** The dense and complex web of entry requirements and exceptions can be difficult and confusing to understand, especially when information is not provided in a traveller's language or when one source of information contradicts another.¹¹¹ Nuanced requirements, such as needing to have a printed (rather than digital) copy of proof of testing, can be easily overlooked in the travel preparation process, creating delays and confusion upon arrival to a border checkpoint or airline check-in desk. Travellers on multi-leg journeys often must navigate multiple sets of entry requirements, and the length of travel and associated layovers can make it difficult to comply with pre-departure testing rules. In some cases, this confusion may be intentional; by not streamlining requirements, policymakers may aim to limit the volume of travel so they can maintain time- and resource-intensive health measures at PoEs. But these potential benefits are likely

106 For estimates of the cost of hotel quarantine in different countries as of late 2021, see Toni Perkins-Southam and Dia Adams, "How Much Does a Hotel Quarantine Cost?", *Forbes Advisor*, 17 December 2021.

107 Adrian Melia et al., "Cost-Effectiveness Analysis of COVID-19 Case Quarantine Strategies in Two Australian States: New South Wales and Western Australia", *Journal of Risk and Financial Management* 14, no. 7 (4 July 2021); Shannon McMahon, "How 9 Destinations Around the World Enforce Mandatory Quarantines", *The Washington Post*, 2 February 2021; Eamon Barrett, "JP Morgan Gives Hong Kong Staff \$5,000 to Cover Costs of Quarantine in the 'COVID Zero' City", *Fortune*, 22 November 2021.

108 WHO, "Policy Considerations for Implementing a Risk-Based Approach to International Travel in the Context of COVID-19" (policy brief, WHO, Geneva, 2 July 2021).

109 Evan Gove, "How European Citizens Are Getting Around the US Travel Ban", *Porthole Cruise and Travel*, 20 August 2021.

110 For example, some airlines admitted to prioritizing high-paying, business-class passengers when flight capacity is limited, such as when governments limited the number of arrivals allowed each day. See Elias Visontay, "Australians Stranded Overseas as Airlines Fly with as Few as Four Economy Passengers", *The Guardian*, 19 August 2020.

111 An IATA analysis of the top 50 air travel markets found "bewildering variety": 7 had no restrictions; 24 restricted travel from certain countries (without coordinated risk assessment or restrictions); and 20 provided exemptions for vaccinated passengers (without coordinated lists of acceptable vaccine types). See Conrad Clifford and Alan Murray Hayden, "Restarting Global Travel" (presentation at the IATA Annual General Meeting, 3–5 October 2021), 3.

outweighed by the negative psychosocial consequences of the complex travel system.¹¹² Moreover, travel measures can cause psychological and emotional harm to people unable to visit family abroad or return home, either because of blanket travel restrictions or because travel is too costly.

- **Risk and uncertainty.** Before the pandemic, people could be relatively confident they would be able to travel and return according to their plans. Now, travellers must consider the risk of unexpected travel measures, flight cancellations and the prospect of becoming infected and having to quarantine. These sudden and potentially burdensome conditions reduce confidence in travel plans and can deter people from moving, particularly those who may lack access to testing, be unable to quarantine for long periods or face financial barriers to purchasing travel insurance or rescheduling flights. Ensuring that policy changes are more predictable, and that travellers are aware of their options should the situation change, will be essential to rebuilding public confidence in mobility and lowering the uncertainty associated with travel decision-making.

These costs disproportionately burden certain groups of travellers and migrants. While typically the poorest of the poor lack the resources to move, the rising financial costs may broaden the population excluded from travel – for example, if recruitment agencies increase the fees they charge labour migrants as they navigate new travel measures; if smugglers begin to charge irregular migrants fees to provide fraudulent health credentials; or if travel measures make the daily commute of cross-border workers prohibitively expensive or lengthy. Some groups of travellers, such as business travellers or certain wealthy tourists, may easily navigate these measures with the support of companies and tourist agencies, as well as their existing social capital and experience, but others will be excluded or face disproportionate barriers to travel.

Beyond financial and psychosocial costs, global inequalities in mobility will likely be determined by vaccine access in the medium term. As of 12 January 2022, 67 per cent of people in high-income countries had received at least one vaccine dose compared with 11 per cent of people in low-income countries.¹¹³

This inequality in vaccine supply has important implications for mobility, not least that people in the Global South face more time-intensive, expensive and burdensome conditions to enter C/T/As with vaccine requirements, assuming those C/T/As even provide alternatives for unvaccinated travellers. Among the other important issues raised by vaccine inequity are that most refugees are hosted in poorer countries, where lack of vaccine access may limit the vaccination of refugee communities, in turn limiting refugees' options for resettlement in countries that require vaccination for entry.¹¹⁴ Moreover, even in low- and middle-income countries with vaccination access, not

Some groups of travellers, such as business travellers or certain wealthy tourists, may easily navigate these measures ... but others will be excluded or face disproportionate barriers to travel.

112 For more on the impacts of these measures, see Carmen Klinger et al., "Unintended Health and Societal Consequences of International Travel Measures during the COVID-19 Pandemic: A Scoping Review", *Journal of Travel Medicine* 28, no. 7 (October 2021); Muhammad Khalilur Rahman, Md. Abu Issa Gazi, Miraj Ahmed Bhuiyan and Md. Atikur Rahaman, "Effect of Covid-19 Pandemic on Tourist Travel Risk and Management Perceptions", *PLoS ONE* 16, no. 9 (1 September 2021); Isaac Yen-Hao Chu, Prima Alam, Heidi J. Larson and Leesa Lin, "Social Consequences of Mass Quarantine during Epidemics: A Systematic Review with Implications for the COVID-19 Response", *Journal of Travel Medicine* 27, no. 7 (October 2020).

113 UN Development Programme (UNDP), "Global Dashboard for Vaccine Equity", accessed 12 January 2022.

114 For example, it is unclear whether people with a refugee or humanitarian visa to travel to Australia will be able to enter if they are not vaccinated, since there is no humanitarian exemption from the vaccination requirement. See Refugee Council of Australia, "Facilitating Humanitarian Arrivals in the Context of Global Vaccine Inequities" (brief, 11 February 2022).

least China, India and the Russian Federation, common vaccine brands (such as Sinopharm and Covaxin) are not consistently recognized by other major destination countries. Additional inequalities may emerge around policies related to the verification of vaccination status: health credential systems in the Global South may not be technically integrated into systems in the North, and manual inspection of credentials leaves room for discrimination by border staff based on travellers' race or other characteristics.¹¹⁵ (See Section 4.B. for further discussion of verification of vaccination status.)

Exceptions to different travel measures – when streamlined and clearly communicated – may reduce these costs and the resulting inequalities for some travellers, but they may also create new disparities. The United States, for example, exempts non-immigrant, non-tourist visa holders from travel restrictions if the population in their country of origin is less than 10 per cent fully vaccinated.¹¹⁶ Some C/T/As have also exempted vaccinated travellers from testing and quarantine requirements, making travel less costly and easier to navigate.¹¹⁷ Such measures can reduce costs, but exceptions benefit only some groups of travellers; exceptions for business travel, for example, privilege people bringing direct economic contributions. Similarly, while C/T/As largely exempt their nationals and residents from route restrictions, holders of most temporary visas are not exempt, meaning these visa holders are unable to travel or face considerable uncertainty about whether they can return. Meanwhile, some C/T/As with exceptions for children from vaccination requirements because they are often ineligible for vaccines only provide these exceptions to children of vaccinated parents, therefore reflecting global vaccine inequality indirectly.¹¹⁸ Complex exceptions may also increase uncertainty and discourage those with more limited access to information and guidance from travelling.

Inclusion of Migrants and Refugees in COVID-19 Responses

Including migrants and refugees in national and local COVID-19 response plans is an essential component of effective pandemic policy from both a mobility and a public health perspective. As in 2020, however, governments and authorities differed in the extent to which they facilitated this inclusion, with some migrants and refugees unable to access much-needed health care and socioeconomic support. Across the world, despite the diversity of contexts, the pandemic has amplified the existing vulnerabilities some groups of people on the move face, including food insecurity¹¹⁹ and barriers to accessing education¹²⁰ and social protection and services. And while the widespread COVID-19 outbreaks many initially feared would occur in

115 For example, reports have emerged in the United Arab Emirates of discrimination against health credentials from the Global South. Participant comments during a working group meeting of the MPI Task Force on Mobility and Borders during and after COVID-19, 11 January 2022.

116 US White House, "A Proclamation on Advancing the Safe Resumption of Global Travel during the COVID-19 Pandemic" (presidential proclamation, 25 October 2021).

117 For example, travellers to Germany from "high-risk" areas are required to home quarantine, but travellers with proof of vaccination or recovery status are exempt. See German Federal Ministry of Health, "Frequent Asked Questions on Digital Registration on Entry, the Obligation to Furnish Proof and Quarantine on Entry", updated 14 January 2022. Other C/T/As allow vaccinated passengers to quarantine at home rather than at a hotel, or to quarantine for a shorter period.

118 For example, children between ages 5 and 12 arriving in Canada are only exempted from testing requirements if accompanied by a fully vaccinated adult. Children accompanying unvaccinated travellers must follow all testing and quarantine requirements. See Government of Canada, "COVID-19 Travel: Checklists for Requirements and Exemptions", updated 23 December 2021.

119 IOM and World Food Programme (WFP), *Populations at Risk: Implications of COVID-19 for Hunger, Migration and Displacement* (Geneva and Rome: IOM and WFP, 2020).

120 See, for example, Kim Caarls et al., *Lifting Barriers to Education during and after COVID-19* (Florence, Italy: United Nations Children's Fund [UNICEF] Office of Research – Innocenti, 2021).

crowded environments, especially encampment settings, do not seem to have materialized,¹²¹ many refugee and migrant communities remain more vulnerable to severe illness and death caused by the virus due to their often-precarious living and working conditions, lack of access to health care and higher prevalence of underlying health conditions.¹²²

As governments and authorities rolled out vaccination campaigns in 2021, it was widely recognized that getting as large a share of a C/T/A's population vaccinated as possible would be critical to stopping the virus' spread and protecting public health. But with vaccination levels unequal globally, and access in some C/T/As limited, it was feared that some refugee and migrant populations would be excluded from national vaccination campaigns. Notably, some countries such as Jordan¹²³ and Bangladesh¹²⁴ chose to vaccinate migrants and refugees alongside nationals. But in other contexts, including some that have seen large-scale migration in recent years, barriers remained. For example, in some Latin American countries, only Venezuelans with a regular migration status were able to receive vaccination.¹²⁵ By December 2021, out of 180 C/T/As analysed, 132 included refugees in their vaccine rollouts, 149 included regular migrants and 84 included irregular migrants.¹²⁶ In some situations, however, governments or authorities may be unwilling or unable to provide vaccinations. To address these needs, the COVAX facility, which aims to ensure equitable access to COVID-19 vaccines by procuring and distributing them to lower-income countries, has developed a humanitarian buffer as a last resort.¹²⁷ But the operationalization of the buffer has taken time, with humanitarian organizations and C/T/As submitting few applications, vaccine supply falling short of expectations and issues surrounding the liability of vaccine manufacturers remaining unresolved.¹²⁸

The pandemic has amplified the existing vulnerabilities some groups of people on the move face, including food insecurity and barriers to accessing education and social protection and services.

Even where refugees and migrants were included in vaccination campaigns, some have been reluctant to come forward or faced barriers to doing so. Obstacles include pre-existing hurdles that hindered access to health systems, such as linguistic and administrative barriers, as well as mistrust of authorities, lack of

121 Hilary Beaumont, "Fears over Coronavirus Grip Migrant Camps on U.S.-Mexico Border", Al Jazeera, 12 March 2020; Marie McAuliffe and Céline Bauloz, "The Coronavirus Pandemic Could Be Devastating for the World's Migrants", World Economic Forum, 6 April 2020; Jessica Ritchie, "COVID-19 Brief: Impact on Conflict & Refugees", US Global Leadership Coalition, updated 30 August 2021; Eric Reidy, "One Year On: How the Pandemic Has Affected Refugees, Asylum Seekers, and Migration", The New Humanitarian, 10 March 2021.

122 WHO, "COVID-19 Immunization in Refugees and Migrants: Principles and Key Considerations" (interim guidance, 31 August 2021).

123 Saverio Bellizzi et al., "Vaccination for SARS-CoV-2 of Migrants and Refugees, Jordan", *Bulletin of the World Health Organization* 99, no. 9 (1 September 2021).

124 WHO, "Bangladesh Extends COVID-19 Vaccination to Rohingya Refugees in Cox's Bazar Camps" (news release, 16 August 2021).

125 Amaya Perez-Brumer et al., "Vaccines for All? A Rapid Scoping Review of COVID-19 Vaccine Access for Venezuelan Migrants in Latin America", *Journal of Migration and Health* 4 (2021).

126 These numbers are higher than the number of C/T/As that included refugees and migrants in their vaccine rollout plans. See IOM, "Migrant Inclusion in COVID-19 Vaccination Campaigns", updated 8 December 2021.

127 Talha Jalal, "The COVAX Humanitarian Buffer Explained", Gavi, the Vaccine Alliance, 30 March 2021; Inter-Agency Standing Committee, "Frequently Asked Questions: The COVAX Humanitarian Buffer" (Q&A document, 8 November 2021).

128 Arden Bentley and Bilen Zerie, "Less than a Lifeline: Challenges to the COVAX Humanitarian Buffer" (issue brief, Refugees International, 20 September 2021); Francesco Guarascio and Panu Wongcha-um, "Refugees Lack COVID Shots Because Drugmakers Fear Lawsuits, Documents Show", Reuters, 16 December 2021.

information available in migrants' and refugees' native language, and the prevalence of misinformation.¹²⁹ Additionally, irregular migrants may fear deportation or apprehension if they present themselves to authorities for vaccination. Combatting this hesitancy requires working with members of these communities to provide information in culturally sensitive and linguistically accessible ways.

In many contexts, governments and authorities also excluded migrants and refugees from broader pandemic response efforts. Economic responses to mitigate unemployment, loss of livelihoods, closed schools, food insecurity and lack of shelter, for example, often excluded people on the move. Governments and authorities often extended health services to irregular migrants, but access to other basic services and social protections lagged behind.¹³⁰ For example, irregular migrants in Portugal often lacked the proof of social security contributions needed to access unemployment benefits and financial support introduced during the pandemic,¹³¹ although the government provided temporary settled status so many of these migrants could access the most basic services.¹³² Similarly, recovery stimulus packages in some C/T/As also excluded irregular migrants, refugees and temporary visa holders. In the United States, the first round of pandemic stimulus excluded irregular migrants and their families (some 5 million of whom were legal immigrants or US citizens), but the subsequent economic recovery packages were expanded to include many of these residents.¹³³ In Australia, temporary visa holders remained ineligible for employment support throughout the pandemic.¹³⁴

Whether in access to vaccines or other policy responses to the pandemic, these various forms of exclusion threaten to compound existing inequalities between migrants and non-migrants. Addressing broader inequities such as access to health care and social protection will require concerted attention from policymakers across government, but decisions about the policies governing cross-border movement – including about the speed with which travel and mobility are restored – will also shape opportunities for migration and the conditions under which it occurs.

129 See, for example, Alison F. Crawshaw et al., "What Must Be Done to Tackle Vaccine Hesitancy and Barriers to COVID-19 Vaccination in Migrants?", *Journal of Travel Medicine* 28, no. 4 (May 2021); Belinda J. Liddell et al., "Factors Associated with COVID-19 Vaccine Hesitancy Amongst Refugees in Australia", *European Journal of Psychotraumatology* 12, no. 1 (2021); Noura Salibi et al., "COVID-19 Vaccine Acceptance in Older Syrian Refugees: Preliminary Findings from an Ongoing Study", *Preventative Medicine Reports* 24 (December 2021).

130 UNICEF, "COVID-19 Has Led to a Dramatic Reduction in Essential Services and Protection for Migrants and Displaced Children in Countries around the World" (press release, 18 December 2020).

131 Victoria Waldersee, "Seasonal and Undocumented Workers in Portugal Fall through Safety Net", Reuters, 5 May 2020.

132 European Commission, "Portugal: More than 356,000 Immigrants Provisionally Legalised during COVID-19 Pandemic" (press release, 16 January 2021).

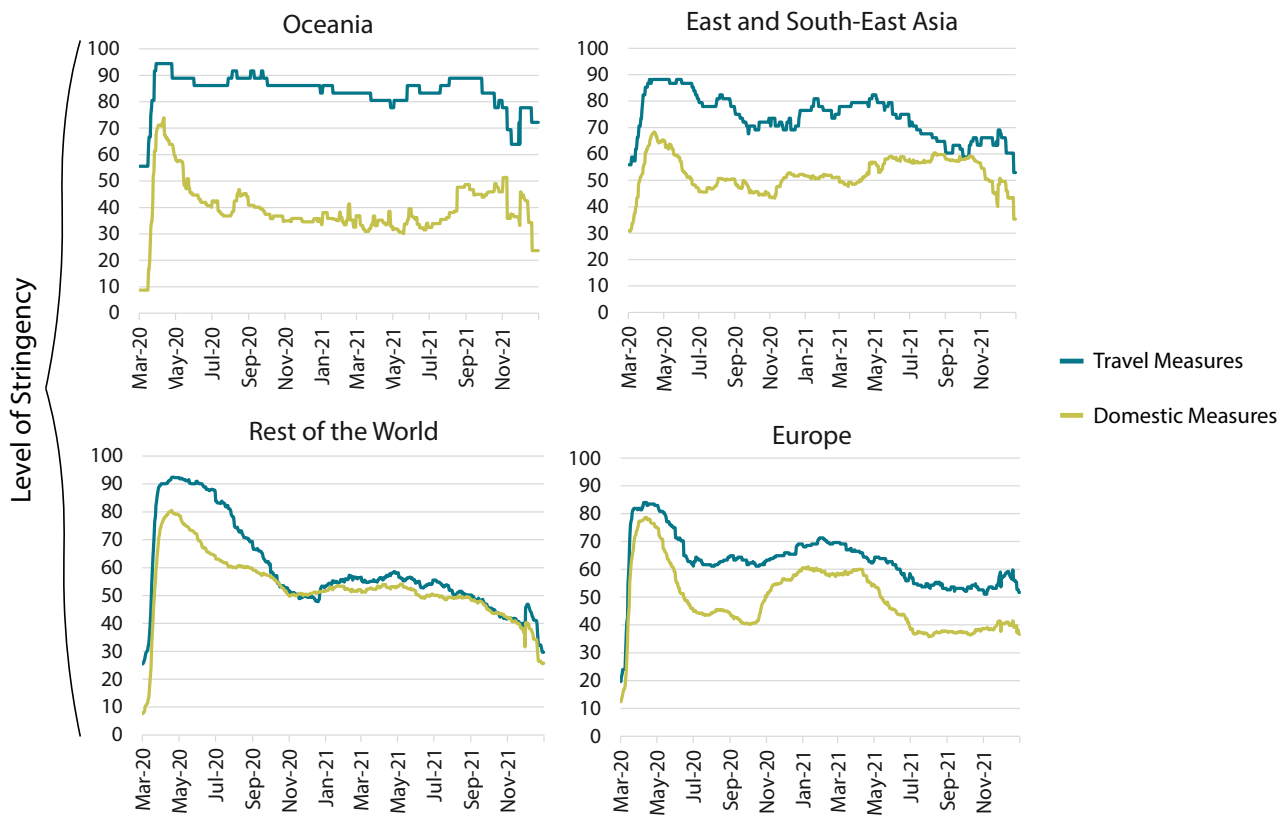
133 In the United States, the initial round of stimulus funding excluded irregular migrants and their families, although they were covered by the second round. See Julia Gelatt, Randy Capps and Michael Fix, "Nearly 3 Million U.S. Citizens and Legal Immigrants Initially Excluded under the CARES Act Are Covered under the December 2020 COVID-19 Stimulus" (commentary, MPI, Washington, D.C., January 2021).

134 Ben Doherty, "Australia's Coronavirus Relief Exclusions Prove We Are Not All in this Together", *Guardian Australia*, 3 April 2020; Matilda Marozzi, "ATO Tries to Recover JobKeeper Payments from Migrant Workers", ABC, 11 May 2021.

4 Shifting Policy Goals and Risk Tolerance

Public and political risk tolerance has shaped pandemic response strategies, from those that have sought to eliminate risk entirely to those that have sought to manage risk. Governments and authorities pursuing an eradication strategy (e.g. Australia, China, New Zealand and Singapore) have tried to quash outbreaks and prevent any new cases being imported. Alongside robust travel restrictions and quarantine measures for the few authorized to travel (see Section 2), they have imposed strict lockdowns and public health measures, often targeted to local outbreaks. As Figure 13 shows, C/T/As pursuing an eradication strategy had a larger gap in level of stringency between domestic and travel measures than those pursuing mitigation strategies in 2020 and 2021, although that gap began to narrow in the second half of 2021 in line with plans to open back up, which will be discussed in Section 4.B. Many countries in Oceania, for example, succeeded in eradicating the virus, at least until the Delta variant, which allowed them to use less stringent domestic measures coupled with strict travel measures for much of 2021.

FIGURE 13
Average Stringency of Travel and Domestic Measures in Regions Where C/T/As Pursued Eradication (top) and Mitigation (bottom), March 2020 – December 2021



Notes: This figure uses the Oxford stringency index, which is the average of nine indexes, eight of which measure domestic policies and one that measures travel measures. The data on travel measures shown in this figure are from this travel measures index. The data on domestic measures reflect the average of the eight domestic policy indexes in the Oxford index. This creates an index of 0 to 100, with values closer to 100 representing a higher level of stringency. In this figure, Oceania includes the C/T/As in the trans-Tasman region (Australia and New Zealand) and in other parts of Oceania. East and South-East Asia contains all C/T/As in the East Asia and ASEAN regions. Europe includes all C/T/As in the European Economic Area and in Eastern and South-Eastern Europe. The “Rest of the World” panel includes all C/T/As not included in the other panels.

Source: Thomas Hale et al., “Oxford COVID-19 Government Response Tracker”, University of Oxford, Blavatnik School of Government, accessed 10 January 2022.

The risk threshold for C/T/As with mitigation strategies, by contrast, has fluctuated over time as governments and authorities weigh the socioeconomic and political costs of different public health measures against their benefits. This led to, for example, Caribbean island nations that rely on tourism reopening for international travel fairly early on in 2020.¹³⁵ In 2021, C/T/As had to weigh a growing number of variables as part of their risk calculations, such as vaccination rates and variant prevalence, economic factors and lockdown fatigue. These calculations resulted in the differentiated regional responses discussed in Section 2. And as Figure 13 shows, while most regions pursuing mitigation strategies largely aligned the stringency of their travel and domestic measures starting around October 2020, a small gap persisted between the two in Europe because the European Union largely maintained travel restrictions for travellers from outside the bloc while reopening internal borders.

A. *Metrics to Assess Risk and Set Policy*

COVID-19-related data collection improved in 2021, with established metrics for assessing policy effectiveness. These metrics include the number of COVID-19 cases, deaths and hospitalizations as well as ventilator use, testing rates, test positivity rates and the rate of spread (R number). Yet data tracking is not uniform across regions or even within countries, especially since some jurisdictions have invested more heavily in testing than others. For example, within the United States, different States have different reporting systems and methodologies. The utility of different metrics has also changed over time; as vaccinations became more common in 2021, this led to the partial uncoupling of counts of COVID-19 cases from counts of hospitalizations and deaths, making the latter more useful metrics in determining the severity of the epidemiological situation in C/T/As with a highly vaccinated population.¹³⁶

Meanwhile, several C/T/As, regional blocs and international organizations have published or refined risk assessment systems. Towards the end of 2020, the WHO published a risk assessment tool that recommended C/T/As use “the reported 14-day case incidence per 100,000 population” as a primary indicator, supplemented by other indicators such as mortality, test positivity and testing rates,¹³⁷ while the International Civil Aviation Organization (ICAO) released a manual specific to risk management in air travel.¹³⁸ The European Union’s traffic light system, first adopted in October 2020, uses the WHO’s 14-day incidence rate, along with 7-day test rates and test positivity rates to assign risk to the bloc’s different regions.¹³⁹ The emergency brake mechanism embedded within this system allows EU Member States to impose temporary travel restrictions in response to rapidly worsening epidemiological situations in third countries or the emergence of VOCs, while ensuring these decisions are regularly reviewed.¹⁴⁰ Similarly, the United States uses 28-day incidence rates as the primary indicator for its four-level Travel Health Notices

135 Benton, Batalova, Davidoff-Gore and Schmidt, *COVID-19 and the State of Global Mobility in 2020*.

136 Dylan Scott, “How to Make Sense of the Case and Hospitalization Data as Omicron Takes Off”, Vox, 22 December 2021.

137 WHO, “Risk Assessment Tool to Inform Mitigation Measures for International Travel in the Context of COVID-19” (guidance document, 16 December 2020); WHO, “Technical Considerations for Implementing a Risk-Based Approach to International Travel in the Context of COVID-19” (interim guidance, 2 July 2021).

138 ICAO, *Manual on Testing and Cross-Border Risk Management Measures*.

139 The case and test incident rates are per 100,000 people. While it is up to each individual Member State to make policy decisions based on these risk categorizations, they aim to have coordinated and roughly equal policies. The European Union also has a list for non-Member States that should not be restricted, which uses similar metrics. See European Council, “COVID-19: Travel within the EU”, updated 22 December 2021.

140 European Council, “COVID-19: Travel into the EU”, updated 22 December 2021.

system,¹⁴¹ but this system is an advisory for travellers and does not affect mobility policy. Others use domestic risk levels as the basis for mobility policy. For example, South Africa ties travel restrictions to its domestic alert level system, which is informed by epidemiological trends and health system capacity in country and provincially.¹⁴² Meanwhile, Israel classifies C/T/As into risk categories based on the presence of a new variant, case numbers in that C/T/A and the positivity rate of travellers arriving in Israel from the C/T/A.¹⁴³

However, unclear thresholds for imposing different travel measures have made it difficult for individuals and businesses that rely on cross-border mobility to make decisions, sometimes to chaotic effect. For example, the United Kingdom¹⁴⁴ uses a range of quantitative and qualitative metrics in its traffic light system and publishes select data from its risk assessments.¹⁴⁵ But by not publicly defining each category, the system is difficult to evaluate and creates confusion, such as when the UK government placed Pakistan and Bangladesh, but not India, on its red list in response to the Delta variant, despite these countries having similar case rates.¹⁴⁶ Singapore has faced similar issues and has been criticized for contradictions between official risk levels and the epidemiological situations in certain C/T/As.¹⁴⁷ And in mid-2021, the United States came under criticism from European diplomats for refusing to publicize a timeline or metrics for lifting travel restrictions on travellers from 33 countries, including the Schengen area.¹⁴⁸ Inconsistent public communications on risk metrics and sudden travel measures undermine members of the public's confidence in their travel plans, with unintended consequences as people rush to pre-empt potential new restrictions, creating congestion in trains, airports and at other points of entry.¹⁴⁹

Unclear thresholds for imposing different travel measures have made it difficult for individuals and businesses that rely on cross-border mobility to make decisions, sometimes to chaotic effect.

141 US Centers for Disease Control and Prevention, "How CDC Determines the Level for COVID-19 Travel Health Notices", updated 6 December 2021.

142 South African Government, "About Alert System", accessed 21 December 2021; South African Government, "Travel – Coronavirus COVID-19", accessed 21 December 2021.

143 Michael Hauser Tov, "How Israel Designates U.S., Italy as Omicron 'Red Countries' and Bans Travel There", *Haaretz*, 20 December 2021; Rossella Tercatin, "Coronavirus: How Does Israel Decide Which Countries to Ban for Traveling?", *The Jerusalem Post*, 22 July 2021.

144 Health policy in the United Kingdom is devolved to each of the four constituent countries; however, as of the end of 2021, the countries' policies were aligned.

145 UK Health Security Agency, "Guidance: Risk Assessment Methodology to Inform International Travel Traffic Light System", updated 29 October 2021; UK Health Security Agency, "Collection: Data Informing International Travel Risk Assessments", updated 15 December 2021.

146 Ed Conway, "COVID-19: When the Government's 'Opaque' Green, Amber and Red List Decisions Don't Match the Data", *Sky News*, 16 May 2021.

147 In response to questions, Singapore's Ministry of Health simply stated that metrics were considered but did not clarify how decisions were made. See Hui Weng Tat, "Forum: Provide Greater Clarity on How Places Are Categorised in Border Measures", *The Straits Times*, 28 October 2021; Tan Wei Ming, "Risk-Based Approach Taken for Country Classifications", Singapore Ministry of Health, 30 October 2021.

148 See, for example, David M. Herszenhorn, "'Huge Disappointment' in EU over Biden's Continuing Travel Ban", *PoliticoPro*, 28 July 2021.

149 See, for example, Hugo Daniel, "'Green List': 27,000 Britons Scrambled to Leave Algarve in Three Days before Portugal Moved to 'Amber List'", *inews.co.uk*, 18 June 2021.

Traffic light systems and complex risk assessment frameworks have been criticized for being confusing and creating different rules for different settings, yet they have the virtue of showing how complex risk calculations are being made. The challenge is that transparency does not always inspire public trust, especially if the messaging is confusing or public authorities change their strategy over time.¹⁵⁰ Political cover could come in the form of using metrics provided by a third-party organization or greater international coordination on risk assessment, following the regional model pioneered by the European Union and adopted by other regions. Regional cooperation on traffic light systems has proven difficult when directly tied to travel restrictions – the Caribbean travel bubble quickly collapsed when certain countries were excluded due to higher risk levels – but regional coordination around advisory risk metrics could at least provide travellers with more confidence and governments and authorities with a public evidence base to communicate risk.

B. Changing Risk Tolerance

Throughout the pandemic, many C/T/As have changed their COVID-19 and mobility strategies, sometimes by pursuing the same goals using different measures (such as health requirements instead of entry restrictions), and sometime by shifting their goals altogether. For example, “living with COVID-19” emerged as a new goal for pandemic mobility management following the spread of the Delta variant, especially in combination with rising levels of vaccination. Many C/T/As pursuing eradication strategies began to realize that goal was no longer achievable and started presenting and implementing reopening plans, while some C/T/As with mitigation strategies opened to even more travellers when high vaccination rates reduced the risks of overwhelming health systems.

The transmissibility of new variants, combined with rising vaccination levels, has prompted a shift away from eradication strategies, but the process has not been linear. Singapore announced a shift away from its “zero COVID” policy goal in June 2021; Australia followed in August and New Zealand in October.¹⁵¹ Nonetheless, rising case rates delayed reopening in Singapore,¹⁵² and as of the end of 2021, it had not eased its travel restrictions and had suspended vaccinated travel lanes.¹⁵³ Australia’s reopening was delayed by the arrival of the Omicron variant¹⁵⁴ and plagued by multilevel governance tensions, with some States more

The transmissibility of new variants, combined with rising vaccination levels, has prompted a shift away from eradication strategies, but the process has not been linear.

150 Natalia Banulescu-Bogdan and Meghan Benton, “Public Confidence in Pandemic Mobility Systems” (discussion paper prepared for a working group meeting of the MPI Task Force on Mobility and Borders during and after COVID-19, October 2021).

151 *The Economist*, “Asia Countries Are at Last Abandoning Zero-Covid Strategies”, *The Economist*, 9 October 2021.

152 Singapore, despite passing its stated threshold of 80 per cent vaccination to reopen in September 2021, instead increased restrictions in October and waited until December 2021 to begin easing restrictions. See Sui-Lee Wee, “They Had the Vaccines and a Plan to Reopen. Instead They Got Cold Feet”, *The New York Times*, 8 October 2021.

153 These lanes allow vaccinated travellers from certain C/T/As to enter Singapore without quarantine. See Singapore Immigration and Checkpoints Authority, “Travelling to Singapore”, accessed 28 December 2021.

154 The plan was to allow Australian nationals to return in November 2021 and open up further in December 2021. See BBC, “Covid: Australia to End Ban on Citizens Leaving Country”, BBC News, 27 October 2021; John Yoon, “Australia Accelerates Its Plans to Allow International Travel”, *The New York Times*, 1 November 2021; AFP, “Australia to Re-Open Borders to Students, Workers”, France 24, 22 November 2021.

eager to open than others.¹⁵⁵ Other C/T/As, such as the Republic of Korea, also announced an easing of travel restrictions in 2021,¹⁵⁶ but the Omicron variant delayed many of these plans.¹⁵⁷ However, in early 2022, there have been renewed calls to lift restrictions and travel measures as rising vaccination rates and the spread of the Omicron variant begin the virus' transition to becoming endemic.

Still, not all C/T/As have abandoned their eradication strategies. Most notably, the People's Republic of China remains largely closed to international travel and routinely imposes domestic lockdowns to address outbreaks.¹⁵⁸ The Hong Kong Special Administrative Region (SAR), China, in order to facilitate travel with mainland China, has followed suit, with one of the strictest quarantine requirements that only travellers from China can skip.¹⁵⁹ These requirements have negatively affected Hong Kong SAR, China's attractiveness to international firms, putting its status as a global financial hub in jeopardy.¹⁶⁰ The Taiwan Province of the People's Republic of China has likewise maintained its elimination strategy, at significant socioeconomic cost.¹⁶¹

Political, as well as public health, risk has factored into decisions on whether and when to lift restrictions. The US government, for example, maintained travel restrictions against multiple countries, including EU Member States, even when they had lower COVID-19 case counts than the United States.¹⁶² Moreover, according to some analysts, the final impetus for lifting the ban was diplomatic, rather than purely for public health reasons, as it followed political tensions between the United States and France over a nuclear submarine deal.¹⁶³ Meanwhile, in eradication-focused C/T/As, citizens embraced the goal of "zero COVID", as exemplified, for instance, by the popularity of "double donut days" in Australia, where both case and death counts were zero. Even with changes in messaging towards a phased reopening, sizable portions of the

155 For example, as of February 2022, Australia has opened its borders to vaccinated tourists and foreign travellers, but the State of Western Australia remained closed to most interstate and international travellers, meaning travellers could enter the country and move around the rest of the country except Western Australia. See Nick Sas, "As 'Fortress Australia' Opens after Two Years of COVID-19 Border Closures, Will Backpackers and Tourists Come Back?", ABC, 31 January 2022.

156 Republic of Korea Ministry of Health and Welfare, "Roadmap for Gradual Recovery to a New Normal" (press release, 29 November 2021).

157 Natasha Khan, Mike Cherney and Miho Inada, "Omicron Disrupts Reopening Plans Across Asia", *The Wall Street Journal*, 29 November 2021; Natasha Frost and Livia Albeck-Ripka, "New Zealand and Other Asia Pacific Nations Scramble to Respond to Omicron", *The New York Times*, 21 December 2021.

158 Ben Wescott, "China Grows More Isolated as Asia Pacific Neighbors Start Living with Covid-19", CNN, 1 November 2021.

159 Timothy McLaughlin, "The Countries Stuck in Coronavirus Purgatory", *The Atlantic*, 21 June 2021; Vivian Wang, "Why China Is the World's Last 'Zero Covid' Holdout", *The New York Times*, 27 October 2021. Starting 5 February 2022, Hong Kong SAR, China shortened its quarantine to 14 days with 7 additional days of self-monitoring. See Farah Master and Twinnie Siu, "Hong Kong to Cut Quarantine for Arrivals to 14 Days from Next Month", Reuters, 27 January 2022.

160 Theodora Yu and Shibani Mahtani, "Hong Kong Is Clinging to 'Zero Covid' and Extreme Quarantine. Talent Is Leaving in Droves", *The Washington Post*, 27 December 2021; Reuters, "Hong Kong's Zero-Covid Policy Undermining Financial Hub Status – Industry Group", Reuters, 25 October 2021. The unworkability of Hong Kong SAR, China's quarantine requirements for business is exemplified by the exemption granted to JP Morgan Chase's CEO Jamie Dimon in November 2021, a rarity. See Alexandra Stevenson, "Hong Kong Exempts JP Morgan Chase's Chief from Its Lengthy Quarantine", *The New York Times*, 16 November 2021.

161 Vincent Chao, "Moving Past Taiwan's Zero-Tolerance Approach", Center for Strategic and International Studies, 23 August 2021; Helen Davidson, "'How Long Can You Maintain It?' Cost of Taiwan's Pursuit of Covid Zero Starts to Show", *The Guardian*, 7 November 2021; Frédéric Laplanche, *Taiwan's COVID-19 Strategy: Successfully Combining Health Priorities and Democratic Principles* (Paris: Fondation pour la Recherche Stratégique, 2021).

162 For a discussion of the perceived political risk of lifting these restrictions, see Edward Alden, "America's Pandemic Travel Bans No Longer Make Sense", *Foreign Policy*, 13 September 2021.

163 Célia Belin, "Travel Is Resuming, but Not for Everyone", Brookings Institution, 8 November 2021. Biden administration officials deny that the reopening was related to tensions with Europe. See David Smith, "US to Lift Covid Travel Ban for Vaccinated Passengers from UK and Most of EU", *The Guardian*, 20 September 2021.

public in such C/T/As remain wary of international travel.¹⁶⁴ This politicization of mobility measures – and the fact that perceived public support has shaped policy responses, in many instances – points to the need to consider messaging and strategic communication alongside public health measures as part of pandemic management.¹⁶⁵

5 Regional and International Coordination

Tension between national sovereignty and international cooperation remained at the heart of border and travel policies in 2021, as C/T/As continued to pursue their own strategies and goals largely unilaterally. Although international institutions released guidelines, blueprints and road maps for reopening safe travel, their effect on national policies was limited. There is still a lack of global standards for international travel and pandemic management, including on how to use time-limited border closures, the categories of people eligible for exceptions, testing and screening procedures, and digital health record interoperability.

The limited capacity of international organizations and frameworks to coordinate global action on borders and travel was evident in the response to variants of concern in 2021. Neither the implementation nor the lifting of travel bans was coordinated among governments and authorities or through an international body such as the WHO. The WHO's advice against travel bans was echoed by the International Air Transport Association (IATA)¹⁶⁶ and ICAO,¹⁶⁷ but no international institution was prepared to coordinate C/T/As' responses to the emergence of a new variant when regional and international cooperation on the pandemic was already lacking. Furthermore, the speed with which many C/T/As imposed travel restrictions left little time for coordination or preparation with different government ministries, border officials, airlines and travel agents. By moving quickly, the governments sent a public signal that the variants would likely require further measures, but they also left nationals stranded abroad,¹⁶⁸ passengers stranded in domestic airports¹⁶⁹ and travellers uncertain about when restrictions would be lifted or further restrictions imposed.

Several initiatives at the international level are seeking to coordinate action on travel and mobility, including through ICAO,¹⁷⁰ the UN World Tourism Organization (UNWTO)¹⁷¹ and the Organisation for Economic

164 Michelle Fay Cortez, Faris Mokhtar and Low De Wei, "Singapore Confronts the Division and Fear That Come from Living with Covid", Bloomberg, 14 October 2021.

165 Banulescu-Bogdan and Benton, "Public Confidence in Pandemic Mobility Systems".

166 IATA, "Follow WHO Advice and Rescind Travel Bans" (press release, 13 December 2021).

167 ICAO, "Recommendations to States Regarding the SARS-CoV-2 Omicron Variant" (electronic bulletin EB 2021/43, 30 November 2021).

168 See, for example, Alisha Ebrahimji, "Sleeping in Cars, Teaching on Zoom and Several Cancellations: These Travelers Are Stranded over Restrictions Tied to the Omicron Variant", CNN, 1 December 2021.

169 See, for example, Stephanie Nolen, "A Times Correspondent Reports from a Plane Held on the Tarmac in Amsterdam", *The New York Times*, November 26, 2021.

170 ICAO's Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) and its Council Aviation Recovery Taskforce (CART) include a host of international organizations, including IOM and WHO, and produced guidance for governments and the air industry on restarting mobility through Public Health Corridors (PHCs). PHCs are travel routes between two countries where both countries agree to certain risk-mitigation measures related to ensuring a "clean", or COVID-19-free crew, aircraft, airport facilities and passengers. This guidance aims to ensure that airline crew can travel and manage flights without being infected or transmitting the virus at origin, layover or destination.

171 The UNWTO convened a Global Tourism Crisis Committee, which has met three times to discuss coordination, harmonized travel and safety protocols, and vaccine and testing access, respectively.

Co-operation and Development (OECD),¹⁷² but as yet no meta-coordinator has emerged to coordinate these efforts, which have had limited effect. The WHO, despite its leadership on pandemic response, has limited its work on mobility to producing guidance on international travel¹⁷³ and digital health credentials.¹⁷⁴ However, such coordination may be emerging. November 2021 saw statements of commitment towards greater international coordination at the IOM Council's high-level segment on COVID-19, where IOM expressed its willingness to coordinate various global initiatives and facilitated discussion on COVID-19 and mobility.¹⁷⁵ Additionally, several national representatives committed to supporting international coordination on border procedures, including the Alejandro Mayorkas, secretary of the U.S. Department of Homeland Security, who spoke about the need for a pre-established global architecture to bring health concerns and border management together and better prepare the world for future crises, and EU Commissioner for Home Affairs Ylva Johansson, who noted that "the virus only increased the need for cooperation on migration."¹⁷⁶

A. Regional Cooperation

In the absence of comprehensive international coordination, C/T/As in some regions worked together to restart intraregional and interregional mobility. Regions with the strongest existing intraregional coordination had the most coordinated responses to COVID-19 and variants of concern, while weaker regional institutions and those with a smaller focus on borders and mobility were less able to coordinate C/T/As' pandemic response. Interregional inequalities in vaccine access, health infrastructures and border capacities also shaped the nature and strength of regional coordination.

European coordination was already the most advanced in 2020, and in 2021, Europe continued its regional integration of risk assessment, interoperability of digital health credentials and variant response. Although control of external borders remains under EU Member State control, European Council guidance led to the standardization of regional policies, including its traffic light system for risk assessment, and its recommendations led some Member States to move towards person-based travel measures (where vaccinated travellers and those with proof of a negative test or prior infection are allowed entry, regardless of their country of origin). In response to the Omicron variant, the Council coordinated a high-level roundtable where EU countries agreed to activate the "emergency brake" on travel from seven southern African countries. Although this recommendation was non-binding, all Member States imposed either travel bans or additional testing and quarantine requirements on travellers from those countries. The European Centre for Disease Prevention and Control also issued region-specific guidance on travel measures

172 The OECD developed a blueprint based on the EU traffic light model that offers a global standard for pegging border restrictions to the risk profile of travellers' country of origin. The blueprint was endorsed by OECD ministers as a non-binding roadmap for voluntary implementation, but there is limited evidence that OECD countries have used this blueprint, instead generally demonstrating a preference to develop risk assessment and travel restriction policies themselves. See OECD, *OECD Initiative for Safe International Mobility during the COVID-19 Pandemic (Including Blueprint)* (Paris: OECD Publishing, 2021).

173 WHO, "Technical Considerations for Implementing a Risk-Based Approach".

174 WHO, *Digital Documentation of COVID-19 Certificates: Vaccination Status – Technical Specifications and Implementation Guidance* (Geneva: WHO, 2021).

175 IOM also focused on the issue in its global International Dialogue on Migration and is planning to integrate consideration of COVID-19 into the International Migration Review Forum in May 2021.

176 IOM, "Predictability, Accessibility Keys to Cross-Border Mobility Rules, IOM DG Tells Annual Council" (news release, 30 November 2021); European Commission, "Commission Johansson's Video Message at the High-Level Segment of the 112th IOM Council of the International Organization for Migration on the Impact of COVID-19 on Borders, Migration, and Mobility: Learning Lessons and Preparing for the Future" (news release, 30 November 2021).

in response to Omicron, noting that “it is likely that within the coming weeks the effectiveness of travel measures will significantly decrease, and countries should prepare for a rapid and measured de-escalation of such measures.”¹⁷⁷ Still, limitations remain to regional coordination in Europe, with Member States taking disparate approaches to travel restrictions despite Council recommendations,¹⁷⁸ causing confusion and calls for better communication of travel rules.¹⁷⁹

Coordination in Africa grew in 2021 but remained limited by vaccine access and capacity constraints. At a heads-of-state summit in late 2021, ECOWAS urged Member States to open land borders on 1 January 2022, building on its *Guidelines on the Harmonisation and Facilitation of Cross Border Trade and Transport and Mitigation of Health Risks*.¹⁸⁰ ECOWAS also urged States to harmonize recognition of PCR tests and their validity periods, and to provide equipment and facilities at points of entry through cooperation between Member States. The EAC, meanwhile, developed the EACPass, in coordination with the non-profit The Commons Project, to verify COVID-19 test results. However, challenges to regional coordination have persisted, with divergent policy responses, low vaccination rates and the politicization of lockdowns and travel restrictions. Sudden border closures between South Africa, Zimbabwe and Mozambique in January 2021, for example, were reportedly implemented without official notification of the SADC Secretariat, though Member States had agreed to do so in guidelines adopted in 2020.¹⁸¹

In the Americas, significant variation remains in regional responses to COVID-19. The South American countries that are part of the Southern Common Market (Mercosur) showed limited willingness to coordinate on intraregional travel, perhaps not surprising given the bloc’s significant internal divisions.¹⁸² CARICOM countries were more active on intraregional coordination, reflecting an existing regional infrastructure on tourism and travel. These countries adapted their tourism systems and initiatives to share information on travel and health requirements, as well as to train and certify hospitality and airline staff on COVID-19 safety guidelines.¹⁸³ CARICOM also collaborated on vaccine and health equipment sharing and jointly advocated for international assistance, and its Member States are considering harmonizing travel protocols.¹⁸⁴ Regional cooperation did not, however, extend to coordinating responses to the Omicron variant.¹⁸⁵ Similarly, the CARICOM travel bubble proposed in late 2020 quickly fell apart as some countries were excluded because of higher case numbers, although calls for a regional travel bubble continued

177 European Centre for Disease Control (ECDC), “Implications of the Further Emergence and Spread of the SARS CoV 2 B.1.1.529 Variant of Concern (Omicron) for the EU/EEA First Update” (Threat Assessment Brief, ECDC, Stockholm, 2021), 10.

178 Lebewit Lily Girma, “European Nations Still Not Buying into a Coordinator Approach on Travel Rules”, Skift, 1 February 2022.

179 In February 2022, 52 Members of the European Parliament sent a letter to the European Commissioner for the Internal Market criticizing confusing travel rules and the failures of the Commission’s Re-Open EU website to provide clarity. See Douglas Busvine, “Pandemic Passport: Trucker’s Revolt – the EU’s Useless Travel App – England Ends Isolation”, Politico, 11 February 2022.

180 ECOWAS, *Final Communiqué: Sixtieth Ordinary Session of the Authority of Heads of State and Government* (Aduja, Nigeria: ECOWAS, 2021), 8.

181 Liesl Louw-Vaudran and Ringisai Chikohomero, “Dialogue Could Have Averted COVID-19 Border Chaos”, Institute for Security Studies, 19 January 2021.

182 See Council on Foreign Relations Editors, “Mercosur: South America’s Factitious Trade Bloc”, Council on Foreign Relations, 17 December 2021.

183 For example, see Caribbean Public Health Agency, “Healthier Safer Tourism”, accessed 22 December 2021; Caribbean Public Health Agency, “Caribbean Traveller’s Health App”, accessed 22 December 2021.

184 Caribbean Community (CARICOM), “Communiqué Issued at the Conclusion of the Sixteenth Special Emergency Meeting of the Conference of Heads of Government of the Caribbean Community, via Videoconference, 13 September 2021” (communiqué, 13 September 2021).

185 Caricom Today, “CARPHA: The Decision to Impose Travel Entry Requirements Belongs to the National Authorities”, Caricom Today, 8 December 2021.

throughout 2021.¹⁸⁶ Regional cooperation in North and Central America, despite agreements between some countries to cooperate on border policies,¹⁸⁷ has not resulted in harmonized restrictions or policies.

In 2021, regional cooperation in Asia and the Pacific took the form of bilateral and multilateral agreements and travel bubbles, rather than occurring through regional institutions such as ASEAN. Agreements between two or more countries to remove quarantine requirements (sometimes called “travel bubbles”) are not a uniquely Asia-Pacific phenomenon,¹⁸⁸ but they are associated with the region because of its limited regional cooperation,¹⁸⁹ some C/T/As’ limited access to vaccines (such as Pacific island countries), and stricter and longer-lasting travel restrictions and quarantine requirements in countries such as Australia, Malaysia and Singapore. Arguably the most successful travel bubble is Singapore’s: vaccinated travellers from 24 countries are able to enter Singapore by air without quarantine, and the country has a “reciprocal green lane” for business travellers from Brunei Darussalam and certain parts of China.¹⁹⁰ Travel bubbles, however, tend to be fragile and can burst or be paused if case numbers rise beyond tolerated risk levels. New Zealand’s travel bubble included Australia, the Cook Islands, Niue, Samoa, Tonga and Vanuatu, but the agreement with Australia was suspended multiple times, while travel to the Cook Islands was paused.¹⁹¹ Other travel bubbles were set up in Australia, India and Malaysia, but they faced delayed implementation and frequent pauses.¹⁹² Overall, travel bubbles have been important tools allowing C/T/As with a lower risk tolerance to facilitate some amount of international travel, but as more countries exempt vaccinated travellers from quarantine, further travel bubbles are unlikely to emerge outside the region.

Differences in regional access to vaccines, funding, digital infrastructure and health capacities have affected regions’ priorities for cooperation.

It is important to note that better regional coordination may not necessarily lead to better health outcomes or greater mobility. Differences in regional access to vaccines, funding, digital infrastructure and health capacities have affected regions’ priorities for cooperation; regions in Africa and the Americas, for example, have focused on facilitating cross-border trade and transport and harmonizing testing protocols, rather than certifying vaccination status, given limited vaccine access for most of 2021. Moreover, diverse levels

186 Renuka Singh, “New Caricom Chair Calls for Inclusive Inter-island Travel”, *Trinidad and Tobago Guardian*, 5 July 2021.

187 For example, the United States and Mexico agreed to bilateral cooperation on pandemic response, including on adjusting border policies. See US White House, “U.S. – Mexico Bilateral Cooperation” (fact sheet, 1 March 2021).

188 Other significant travel bubbles were trialled in the Baltics (Estonia, Latvia and Lithuania) and the Caribbean, but neither lasted. In most regions, bubbles have been replaced by broader exemptions for vaccinated travellers.

189 Strong regional cooperation in the Asia-Pacific region predates the pandemic, with developed regional and subregional bodies and agreements on cross-border trade, mobility and investment. The region’s pandemic response to travel and borders, however, has been almost exclusively at the national or bilateral level, and (sub-)regional institutions such as the Association of Southeast Asian Nations (ASEAN) and the Asia-Pacific Economic Cooperation (APEC) have made minimal progress on coordinating a restart to intraregional mobility. See APEC Policy Support Unit, *Passports, Tickets and Face Masks: COVID-19 and Cross-Border Mobility in the APEC Region* (Singapore: APEC, 2021); To Trieu Hai Ly, “ASEAN Struggles to Be Effective in Its COVID-19 Response”, Asia Pacific Foundation of Canada, 3 June 2020; UN Economic and Social Commission for Asia and the Pacific (ESCAP), ADB and UNDP, *Responding to the COVID-19 Pandemic: Leaving No Country Behind* (Bangkok: ESCAP, ADB and UNDP, 2021).

190 Singapore Immigration and Checkpoints Authority, “Travelling to Singapore”.

191 New Zealand Government, “Quarantine-Free Travel”, accessed 20 December 2021.

192 To encourage tourism, some countries also implemented adapted travel bubbles for *domestic* movement, allowing vaccinated travellers quarantine-free entry if they remain in a specific (tourist-heavy) city. Thailand’s Phuket Sandbox, for example, required travellers to stay in Phuket for two weeks before visiting other Thai cities. See Saxon, Sodprasert and Sucharitakul, “Reimagining Travel”.

of regional cooperation often reflected existing regionalization: Mercosur has long had internal political conflict over trade and the status of the Bolivarian Republic of Venezuela, while the European Union's history of internal freedom of movement made regional harmonization a clear priority. Regional cooperation on pandemic mobility response is unlikely to be successful when pre-pandemic regional institutions were weak or fragmented. 2022 will likely provide the evidence needed to answer a key question on regional coordination: Will regions with greater internal cooperation be better equipped to safely restart mobility on a larger scale? As C/T/As and regions move towards more mobility in 2022, the benefits and limitations of regional coordination may become increasingly clear.

B. Vaccines and Boosters

As vaccinations against COVID-19 began in December 2020 and picked up speed in 2021, many C/T/As opened up for vaccinated travellers. As discussed in Section 2, exemptions for vaccinated people and those who have recovered from COVID-19 almost tripled in 2021, and this trend will likely continue in 2022. But the shift towards vaccine requirements risks exacerbating the inequalities reflected in global vaccine inequity: as of December 2021, some 66 per cent of people in high-income countries had at least one dose of a COVID-19 vaccination, compared to 9 per cent in low-income countries.¹⁹³

Vaccine Requirements and Inequalities

The trend towards vaccine requirements for international travel has further widened the gulf between movers and non-movers. Access to vaccinations is deeply unequal between the Global North and South, only exacerbated by the need for booster shots for the strongest protection against the Omicron variant. For example, the COVAX facility distributed less than half of its 2-billion-dose target in 2021.¹⁹⁴ Requiring incoming passengers to be fully vaccinated can thus exclude travellers from much of the Global South. This is even more so the case if vaccines or digital health certificates available in poorer countries are not recognized by richer countries.¹⁹⁵ This inequality can be mitigated, however, through efforts to make access to vaccines more equitable, exceptions for travel from countries with low vaccination rates and options for unvaccinated travellers to enter a country with a negative COVID-19 test.

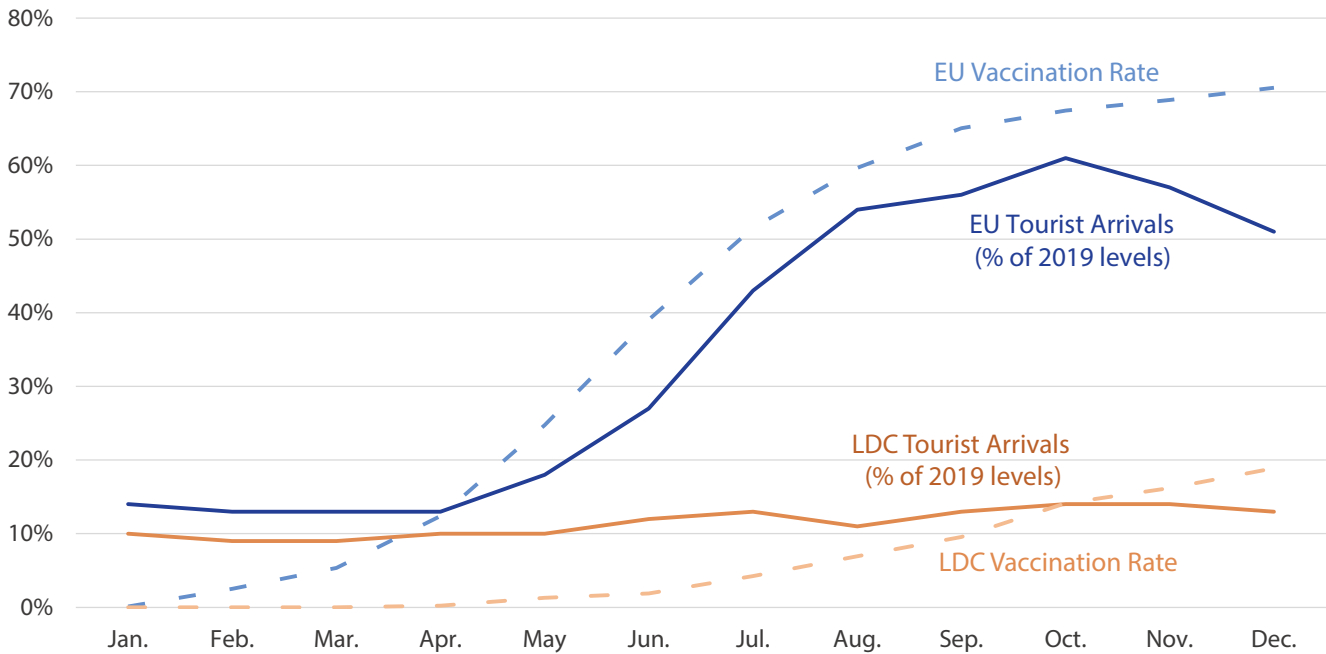
Global vaccine inequity also may create challenges that keep low- and middle-income countries from opening to incoming travel. Vaccination access not only allows people to travel with fewer requirements, from skipping quarantine to fewer tests, but it also allows countries to open their borders safely and more widely, as higher vaccination rates mean circulation of the virus poses less of a threat to a country's health system. Figure 14 demonstrates the link between vaccination rates and tourist arrivals, with residents of EU countries far more vaccinated than those in the world's least developed countries *and* the European Union far closer to pre-pandemic levels of tourism.

¹⁹³ UNDP Data Futures Platform, "Global Dashboard for Vaccine Equity", accessed 21 December 2021.

¹⁹⁴ Adam Tayler, "Covax Vaccine Deliveries Surge in Final Stretch of 2021, with a Record 300 Million Doses Sent Out in December", *The Washington Post*, 1 January 2022.

¹⁹⁵ Given these inequalities, the WHO has consistently advised against strict vaccine requirements for international travel. See WHO, "Statement on the Tenth Meeting of the International Health Regulations (2005) Emergency Committee Regarding the Coronavirus Disease (COVID-19) Pandemic" (statement, WHO, 19 January 2022).

FIGURE 14
International Tourist Arrivals and Vaccination Rates in the European Union and the World’s Least Developed Countries (LDCs),* 2021



* This figure follows the UN classification of LDCs. See United Nations, “UN List of Least Developed Countries”, accessed 20 December 2021.

Notes: The EU vaccination rate is the share of people in the European Union with at least one vaccine dose on the first day of the month, or the closest available date. The LDC vaccination rate is the average of the share of people in each LDC with at least one vaccine dose (excluding Eritrea, for which data were not available). Tourist arrivals denote the number of international tourist arrivals in a given month in 2021 as a percentage of the same month in 2019.

Sources: University of Oxford, “Our World in Data: Coronavirus (COVID-19 Vaccinations)”, accessed 20 December 2021; UN World Tourism Organization, “International Tourism and COVID-19”, accessed 20 December 2021.

These data suggest that countries with higher vaccination rates may, in some cases, open for tourism and other forms of mobility safer, earlier and at scale. But vaccines are not the panacea for mobility, and some countries with low vaccination rates have been able to reopen by relying on other health tools, such as testing. Vaccine-related challenges will likely continue, from issues with vaccine supply and roll-out to vaccine hesitancy, underscoring the need for clear exceptions from vaccine requirements to avoid shutting out large segments of the world’s population. Nonetheless, mobility issues related to uneven access to vaccines cannot be addressed through exceptions from travel restrictions alone; achieving vaccine equity is at the heart of an equitable global re-opening of mobility.

Digital Health Credentials

The rollout of vaccines in early 2021 spurred many C/T/As to introduce vaccine requirements for travellers seeking to enter their territory (or exceptions to other travel measures for vaccinated passengers). It also fuelled a burst of innovation around digital health credentials. These credentials aim to both reduce circulation of the virus and restart mobility at scale by automatically verifying digital proof of vaccination, testing or recovery status. Over the course of 2021, the myriad digital health credential systems began to be consolidated, although important technical and policy issues remain.

Early 2021 saw the proliferation of digital health credentials, with little initial coordination.

Governments and authorities implemented digital health credentials both to allow vaccinated people to access domestic venues and services, and to reopen for travel. In the context of cross-border mobility, these credentials are more common and face more complex coordination challenges. Initially, international

travel relied on mutual recognition (when two countries agree to accept each other's credentials), which effectively created a series of semi-overlapping travel bubbles, with well-vaccinated countries at the centre. Mutual recognition agreements require time-intensive political negotiations, particularly when countries (such as the United States) lack a single national health credential system. As time went on, interoperability – the ability of two systems to process and verify each other's credentials – became the goal over mutual recognition, which may rely on visual inspection rather than digital verification. But interoperability between credential systems requires considerable coordination, particularly after the WHO decided to not develop its own digital health credential.¹⁹⁶

These credentials aim to both reduce circulation of the virus and restart mobility at scale by automatically verifying digital proof of vaccination, testing or recovery status.

The rest of 2021, however, saw some signs that these measures were maturing. Two trends can be seen in particular. The first was a shift towards seeing these measures as the basis for permanent changes, rather than temporary tools to bridge a period of emergency. Some experts called for “sunset clauses”, or legislated deadlines at which data are wiped and technical infrastructure is dismantled, based on privacy risks.¹⁹⁷ But policymakers who established credential systems with a sunset clause, such as the EU Digital Covid Certificate (EUDCC), began to discuss extending this date,¹⁹⁸ while other credential systems, such as India's Digital Infrastructure for Vaccination Open Credentialing (DIVOC), have already been adapted to keep records of other vaccinations, such as polio. Some digital health credentials have also come to include data on vaccine boosters, test results and proof of recovery, standardizing how long vaccines are accepted before boosters are required as the evidence base has evolved and variants emerged. Digital health credential systems are likely to be part of international travel in the long term, with many C/T/As developing more robust digital and contactless travel information systems for future disease outbreaks, as well as working to align credential systems with relevant data protection and privacy regulations to avoid excluding certain vulnerable communities such as migrants and refugees who might be hesitant to share health and identity documentation.

196 The WHO scrapped plans to pilot a digital health credential in Estonia and decided against developing a global health trust framework or global public key directory framework, which would facilitate the verification of certificates across borders, reportedly because it does not have the mandate or ability to absorb liability issues. Instead, the WHO produced technical guidance and standards on credentials that identify the standard dataset needed, which have largely been adopted by most major digital health credential systems. WHO plans to develop a universal verifier app and credential generation services in 2022. See WHO, “Revised Scope and Direction for the Smart Vaccination Certificate and WHO's Role in the Global Health Trust Framework” (news release, 4 June 2021); *The Economist*, “Why Vaccine Passports Are Causing Chaos”, *The Economist*, 30 October 2021.

197 See Ana Beduschi, *COVID-19 Health Status Certificates: Policy Recommendations on Data Privacy and Human Rights* (Exeter, UK: University of Exeter, 2021).

198 European Commission, “Report from the Commission to the European Parliament and the Council Pursuant to Article 16(1) of Regulation (EU) 2021/953 of the European Parliament and of the Council on a Framework for the Issuance, Verification and Acceptance of Interoperable COVID-19 Vaccination, Test and Recovery Certificates (EU Digital COVID Certificate) to Facilitate Free Movement during the COVID-19 Pandemic” (COM [2021] 649 final, 18 October 2021), 18.

The second trend in 2021 was towards consolidation, with at least four systems becoming more dominant. The EUDCC verifies vaccination, testing or recovery status for travel among EU Member States as well as between the European Union and 33 non-EU countries and territories.¹⁹⁹ The DIVOC system verifies vaccination or testing status in India, Sri Lanka and the Philippines.²⁰⁰ The private sector SMART Health Card verifies vaccination status for both domestic and international use, and the card is the national standard in Canada and increasingly dominant in the United States.²⁰¹ The ICAO Visible Digital Seal (VDS) verifies vaccination status for international travellers from Australia and Japan.²⁰² While credential systems may consolidate around these four, challenges remain in making them interoperable.²⁰³

Since a global digital health certificate standard has not emerged, many governments and authorities have taken a pragmatic approach, accepting any reasonable proof of vaccination, testing or recovery.

Since a global digital health certificate standard has not emerged, many governments and authorities have taken a pragmatic approach, accepting any reasonable proof of vaccination, testing or recovery. Australia, Canada and the United States require credentials to be in specific languages (or with a certified translation) and include specific information (e.g. name, type and date of vaccination), but they accept verifiable or non-verifiable, digital or paper credentials.²⁰⁴ Flexibility in verification may be appropriate in many contexts, considering varied and shifting transmission levels at origin and destination, finite border infrastructure capacity and the socioeconomic consequences of international travel restrictions. Moreover, some people will always need paper-based alternatives to digital systems, either because they lack a smartphone and/or internet access or because of difficulties navigating complex digital systems and online portals. But technical interoperability will likely be necessary if mobility is to return to pre-pandemic volumes, given its potential to speed up travel by reducing burdens on airlines to manually review credentials,²⁰⁵ minimize public health risks from fraudulent credentials through technical verification and reduce the risk of discrimination in the manual review process. Interoperability may also mitigate the risks that international travellers and migrants will be locked out of some aspects of life while abroad, such as restaurants, concerts, museums and other venues, because of an inability to access domestic credential systems.

Coordination on Vaccinations, Boosters and Exemptions

Governments and authorities have not yet agreed on which vaccines should be accepted for international travel, creating further inequalities for residents of poorer countries with access to different vaccines than

199 European Commission, “EU Digital COVID Certificates”, accessed 13 December 2022.

200 eGov Foundation, “DIVOC by eGov Foundation”, accessed 3 January 2021.

201 SMART Health IT, “SMART Health Cards”, accessed 16 December 2021.

202 ICAO, “New ICAO VDS Delivers Important Benefits for Secure and Efficient COVID-19 Testing and Vaccination Validation” (news release, 9 June 2021).

203 The EU Digital Covid Certificate (EUDCC), for example, faces challenges to be interoperable with the ICAO Visible Digital Seal (VDS), and the EUDCC regulation allows for mutual recognition only with government-run credentials, potentially excluding the SMART Health Card. See European Commission, “Report from the Commission to the European Parliament and the Council”.

204 To support verification and interoperability, ICAO is developing a master list of digital health credential systems.

205 Airports have reported operating at 100 per cent capacity while only handling a volume of travel equivalent to 10 to 15 per cent of pre-pandemic travel because of time-consuming check-in and verification procedures. Participant comments during a working group meeting of the MPI Task Force on Mobility and Borders during and after COVID-19, 11 January 2022.

residents of richer countries. For instance, as of late 2021, only 29 per cent of confirmed purchased vaccine doses by least developed countries²⁰⁶ and 22 per cent of those shipped through COVAX²⁰⁷ were for EU-approved vaccines. Reports have even emerged of “vaccine tourism”, with people travelling from the Russian Federation to Europe to access EU-approved vaccinations rather than accepting the largely unrecognized Sputnik vaccination.²⁰⁸ While many governments and authorities are converging on the WHO’s emergency use listing of accepted vaccines, as long as different countries accept different vaccines, travel will be restricted for some people. For example, the United Kingdom initially refused to recognize the Indian-made AstraZeneca vaccine (Covishield), even though it was among those the WHO listed for emergency use, leading to criticism and claims of discrimination.²⁰⁹ Restrictive lists of accepted vaccines also risk disincentivizing people from taking vaccines that are available to them, as they may instead decide to wait for vaccines recognized in major destination countries to arrive.

Divergent lists of approved vaccines may be further complicated by the need for boosters, with epidemiological questions as yet unanswered about how the mixing and sequencing of boosters may increase their response to the Omicron variant. By early 2022, at least eight countries had announced plans to require booster shots for international travellers.²¹⁰ Better data sharing and public communication are needed to avoid a situation in which people face stricter conditions on travel because they were unable to get a booster on short notice. Regional coordination may help to set and communicate clear booster requirements, as with the European Union’s January 2022 decision to adopt a uniform nine-month validity period on vaccination certificates.²¹¹ And as more governments and authorities begin requiring boosters, digital health credentials must be able to verify booster status, including boosters that were taken in a country other than where the original doses were received. In the short term, until booster shots are more widely available and taken up, countries may still allow unvaccinated travellers or those without boosters to enter, perhaps with stricter testing or self-isolation conditions and an offer of vaccination upon entry.

While many governments and authorities with vaccination requirements have provided exceptions for unvaccinated travellers, some have also worked to incentivize rather than mandate vaccination. While certain exemptions from vaccination requirements are relatively common, such as exemptions for children or returning nations, some countries (such as the United States) provide only limited exemptions, while other (such as the United Kingdom) will allow unvaccinated travellers to enter, provided they take a COVID-19 test before departure and after arrival. It is not yet clear whether governments will eventually set strict vaccination requirements for entry, or whether vaccinations will instead allow travellers to be

206 The European Union has given conditional marketing approval to BioNTech/Pfizer, Moderna, AstraZeneca, Janssen and Novavax vaccines, although some Member States have chosen to recognize other vaccines despite the lack of EU approval. Of the eight least developed countries with confirmed vaccine purchases (Angola, Bangladesh, Benin, Cambodia, Nepal, Senegal, Somalia and Uganda), only 11.7 million doses were for approved vaccines, while 28.57 million doses were purchased of Sinovac, Sinopharm and Sputnik (as of 12 November 2021). These doses, however, were complemented by bilateral donations and COVAX and African Union procurement. Data are from Duke University, “[Launch and Scale Speedometer](#)”, accessed 23 December 2021.

207 As of 14 December 2021, COVAX had shipped 692 million doses, 149 million of which were Sinopharm, Sinovac or Covishield. Data are from COVAX, “[Situation Report #13](#)” (delivery situation report, 14 December 2021).

208 For example, see Jon Shelton, “[Why Are Russian ‘Vaccine Tourists’ Flocking to Europe?](#)”, Deutsche Welle, 29 November 2021.

209 The United Kingdom did eventually approve the Covishield vaccine. See Soutik Biswas, “[Covishield: UK Recognises Covid Jab After Indian Outcry](#)”, BBC News, 22 September 2021.

210 Panchali Dey, “[8 Countries that Have Made Covid Booster Shots Mandatory for Travel](#)”, *Times of India*, 5 January 2022.

211 European Council, “[Statement by Commissioners Kyriakides and Reynders on the Council Agreement to Strengthen Coordination of Safe Travel in the EU](#)” (statement, 25 January 2022).

exempt from stricter health measures such as quarantine or multiple tests. Some countries also provide travellers with access to vaccinations and testing, rather than requiring them for entry.²¹² Policymakers may be able to incentivize vaccination by partnering with airlines to offer air miles or other perks,²¹³ by providing information on vaccines at visa interviews and through schools and travel agencies, or by offering travellers required to quarantine access to vaccinations after their quarantine period.²¹⁴ Coercive measures, such as blanket mandates requiring all adults without certain medical conditions to be vaccinated or face a fine, may be complemented by incentivizing and expanding access to vaccination.

6 Recommendations

While 2021 brought a new arsenal of tools to mitigate the effects of COVID-19 and better manage mobility in the context of a public health emergency, neither vaccines nor other scientific breakthroughs proved to be the panacea that some had hoped. Deep disparities in global access to (and desire for) vaccines, coupled with the ever-shifting threats posed by new variants of concern, kept the international community one step behind the virus. Looking ahead, it is clear that the virus is likely to be circulating for the foreseeable future, and new variants could revive questions of how and whether to use travel restrictions as part of the public health response. Policymakers in most C/T/As have accepted that SARS-CoV-2 will be endemic and that the costs of pursuing eradication strategies are too great; however, making that adjustment will not be automatic. It will take months, if not years, before travel to and from all C/T/As returns to relative normalcy. Meanwhile, travellers will have to contend with continued uncertainty as immunity wanes, new variants emerge, and governments and authorities continue to change policies rapidly.

In 2022, governments and authorities should work towards agreement on a global architecture for mobility and health.

In 2022, governments and authorities should work towards agreement on a global architecture for mobility and health, including agreement on when and how to impose travel restrictions, standards for health screening and testing, a road map towards interoperability in digital health credentials, and the beginning of processes for planning for the next pandemic. Such efforts will also need to be complemented by efforts to build the capacity of immigration and borders infrastructure to adapt to public health emergencies, including through digitization of visa application and admission processes and through remote interviewing, so that migration and mobility processing can better withstand future outbreaks. Possible vehicles for such agreements could include the International Migration Review Forum on the Global Compact for Migration and IOM's International Dialogue on Migration, as well as dialogues under the auspices of ICAO and the WHO's work on a new historic global accord on pandemic prevention, preparedness and response.

212 See, for example, Karen Gilchrist, "Maldives to Offer Holidaymakers Vaccines on Arrival in Push to Revive Tourism", CNBC, 14 April 2021.

213 For example, Qantas airlines gave vaccinated frequent flyer members either Qantas points, USD 20 off a flight or a chance to win a year's worth of free flights. See Qantas, "Been Vaccinated? Be Rewarded", accessed 20 December 2021.

214 See New South Wales Government, "Hotel Quarantine", updated 21 February 2022.

In the interim, governments and authorities should work to consolidate and rationalize the rules they use to govern mobility around four core principles. Rules should be:

- ▶ **Clear:** They should enable travellers of all kinds to plan their lives and be transparent and predictable enough that individuals, businesses and implementing partners can easily understand, comply with and enforce requirements.
- ▶ **Equitable:** They should not impose significant costs on particular groups and should not prevent anyone who needs to travel across borders from doing so.
- ▶ **Streamlined:** They should be used sparingly, lifted where possible and work towards interoperability across systems to enable a return to high volumes of cross-border mobility.
- ▶ **Future focused:** They should be integrated into systems, processes and plans that lay the groundwork for addressing future SARS-CoV-2 variants and, ultimately, the next pandemic.

In line with these principles, governments and authorities could consider the following actions:

Clear

- ▶ **Streamline existing travel rules to make them easier for people to understand.** Governments and authorities should work to reduce the volume and complexity of the rules in play by consolidating categories, reducing unnecessary complications and limiting exceptions. They could also seek to standardize exceptions, initially on a regional basis, so that travellers do not face different rules in neighbouring countries. Ideally, travel rules would be changed less frequently, although governments and authorities face a trade-off between predictability and flexibility in responding to epidemiological conditions.
- ▶ **Shift from country- to traveller-based requirements.** More governments and authorities should consider mitigating risk through traveller-based health requirements, such as testing and vaccination, rather than blanket restrictions based on the country an individual is travelling from. This shift, already happening in many C/T/As, would make it easier to harmonize rules across jurisdictions and develop a clear set of requirements, such as asking either vaccination or testing for entry, that apply to everyone.
- ▶ **Develop and publicize metrics to guide mobility policy.** Governments and authorities could lessen the harm posed by frequent policy changes with greater transparency about the rationale behind restrictions – including spelling out the conditions under which they can be lifted. Publishing these metrics would offer clarity to travellers, airlines and travel-dependent businesses so they can plan with more certainty. It would also help keep governments and authorities accountable for their decisions.
- ▶ **Communicate with migrants and travellers clearly and consistently.** Governments and authorities should work with airlines, universities, recruitment agencies, travel agencies and other actors to make it easier and less expensive for travellers to comply with the rules, for example by building guidance on how to prove vaccination status into visa applications or flight bookings and by making information available through a variety of channels and in several languages.

Equitable

- ▶ **Reduce costs to travellers and reduce inequalities between those who can and cannot move.** Health and quarantine requirements impose significant costs, not least the cost of testing within a particular time frame and missed work associated with quarantine (and sometimes also hotel quarantine costs). It is important to minimize these costs where possible to avoid creating a system where only the affluent can cross borders. For instance, governments and authorities could place a cap on testing fees or endorse a wide set of official providers rather than requiring verification from a select few who as a result maintain a monopoly. Minimizing costs is especially important for certain groups of lower-income and/or more vulnerable migrants, who already often bear disproportionate costs of movement (e.g. seasonal labour migrants required to meet recruitment costs) to avoid closing migration pathways off for many would-be movers.
- ▶ **Offer opportunities and incentives for vaccination across the travel and mobility continuum.** Vaccination should not determine whether people can move or not. Instead, vaccination should be a tool that can expedite the process, for instance by allowing people to access fast lanes in border checkpoints. Governments and authorities could also consider how to incentivize vaccination throughout the travel and mobility continuum, for instance offering access to a vaccination clinic in a consulate as part of a visa application process, allowing vaccination on arrival, or providing travellers and migrants already in the country with access to vaccination (and vaccination credentials). The aim should be to create an “enabling infrastructure” for vaccination, instead of focusing on verification alone.
- ▶ **Be flexible in making and verifying health requirements.** C/T/As should take a pragmatic approach to verifying documents for international travel, accepting paper and non-verifiable proof of vaccination and testing in addition to digital health certificates, provided they contain basic information (e.g. name, date, type of vaccination and lot number). This can also address concerns about groups without access to smartphones or proficiency in using digital systems being unable to verify their health status in digital-only systems. Reasonable alternatives to vaccination also should be offered, such as the opportunity to test or quarantine, so that no one is locked out of international travel because of their vaccination status, and these alternatives should be proportionate and not unnecessarily burdensome for travellers.

Streamlined

- ▶ **Use entry restrictions sparingly and as part of variant preparation plans.** For C/T/As pursuing mitigation strategies, travel restrictions can at best delay (rather than prevent) the arrival of a new variant. Thus, they should be time-limited and expire by default, in the absence of robust evidence that they continue to serve an important public health purpose. Concurrently, governments and authorities should have contingency plans for how to make best use of this delay to study the characteristics and risk of the new variant, and to prepare the national response by increasing testing supplies; genomic sequencing; increasing health-care staffing; and preparing schools, hospitals and public services, among other measures.

- ▶ **Work towards interoperability and common standards in health requirements.** Transport carriers and border authorities will not be able to support a return to pre-pandemic volumes of mobility until they have automated elements of travel procedures, which means giving people the ability to submit documents in advance for a pre-check or having digital verification. While interoperability in digital health credentials may be the long-term goal, in the short term, governments should seek to join one of the main four digital health credential frameworks and ensure they have the border infrastructure to automatically verify travellers' credentials as part of these systems.
- ▶ **Mainstream public health into border infrastructure.** The COVID-19 pandemic has highlighted the importance of investing in robust public health infrastructure writ large, specifically testing and genomic sequencing. Building this into infrastructure at points of entry will allow C/T/As to better implement these measures during this and future public health crises, and to change them as the situation dictates. High-income countries could support low- and lower-middle income countries with capacity-building and infrastructure investments, especially in land and maritime checkpoints, so that they are able to manage new border health requirements, including social distancing, health screening and document processing. As much as possible, health considerations should be integrated into digital systems and databases, such as visa or visa waiver programmes, although this relies on effective cooperation and information-sharing between agencies and ministries and robust data transfer and privacy protections.

Future Focused

- ▶ **Prioritize monitoring and evaluation during this pandemic.** A comprehensive evidence base, one that answers more than purely epidemiological questions, will be needed for long-term planning. Data collection on vaccine hesitancy, international travel routes and digital health credential uptake could help policymakers identify good practices and lessons learned for the inevitable next pandemic. Beyond quantitative data collection, evaluation should also seek to capture the factors that led to successful regional and international coordination and the impacts of various travel measures – both on their own and in combination with other measures.
- ▶ **Create flexible systems and border infrastructures.** As governments and authorities invest in new systems to respond to this pandemic – from digital health credentials to contactless airport processing – they should design these systems to be able to adapt to future disease outbreaks. In some cases, this means digitizing border processing (while protecting data and privacy) as well as adapting the built environment at points of entry to reduce congestion and allow for social distancing when outbreaks occur. But stakeholders should also consider bespoke quarantine facilities, preparing bilateral or regional travel bubbles to restart travel sooner, and developing online portals for passengers to automatically verify their visa and health status documentation before departure.
- ▶ **Strengthen regional and international cooperation to prepare for the next pandemic.** The COVID-19 pandemic has demonstrated the need for robust and ongoing cooperation at all levels *before* a crisis emerges. In the last two years, global attention to and investment in pandemic preparedness and response have grown, including through discussions on the pandemic

preparedness treaty, and international coordination on borders and mobility should be a central concern in these preparations. Enhancing regional cooperation now, both on public health but also on intraregional mobility, trade and transport, may support regional cooperation for the next pandemic.

Migration and mobility will inevitably return to pre-pandemic levels – the economic need to restart travel is clear – but when, how and who can travel will depend on whether governments and authorities commit to clear, equitable and efficient travel measures and policy responses. From vaccine equity and digital credential interoperability, to expanded testing and strengthened border capacities, the last two years have demonstrated how C/T/As can safely open their borders, if they have the right political will, policy environment and technical competencies. If 2020 was the year of crisis and fragmentation, 2021 saw partial but not-yet-comprehensive efforts to restart mobility. Many health measures implemented over the past two years, from testing to face masks, may be needed for cross-border mobility for years to come. Other innovations, such as digital health credentials, may become permanent features of international travel. By learning from and building on the lessons of the pandemic thus far, governments and authorities and their partners can work to restart mobility at scale and build a more resilient global mobility architecture in 2022 and beyond.

Migration and mobility will inevitably return to pre-pandemic levels ... but when, how and who can travel will depend on whether governments and authorities commit to clear, equitable and efficient travel measures and policy responses.

Appendices

Appendix A. Data Sources and Methodological Considerations

Since March 2020, the International Organization for Migration (IOM) has been tracking travel measures and border closures introduced by countries, territories and areas (C/T/As) around the world in response to the COVID-19 pandemic. IOM tracks changes in cross-border mobility policies in several datasets. Data from three of these datasets were analysed in this report to discuss global and regional trends:

- 1 The **dataset on travel measures** tracks each individual measure that each C/T/A has imposed on travellers arriving from another C/T/A. When a measure is targeted at all travellers regardless of C/T/A of origin, it is counted as a travel restriction on each of the 246 C/T/As on the United Nations list. Travel measures include travel restrictions (e.g. route restrictions, nationality restrictions, visa changes and other limitations) and health measures (e.g. proof of a negative COVID-19 test and quarantine requirements).

An example of a travel restriction one C/T/A imposed on travellers from another is the United States of America not allowing travellers to enter directly from India in response to the Delta variant of concern. Travellers would be eligible to enter if they flew to a third country deemed safe by the US State Department and stayed there for at least 14 days before entering the United States.

- 2 The **dataset on exceptions to travel restrictions** tracks the specific population groups to whom a given travel restriction or health measure is not applicable (e.g. C/T/As' own nationals and residents and their family members, diplomats and staff of international organizations, and international students). Note that groups exempted from one measure may still be subject to other measures.

To build on the above example, travellers who were US citizens or legal permanent residents could still return to the United States from India on a direct flight. Similarly, international students from India were exempt from travel restrictions, although many had difficulties getting a US student visa because of limited capacity at US consulates abroad. The exempt travellers still had to fulfil health requirements such as presenting proof of a negative COVID-19 test prior to entering the United States. However, if a child younger than 2 years old was accompanying an adult traveller from the exempt list, the test requirement for the child could be waived.

- 3 The **dataset on points of entry** tracks the situation at international points of entry, which include airports, land border crossing points (rail or road) and sea, river or lake crossing points. (The database also has information on internal transit points and areas of interest, though data on those locations are not analysed in this report). For each point of entry, IOM collects information on the type of restriction measures applied at a given moment, along with the categories of travellers affected by the measures. The IOM dataset tracks whether points of entry are fully operational, partially operational, fully closed or have an unknown status.

The rules that shape mobility are complex and can be changed quickly. These three databases are updated weekly. From a data point perspective, tracking these changes is not always straightforward. To reflect the changing types and composition of travel measures and exceptions, IOM has updated these databases by adding new categories or dropping or consolidating those that are decreasing in importance. For instance, as vaccines were rolled out on a greater scale and as more people contracted and recovered from the virus, C/T/As began issuing exceptions based on these two grounds. To reflect this shift, the databases now track vaccine and recovery certificates separate from a large “other exceptions” category.

How data are collected may introduce challenges during data analysis. For example, health measures are included in both the travel restriction and travel exception datasets. However, conceptually, the datasets capture different policies. In the dataset on travel measures, health measures are counted only when there is **no** travel restriction in place against a particular C/T/A by the destination C/T/A, and as such, health measures act as conditions for authorized entry for all travellers from the given C/T/A of origin. In the dataset on exceptions to travel restrictions, health measures are applicable only to the exempt travellers and are captured as conditions for entry only for these groups. In practice, in the case of destination C/T/As that have travel restrictions against multiple C/T/As of origin, the count of health measures in the *travel measures* database is low because most health measures would appear instead in the *exceptions to travel restrictions* database.

To describe overall trends in travel measures (e.g. Figures 1 and 3–6), Migration Policy Institute (MPI) researchers focused on travel restrictions and health measures that act as conditions for authorized entry. To describe the shift toward using health measures and highlight the rise of vaccine and recovery certificates, MPI researchers combined health requirements in both the travel restrictions and travel exceptions datasets and analysed health measures taken together (as it was done in most of the “Health Requirements” subsection in Section 2.A.).

Appendix B. Regional Trends in Travel Measures and Exceptions, Points of Entry Status and COVID-19 Cases

TABLE A-1

Number of Travel Measures (Travel Restrictions and Health Measures) and Exceptions Issued (left column), Percentage of Fully Operational Points of Entry (right column), and New Reported COVID-19 Cases per Million people (7-day rolling average), by Region, March 2020 – December 2021

■ New Covid Cases
 — Travel Restrictions
 — Health Measures
 — Travel Exceptions
 — Fully Operational PoEs

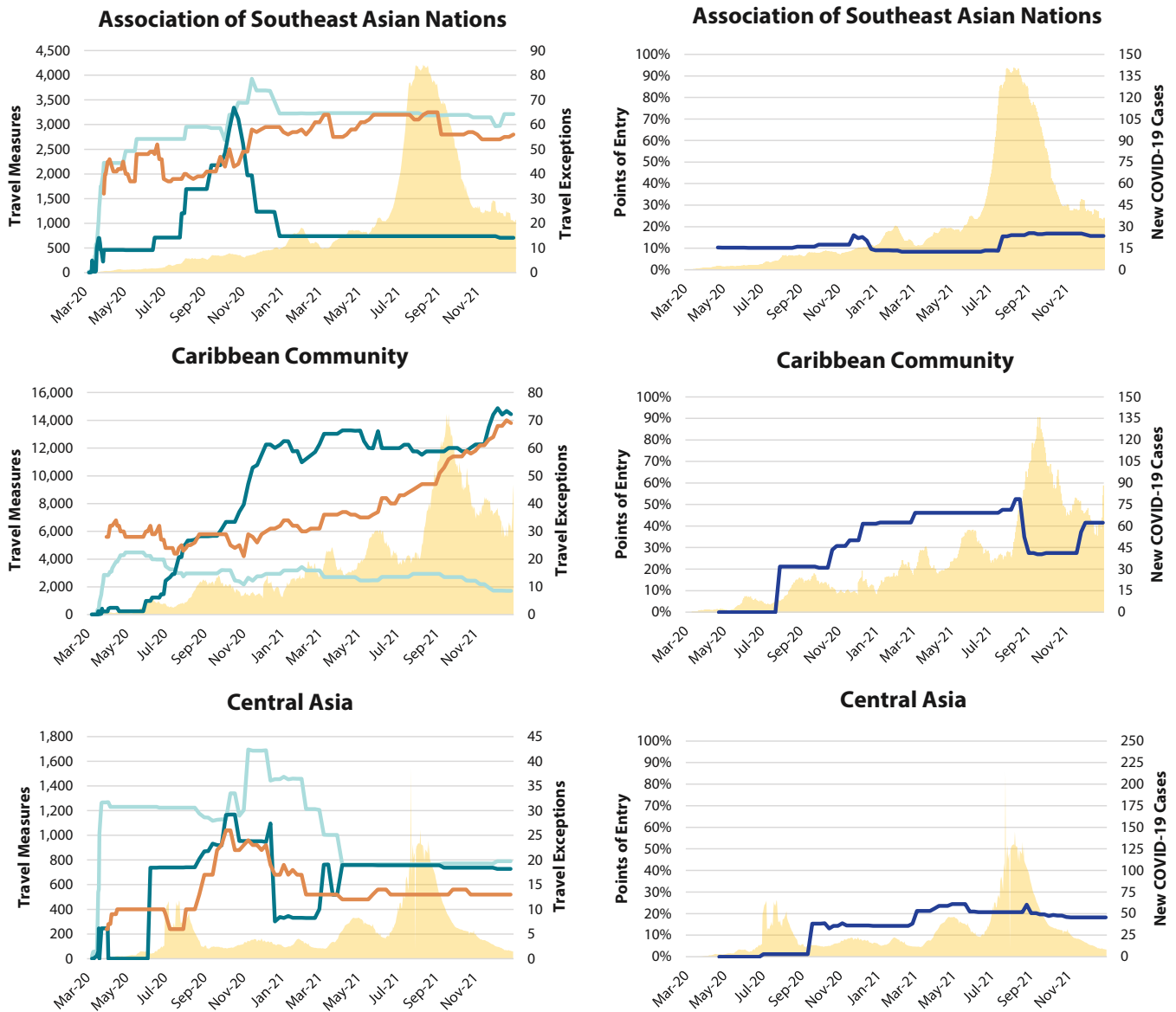


TABLE A-1 (cont.)

Number of Travel Measures (Travel Restrictions and Health Measures) and Exceptions Issued (left column), Percentage of Fully Operational Points of Entry (right column), and New Reported COVID-19 Cases per Million people (7-day rolling average), by Region, March 2020 – December 2021

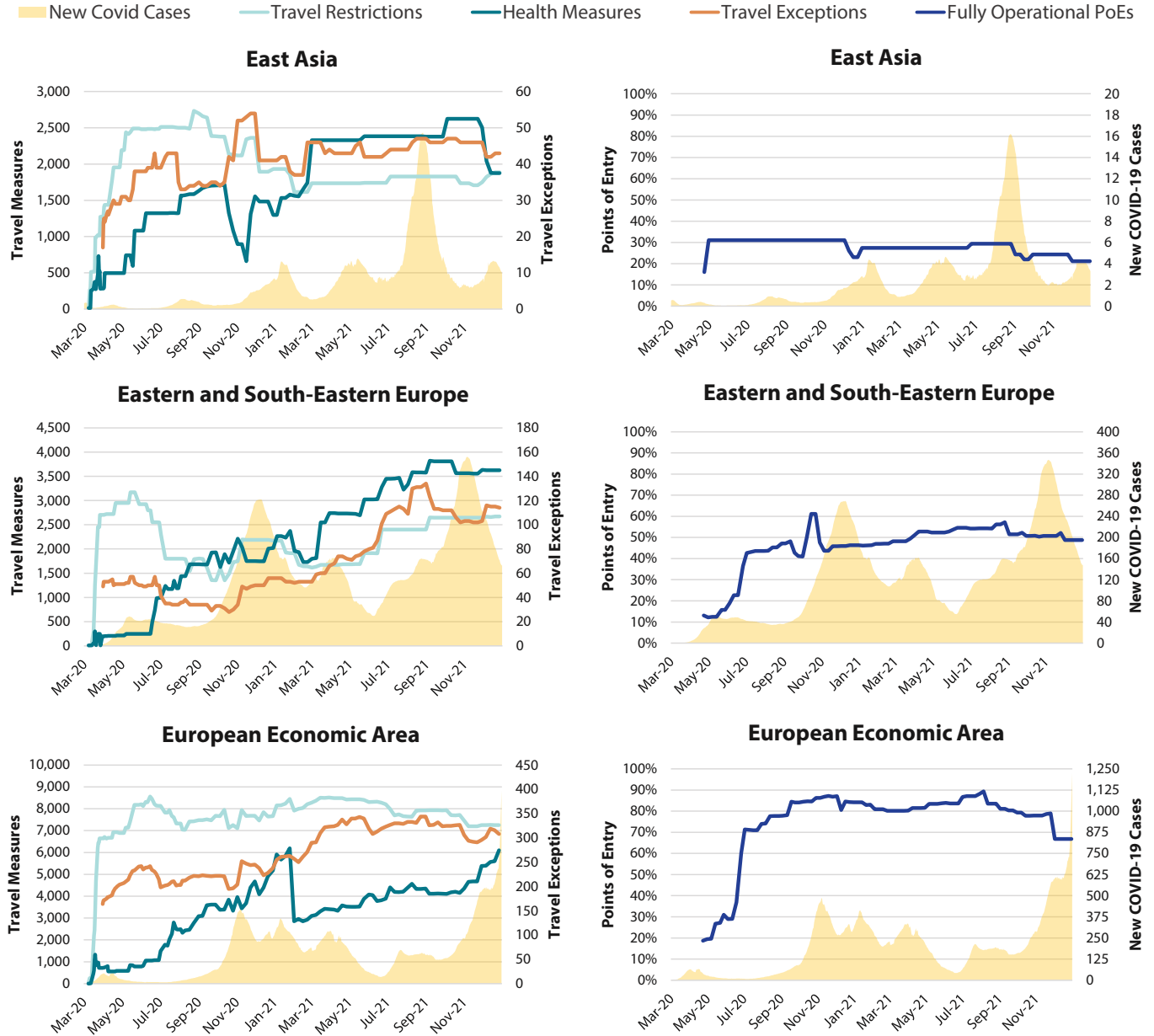


TABLE A-1 (cont.)

Number of Travel Measures (Travel Restrictions and Health Measures) and Exceptions Issued (left column), Percentage of Fully Operational Points of Entry (right column), and New Reported COVID-19 Cases per Million people (7-day rolling average), by Region, March 2020 – December 2021

■ New Covid Cases
 — Travel Restrictions
 — Health Measures
 — Travel Exceptions
 — Fully Operational PoEs

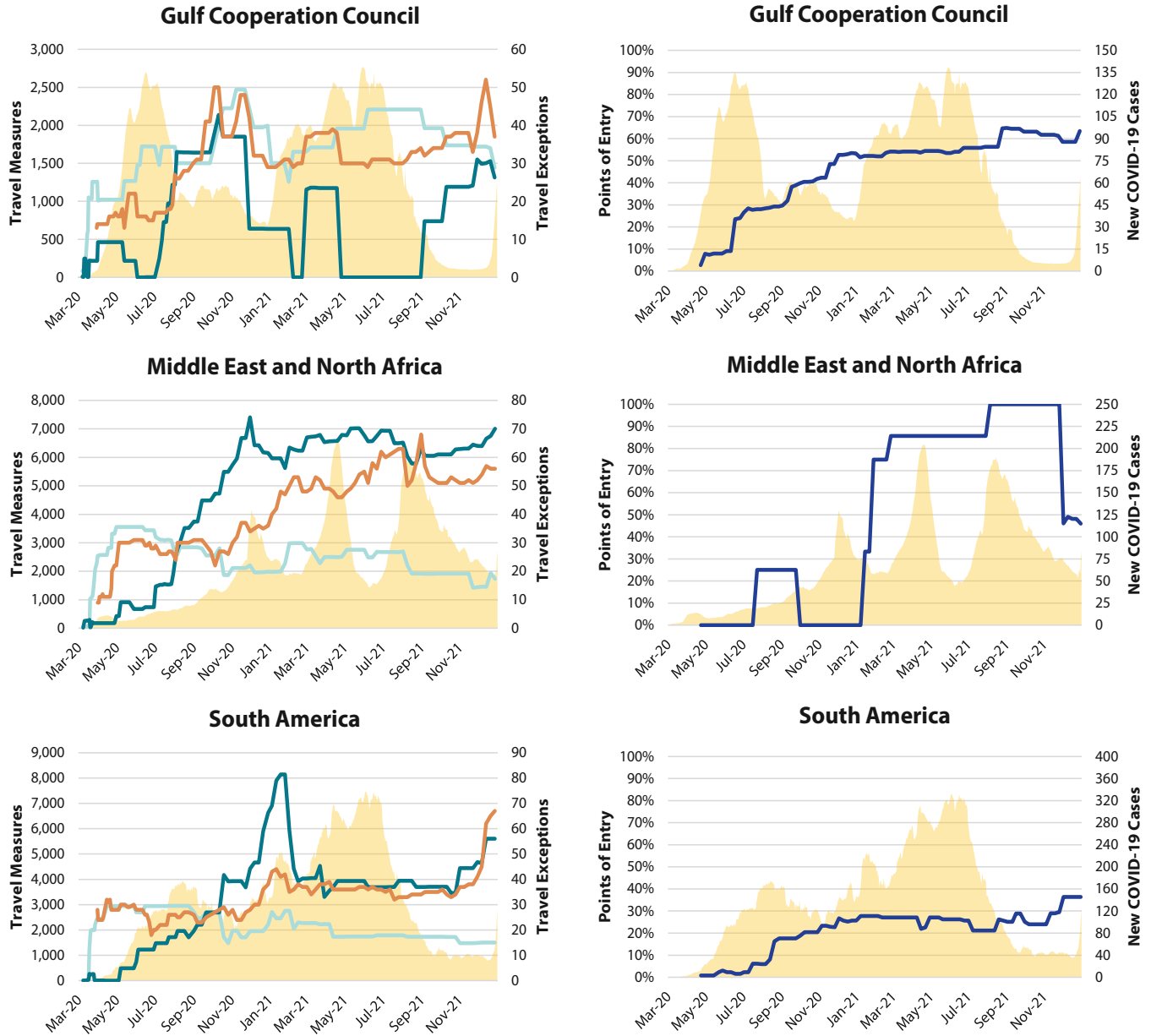


TABLE A-1 (cont.)

Number of Travel Measures (Travel Restrictions and Health Measures) and Exceptions Issued (left column), Percentage of Fully Operational Points of Entry (right column), and New Reported COVID-19 Cases per Million people (7-day rolling average), by Region, March 2020 – December 2021

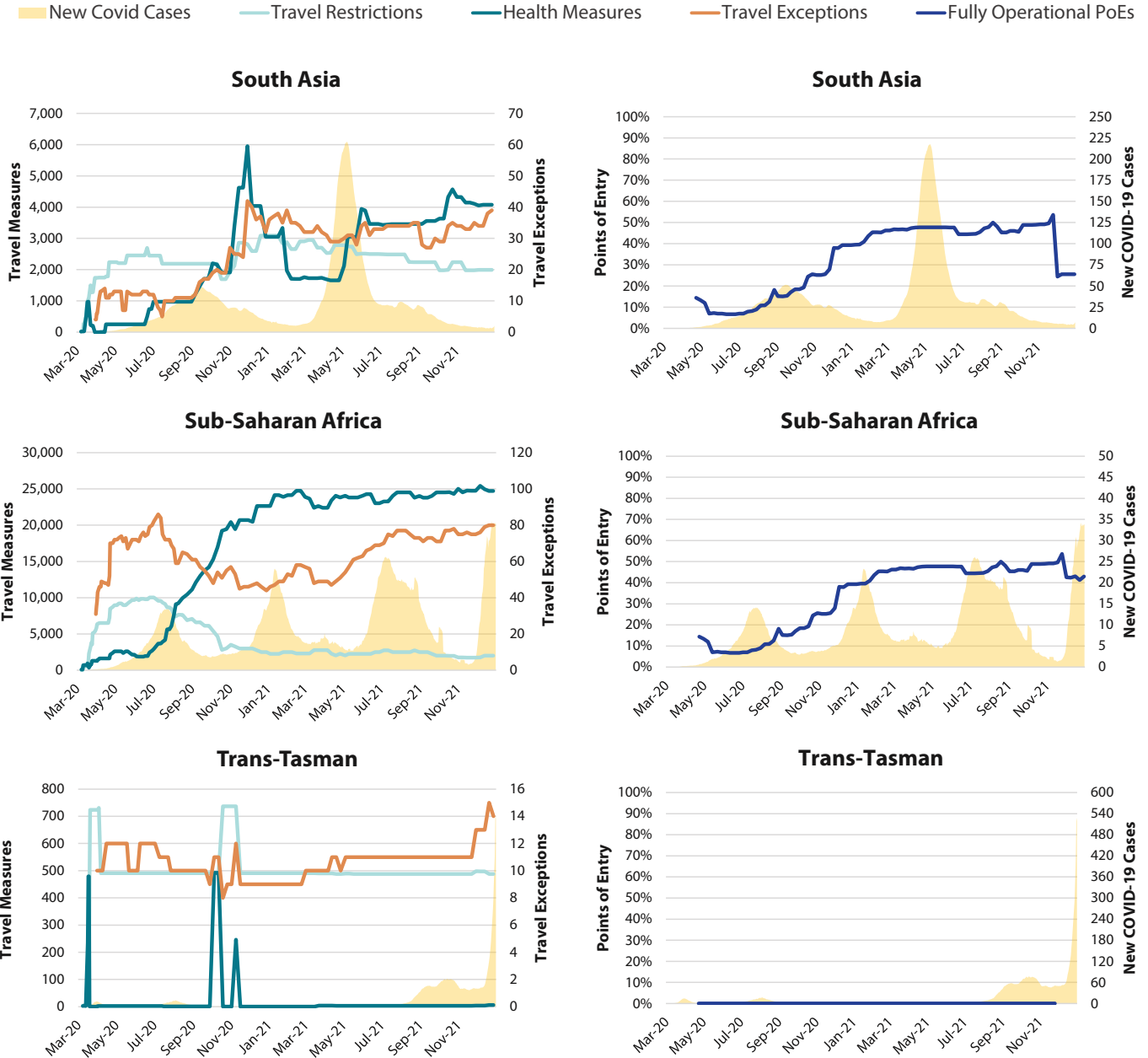
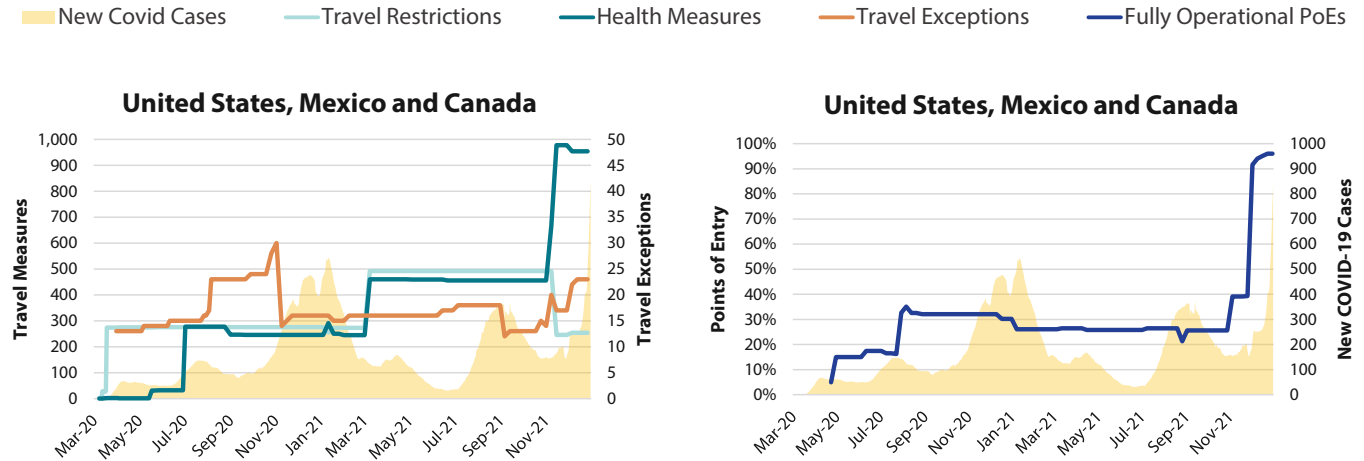


TABLE A-1 (cont.)

Number of Travel Measures (Travel Restrictions and Health Measures) and Exceptions Issued (left column), Percentage of Fully Operational Points of Entry (right column), and New Reported COVID-19 Cases per Million people (7-day rolling average), by Region, March 2020 – December 2021



Notes: (1) Travel restrictions and health measures displayed here represent the sum of the individual measures for each reporting date. For a brief discussion of the indicators displayed in this figure, see this report’s Appendix A. (2) The shaded area chart in all panels shows the number of new COVID-19 cases per million regionally (7-day rolling average), and its scale can be seen on the right vertical axis of the panel in the right column. Counts of newly confirmed COVID-19 cases are shaped to some extent by the accuracy and availability of testing, which vary depending on the C/T/A and the phase of the pandemic. Reporting of COVID-19 cases has fluctuated as the pandemic has continued, since some C/T/As have become less rigorous in their testing (i.e. testing rates have slowed, asymptomatic cases are being tested less frequently).

Sources: Authors’ analysis of the IOM dataset “IOM COVID-19 Mobility Tracking Database (Travel Restrictions and Exceptions to Travel Restrictions)”; Our World in Data, “Coronavirus Pandemic (COVID-19)”; authors’ analysis of the IOM dataset “IOM COVID-19 Country Points of Entry (PoE) Status Baseline Assessment”.

About the Authors



MEGHAN BENTON

[@meghan_benton](#)

Meghan Benton is Director of Research for the International Programme at the Migration Policy Institute (MPI) as well as for MPI Europe. Her areas of expertise are immigrant integration; the role of technological and social innovation in immigration and integration policy; labour migration and mobility; Brexit and free movement; and how labour market disruption affects immigration and integration. She convenes MPI Europe's Integration Futures Working Group, which seeks to develop a forward-looking agenda for integration policy in Europe.

Ms Benton previously held positions at Nesta, the Constitution Unit at University College London (UCL) and the Institute for Public Policy Research. She received her PhD in political science from UCL, a master's degree in legal and political theory (with distinction) from UCL, and a bachelor's degree in philosophy and literature from Warwick University.



SAMUEL DAVIDOFF-GORE

[@sdavidoffgore](#)

Samuel Davidoff-Gore is a Research Assistant with MPI's International Programme, where he works on issues including refugee and asylum policy and international mobility. Mr Davidoff-Gore previously interned with MPI as well as the German Marshall Fund of the United States' office in Berlin, working on the migration team. Prior to that, he worked at the International Foundation for Electoral Systems, supporting projects aimed at building the capacity of local electoral management bodies and promoting inclusive elections in Jordan and Libya.

Mr Davidoff-Gore holds a master's degree with honours from the Johns Hopkins University School of Advanced International Studies, where he concentrated in international economics and international law and organizations. He earned his bachelor's degree with honours from Brown University, where he concentrated in international relations.



JEANNE BATALOVA

[@JeanneBatalova](#)

Jeanne Batalova is a Senior Policy Analyst at MPI and Manager of the Migration Data Hub, a one-stop, online resource for the latest facts, stats and maps covering US and global data on immigration and immigrant integration. She is also a Nonresident Fellow with MPI Europe. Her areas of expertise include the impacts of immigrants on society and labour markets; social and economic mobility; and the policies and practices regulating the immigration and integration of highly skilled workers and foreign students.

Ms Batalova earned her PhD in sociology, with a specialization in demography, from the University of California-Irvine; an MBA from Roosevelt University; and a BA in economics from the Academy of Economic Studies, Chisinau, Republic of Moldova.



LAWRENCE HUANG

 @Lawrence_Huang9

Lawrence Huang is an Associate Policy Analyst with MPI's International Programme. His work focuses on the impacts of the COVID-19 pandemic on migration and mobility, as well as the migration, environment, and climate change nexus.

Previously, Mr Huang worked as a consultant at the International Organization for Migration, where he led capacity-building and knowledge management in an 11-country global programme on migration and sustainable development. Earlier, he was an Editor at the *Oxford Monitor of Forced Migration* and co-ran the annual conference of the Oxford Migration Studies Society. He holds a master's degree in migration studies from the University of Oxford, funded by the Healy Scholarship at St Cross College, and a BA in government with honours from Georgetown University.



JIE ZONG

Jie Zong is a consultant and former Associate Policy Analyst at MPI, where she provided quantitative research support across MPI programmes from 2014 to 2019. Her research areas include unauthorized immigration, integration of first- and second-generation immigrants, child development, and workforce development.

Ms Zong holds a master's degree of public administration from New York University's Wagner Graduate School of Public Service with a specialization in policy analysis, and a bachelor of the arts degree in international finance from the Central University of Finance and Economics in China.

Acknowledgements

The authors are grateful to their Migration Policy Institute (MPI) colleagues, including Natalia Banulescu-Bogdan, Michelle Mittelstadt and Andrew Selee for their advice and peer review during the course of the project; Lauren Shaw for her careful edits; Jessica Bolter and Julia Gelatt for their assistance in data interpretation; and Medina Husakovic and Eloise Thompson for research assistance.

The authors also thank colleagues at the International Organization for Migration (IOM); for their support with data entry, analysis and the contract, the authors thank Pablo Gallego, Nando Lewis, Hong Tran, Prithvi Hirani, Edgar Woynowski, Eminenur Çinar, Annie Bartkowski, Alessandro Nicoletti, Jasmine Tham, Marina Muñoz del Valle, Daniel Ibáñez Campos, Noe Hinck, Jiumei Jao, Camila Kirtzman, Elizabeth Griesmer, Oluwatosin Orenaike, Kiara Soobrayan, Alexandra Bate, Assad Asil Companioni, Courtney Bliler, Natalia Castellanos and Victoria Roa; for their thoughtful review and feedback, the authors thank Hong Tran, Prithvi Hirani, Nikki Herwanger, Ciara Cazuc, Haley West, Jacqueline Weekers, Luis Pi-Nuñez, Julia Black, Anita J. Wadud, Pablo Rojas Coppari, Laura Bartolini, Alexander Klosovsky, Ivona Zakoska-Todorovska, Sweetmavourneen Agan and Janice Lopez; and for their database and dataset support, the authors thank Eduardo Zambrano, Issa Zong-Naba, Pablo Gallego, Jasmine Tham, Camila Kirtzman and Alexandra Bate.



www.migrationpolicy.org



www.iom.int

1275 K St NW, Suite 800, Washington, D.C.
+1 202 266 1940

17 Route des Morillons, P.O. Box 17, 1211 Geneva 19
+41 22 717 9111