International Economic Law Clinic

SAFETY AND CONTINUITY OF INTERNATIONAL CIVIL AVIATION: LESSONS FROM INTERNATIONAL REGULATORY CO-OPERATION DURING THE COVID-19 PANDEMIC WITH A FOCUS ON ASIA

(FINAL MEMORANDUM)

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Abbreviations and acronyms

ABVC	ASEAN BioDiaspora Virtual Centre
ACC	ASEAN Coordinating Council
ACCRPG	ICAO APAC COVID-19 Contingency and Recovery Planning Group
ACI	Airports Council International
ACRF	ASEAN Comprehensive Recovery Framework
AE CATA	ASEAN-EU Comprehensive Air Transport Agreement
AHS	ASEAN Health Sector
APAC	ICAO Asia and Pacific
ASEAN	Association of Southeast Asian Nations
ATM	ASEAN Transport Ministers Meeting
ATP	Air Transport Pass
ATWG	ASEAN Air Transport Working Group
AVSEC Guidelines	ICAO Guidelines for Aviation Security Contingency Measures during the COVID-19 Pandemic
CAA	Civil Aviation Authorities
CAPSCA	Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation
CART	Council Aviation Recovery Taskforce
CART Take-off guidance	Guidance for Air Travel through the COVID-19 Public Health Crisis
CCRD	COVID-19 Contingency Related Differences
COVID-19	Coronavirus disease
CRRIC	COVID-19 Response and Recovery Implementation Centre
DIVOC	Digital Infrastructure for Vaccination Open Credentialing
DDCC:VS	Digital Documentation of COVID-19 Certificates: Vaccination Status
EU	European Union

EUDCC	EU Digital COVID-19 Certificate
GRPN	ASEAN-OECD Good Regulatory Practice Network
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IHR	WHO International Health Regulations
iPack	Implementation Package
IRC	International Regulatory Co-operation
KLTSP	Kuala Lumpur Transport Strategic Plan
MRA	Mutual recognition agreements
OECD	Organisation for Economic Co-operation and Development
PCR	Polymerase Chain Reaction
PHC	Public Health Corridor
RPC	OECD Regulatory Policy Committee
SARPs	ICAO Standards and Recommended Practices
SOMHD	ASEAN Senior Officials Meeting on Health Development
STOM	ASEAN Senior Transport Officials Meeting
UNWTO	World Tourism Organisation
VDS	Visible Digital Seals
VDS-NC	Visible Digital Seals for Non-Constrained environments
VTL	Vaccinated Travel Lane
WHO	World Health Organisation
WTTC	World Travel & Tourism Council

Executive summary

The COVID-19 pandemic has posed an immense challenge to international civil aviation and has resulted in what the International Air Transport Authority has described as “the sharpest decline [in air travel demand] in aviation history”. As the world attempts to recover from the pandemic, states have recognised the importance of air transport to local tourism and their economies, and have made various attempts to resume air travel while limiting the detrimental effects of the pandemic. Given the global nature of international civil aviation, regulatory co-operation to revitalise the air transport industry has been vital.

In line with existing literature by the Organisation for Economic Co-operation and Development, this report aims to assess the level of international regulatory co-operation Asian countries have engaged in to facilitate international travel as well as ensure maximum safety of passengers and staff during the pandemic. This report also considers how states have implemented regulatory co-operation mechanisms at the domestic level.

Five specific areas of co-operation are identified in this report:

1. **Co-operation forums.** Multilateral and regional co-operation forums have been used to discuss ways in which to resume air travel. These have been created through leveraging existing transgovernmental networks, international organisations, and private-public partnerships.

2. **Safe travel standards, regulations and guidelines.** Various standards, regulations and guidelines have been adopted to ensure the health and safety of international travellers (and aviation staff alike). While absolute harmonisation has not occurred to date, regional and international organisations in the public and private sphere have been proactive in promulgating uniform rules. Where states have adopted such rules, friction resulting from regulatory divergences is reduced and international travel is made easier.

3. **Information sharing.** Existing networks and international organisations have also been utilised to facilitate cross-border information sharing. Information sharing allows states to establish a common understanding and language regarding issues related to the pandemic.

It also aids states in gaining access to the most updated data and facilitates the development of effective regulation.

4. **Travel corridors.** Travel corridors serve to facilitate international travel between specific states while maintaining otherwise applicable travel restrictions. For some states, travel corridors are the only means by which foreigners can enter their territory. Commentators have posited that multilateral and regional efforts at establishing travel corridors would be most facilitative of travel.

5. **Vaccination certification.** Vaccination certification is often a prerequisite for international travel or streamlined entry into states. Consequently, uniform standards for recognition of vaccination have been key to resuming international civil aviation.

The modalities of regulatory co-operation between states are of importance because lessons learnt from current crises may serve as an important blueprint for future responses to global crises. As the pandemic is still ongoing, a complete assessment regarding the success and failure of the various international regulatory co-operation mechanisms in international civil aviation aimed at resuming air travel in Asia would be premature. Nonetheless, this report makes five salient observations:

1. **Working off existing measures or building from the ground up.** Current international regulatory co-operation measures have been built off existing experience, institutions, and mechanisms. International organisations have had previous experience dealing with the impact of communicable diseases and other health crises on international civil aviation. New measures dealing with the unprecedented characteristics of the pandemic were also developed. Nonetheless, this report observes that these measures may also be attributable to pre-pandemic networks and relationship-building.

2. **Soft law or private regulatory nature of international regulatory co-operation.** Most of the international regulatory co-operation measures identified are of a non-legally binding nature. This means that adoption of and compliance with standards has relied on consensus, voluntary commitments, and goodwill. This has hindered the adoption and implementation of harmonised practices. On the other hand, soft law (when compared to traditional rule-making)

is more flexible, can be developed quickly and can be modified easily to adapt to the constantly changing pandemic.

3. **The role of private actors in international regulatory co-operation.** Private actors including the Airports Council International and the International Air Transport Association have an immense influence on the civil aviation authority. This influence also encompasses the international regulatory process. Such private actors are involved in international rule--making through collecting data, providing consultation, encouraging compliance with international standards, engaging in multi-stakeholder organisations such as the Collaboration Arrangement for the Prevention and Management of Public Health Events in Civil Aviation, as well as developing and promoting tools to facilitate international travel.

4. **Low levels of engagement with and implementation of multilateral and regional IRC.** While co-operation forums have served as a starting point for consensus, doubt remains over the tangibility and effectiveness of their contributions. Uptake and domestic implementation of international regulatory co-operation mechanisms by Asian countries in particular has been slow. This report considers the non-pandemic and pandemic specific reasons behind this observation. The former include the lack of coordination amongst Asian states, fragmentation at the domestic level, as well as a lack and/or poor allocation of resources. The latter include differing pandemic containment strategies, different levels of access to vaccines, different approaches to data privacy hindering information sharing, and the ever-changing nature of the pandemic itself.

5. **Assessing the effectiveness of international regulatory co-operation: More accountability.** This report suggests that states alongside international organisations must monitor and assess the implementation and effectiveness of regulatory co-operation mechanisms in the future. Simply put, a comprehensive *ex post* review of the global response to the pandemic should take place. Further, going forward, greater transparency is required to ensure the effective dissemination of information.

Introduction

International Regulatory Co-operation (**'IRC'**) has been identified as a necessary tool to "bridge the gap between the domestic nature of rule-making and the increasingly international dimension of issues that laws and regulations aim to address."[1] IRC has been particularly important during the COVID-19 pandemic (**'the pandemic'**). As the Organisation for Economic Co-operation and Development (**'OECD'**) has noted, the pandemic has "reinforce[d] the need for collective action across policy fronts to supplement domestic action and … tackle the spread of the deadly virus."[2] This report provides an overview of IRC aimed at resuming air travel in Asia during the pandemic.

Main areas of co-operation observed in the field of civil aviation

This report identifies five distinct areas of co-operation in which IRC has been observed as follows:

1. **Co-operation forums** have served as the foundation for states, international organisations, private actors and other stakeholders to discuss key regulatory issues and work towards harmonisation.
2. **Information sharing mechanisms**, built in part by co-operation forums, have allowed regulators and experts to exchange data, experience and best practices regarding international civil aviation during the pandemic.
3. **Safe travel standards, regulations and guidelines** have been promulgated to promote uniform rules for air travel, facilitating international travellers.
4. **Travel corridor** arrangements are a particular way through which states in the Asia region have bilaterally and unilaterally attempted to resume travel through extending streamlined entrance requirements to international travellers from specific countries.
5. **Vaccination certification** schemes developed by states have sought to standardise the recognition of different domestic vaccination certificates, as vaccination status is often a requirement for the use of travel corridors.

[1] OECD, *International Regulatory Co-operation, OECD Best Practice Principles for Regulatory Policy* (OECD 2021) <www.oecd-ilibrary.org/sites/5b28b589en/index.html?itemId=/content/pu_blication/5b28b589-en> accessed 16 March 2022, 19.

[2] Ibid, 18.

Key substantive observations

Given that the pandemic is ongoing, any conclusive assessment regarding the success or failure of regulatory co-operation mechanisms would be premature. Nonetheless, this report highlights several observations.

First, IRC efforts to ensure the continued operation and safety of civil aviation during the pandemic have been built off existing experience, institutions, measures, networks, and relationships.

Second, the desire for flexibility to respond to the pandemic has resulted in soft law IRC mechanisms rather than strict legal obligations. Consequently, any adoption of, and participation in, IRC by states is voluntary and dependent on consensus, mutual trust and good will. Relatedly, the Association Southeast Asian Nations ('**ASEAN**') is not a supranational organisation and cannot easily compel compliance among its member states. This can be contrasted to the European Union ('**EU**') whose institutional powers ensure the adoption of uniform standards amongst the member states. In the latter case, this has resulted in the facilitation and faster resumption of regional air travel.

Third, private actors in the civil aviation industry have played a pivotal role in IRC during the pandemic.

Fourth, implementation and adoption of multilateral and regional standards has been low. Instead, Asian states have mostly co-operated through bilateral means. This report identifies both general and pandemic specific challenges facing IRC in line with existing OECD. In particular, non-pandemic specific challenges include the following:

1. **Lack of coordination.** The lack of coordination amongst states has manifested itself in the duplicity of efforts.
2. **Domestic fragmentation.** Disparate interests at the domestic level amongst administrative bodies of Asian states have also hampered these states' commitment to IRC efforts on an international level. Such fragmentation occurs between domestic bodies at different levels of government (i.e. federal, state and municipal), as well as between different sectors of government (e.g. trade and tourism, health, civil aviation).

3. **Lack and/or poor allocation of resources.** Off-the-record interviews with industry representatives and domestic policy makers have confirmed that certain states lack the resources and technical capacity to effectively implement IRC measures. Moreover, even when states do have such resources, they may prioritise different objectives and divert funding away from implementation of IRC mechanisms in the civil aviation sector.

Pandemic specific challenges include the following:

1. **Differing pandemic containment strategies.** Consensus on IRC measures has been hindered by the variety of stances followed by states towards tackling the pandemic. Asian states have maintained an overall cautious strategy in managing the pandemic, although one still sees states that have maintained both very strict and more moderate approaches. In this regard, China's '*zero-COVID'* stance has had a profound influence for our purposes given that it is one of the largest aviation markets in the region and world.
2. **Different access to vaccines.** While different states have different levels of access to vaccines, many states have imposed vaccination as a requirement for relaxed travel requirements. This is arguably discriminatory. Politically motivated states may also refuse to acknowledge specific vaccines.
3. **Different approach to data privacy.** Many states have faced negative societal sentiments towards the collection and dissemination of pandemic-related data. States may be reluctant to collect and share information due to public outcry or other politically charged reasons.
4. **Ever-changing nature of the pandemic.** During the pandemic, infection rates spiked in different states at different points in time. New variants with different rates of lethality and transmissibility were also discovered. These dynamic developments and the need for flexibility have disincentivised states from committing to IRC efforts.

Finally, this report suggests that in order to properly access the effectiveness of IRC mechanisms, more accountability is necessary. Specifically, comprehensive *ex post* review is needed moving forward, along with greater transparency states and international organisations alike. An *ex post* review ensures that states and international organisations can learn from the various IRC mechanisms employed during the pandemic, adapting them for future purposes. Greater transparency ensure that information is clearly disseminated.

Report structure

Structurally, the analysis in this report is divided into three parts.

PART A (Background and context) provides pertinent background information undergirding this report. **Section 1** sets out the impetus and scope of this report, including background information regarding the impact of the pandemic on civil aviation, the specific research questions undertaken, and the methodology followed. **Section 2** explains the analytical framework taken, with reference to relevant OECD literature regarding IRC. **Section 3** provides an overview of the main actors involved in international civil aviation at the multilateral and regional level.

PART B (Areas of international regulatory co-operation in Asia) delves into the specific areas of regulatory co-operation identified above. These span **Sections 4–8**. For each area, regulatory co-operation mechanisms by different actors at the multilateral, regional and bilateral level are considered. Information regarding the domestic implementation of such mechanisms by countries is provided as case studies.

PART C (Analysis) offers a substantive evaluation of the IRC mechanisms covered in **PART B**. Specifically, **Section 9** observes that the IRC mechanisms identified in this report have been built either from the ground or off already existing institutions, networks and measures. **Section 10** emphasises the soft law and private regulatory nature of IRC mechanisms observed. **Section 11** highlights the important role of private actors in IRC in civil aviation. **Section 12** considers the low level of engagement and implementation of multilateral and regional IRC by Asian states, and further identifies general and non-pandemic specific reasons for this observation. Lastly, **Section 13** explains the pressing need for greater transparency and a comprehensive *ex post* review of the global response to the pandemic from the standpoint of civil aviation.

PART A – Background and context

1. Impetus and scope of study

Section 1 sets out this study's impetus and scope. It provides background information regarding the pandemic's impact on international civil aviation, background information on the usage of IRC in civil aviation, the specific research questions this report aims to address, and the methodological approach taken to address them.

1.1. Impact of the pandemic

1.1.1. Air travel

Since the outbreak of the pandemic, the civil aviation industry has faced "the sharpest decline [in passenger air traffic] in aviation history".[3] Compared to pre-pandemic levels, statistics by the International Air Transport Association ('**IATA**') show that overall global passenger air traffic[4] from 2019 to 2020 dropped by 65.9%. International air traffic plummeted 75.6% below 2019 levels, and international air traffic in the Asia–Pacific in particular dropped by 80.3% (**Figure 1**).[5] The drastic reduction in air traffic is perhaps no surprise: states scrambled to implement stringent border controls, lockdowns, and unprecedented restrictions on the cross-border movement of people. This was driven by public health needs to insulate local populations, protect healthcare systems and limit the spread and consequences of the virus.

[3] IATA, '2020 Worst Year in History for Air Travel Demand' (IATA Press Release, 3 February 2021) <www.iata.org/en/pressroom/pr/2021-02-03-02/

> accessed 8 February 2021. See Kaitano Dube, Godwell Nhamo and David Chikodzy, 'COVID-19 pandemic and prospects for recovery of the global aviation industry' (2021) 92 Journal of Air Transport Management 1 <www.sciencedirect.com/science/article/pii/S0969699721000053> accessed on 16 March 2022

[4] '**Air traffic**' is measured in Revenue Passenger Kilometres by IATA and ICAO. This metric represents the total number of kilometres travelled by revenue paying passengers. It is also referred to as "air traffic demand". See AirlineGeeks.com, 'Airline Metrics: Revenue Passenger Kilometers' (17 January 2016) <https://airlinegeeks.com/2016/01/17/airline-metrics-revenue- passenger-kilometers/> accessed 8 February 2022.

[5] IATA, '2020 Worst Year in History for Air Travel Demand' (IATA Press Release, 3 February 2021) <www.iata.org/en/pressroom/pr/2021-02-03-02/> accessed 8 February 2021; IATA, 'Slower but Steady Growth in 2019' (IATA Press Release nr 5, 6 February 2020) <www.iata.org/en/ pressroom/pr/2020-02-06-01/> accessed 8 February 2022.

With the arrival of effective vaccines in late 2020, the civil aviation industry was optimistic that travel would soon be restored.[6] However, the world remained locked down. Even in countries where borders were opened, travellers faced uncertain, rapidly changing and highly complex administrative processes, often imposed unilaterally by state regulators. Such complexities were further exacerbated given the multiplicity of administrative procedures and a lack of common standards for vaccine recognition and pre-travel testing.[7]

With continued travel restrictions, international air traffic did not recover significantly throughout 2021. Overall global air traffic was 58.4% lower than 2019 levels, a marginal improvement which, however, largely reflects a recovery in domestic rather than international air travel. International air traffic remained 75.5% lower than 2019 levels. Notably, international air traffic in the Asia-Pacific further decreased in 2021, dropping to 93.2% lower than 2019 levels (**Figure 1**).[8]

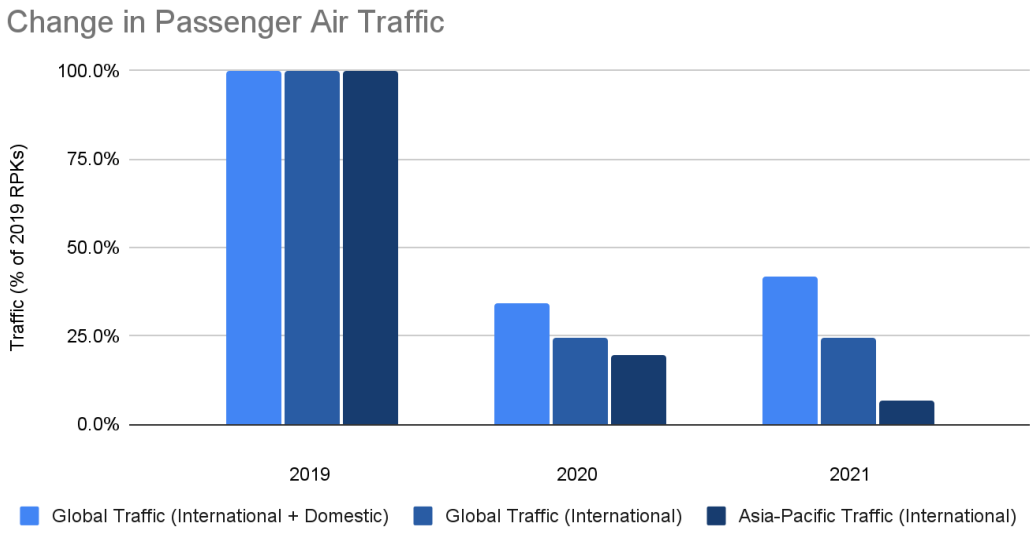

Figure 1. Change in passenger air traffic, measured in % of 2019 traffic

(Source: IATA.)[9]

[6] IATA, '2020 Worst Year in History for Air Travel Demand' (IATA Press Release, 3 February 2021) <www.iata.org/en/pressroom/pr/2021-02-03-02/> accessed 8 February 2021; ICAO, 'Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis' (ICAO, 8 March 2022) <www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf> accessed 9 February 2022.

[7] IATA, 'Passenger Demand Recovery Continued in 2021 but Omicron Having Impact' (IATA Press Release nr 5, 25 January 2022) <www.iata.org/en/pressroom/2022-releases/2022-01-25-02/> accessed 8 February 2022.

[8] Ibid.

[9] Ibid.

Regional divergences in levels of international air traffic became particularly noticeable in 2021. For instance, while air traffic in the Asia-Pacific continued to decrease, traffic in other regions slowly improved. The sheer drop in Asia-Pacific traffic was also unique; other regions were only 65.2% to 71.6% below 2019 levels compared to 93.2% in the Asia-Pacific mentioned previously (**Figure 2**).[10] The regional disparity might be attributable to the continued imposition of stricter travel restrictions by Asian countries, many of which remain either completely inaccessible or not easily accessible to foreigners, whether for tourism or business.[11] This is in part driven by more conservative approaches taken by Asia-Pacific countries to tackling the pandemic.

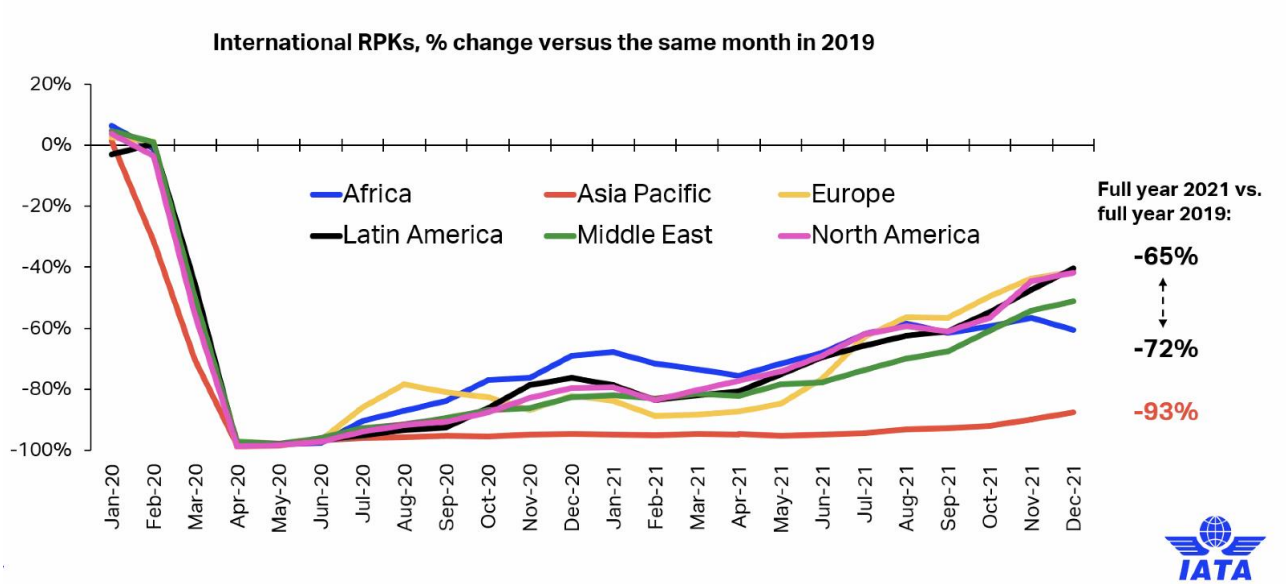

Figure 2. Change in international passenger air traffic regionally 2020-2021

(Source: IATA.) [12]

Despite hints of increased air traffic in regions beyond the Asia-Pacific, the civil aviation industry globally is still heavily affected by the pandemic at the time of writing (20 April 2022), although

[10] IATA, '2020 Worst Year in History for Air Travel Demand' (IATA Press Release, 3 February 2021) <www.iata.org/en/pressroom/pr/2021-02-03-02/> accessed 8 February 2022; IATA, 'Passenger Demand Recovery Continued in 2021 but Omicron Having Impact' (IATA Press Release nr 5, 25 January 2022) <www.iata.org/en/pressroom/2022-releases/2022-01-25-02/> accessed 8 February 2022.

[11] Brendan Sobie, 'ASI White Paper Update: Restarting International Air Travel Within ASEAN' (Singapore University of Technology and Design, June 2021) <https://asi.sutd.edu.sg/white-papers/white-paper-update/> accessed 9 February 2022; Brendan Sobie, 'Commentary: Southeast Asia risks falling behind other regions in recovering aviation and tourism' (Channel News Asia, 18 June 2021) <www.channelnewsasia.com/commentary/travel-passport-vaccination-certs-southeast-asia-asean-singapore-1959011> accessed 9 February 2022.

[12] IATA, 'Passenger Demand Recovery Continued in 2021 but Omicron Having Impact' (IATA Press Release nr 5, 25 January 2022) <www.iata.org/en/pressroom/2022-releases/2022-01-25-02/> accessed 8 February 2022.

hopes of recovery are more foreseeable now as an increasing number of countries shift towards living with COVID-19 as an endemic disease.[13]

1.1.2. Downstream effects on states

The effect of the pandemic on the civil aviation industry has had severe downstream effects for states. Beyond enabling international travel, aviation plays a crucial role in generating economic growth, creating jobs, and facilitating international trade and tourism. Civil aviation directly or indirectly supports up to 65.5 million jobs globally and contributes US$2.7 trillion to the. global Gross Domestic Product.[14]

With regards to tourism, international tourist arrivals in 2020 and 2021 were globally down by 73% and 72% respectively when compared to 2019 levels.[15] Reduction in tourism in the Asia-Pacific region was the most pronounced. While overall tourism around the world saw a slight recovery in 2021, tourism in the Asia-Pacific in fact worsened alongside the reduced air traffic levels.[16] Given the close link between aviation and tourism, the presence of travel restrictions and a lack of co-operation to restore travel, both of which are particularly apparent in the Asia-Pacific region, is likely a key reason for the slow recovery of the region's tourism industry.

Ultimately, considering the significant links between aviation and related downstream industries, the lack of recovery in international air travel will continue to contribute to the profound negative societal effects caused by the pandemic. An Oxfam report published in early 2022 noted that the pandemic has led to a "staggering rise in inequality" in Asia.[17] While the number of billionaires in Asia grew sharply since the start of the pandemic, tens of millions of people have also been pushed further into poverty. Even above the poverty line, people's prosperity and economic

[13] ICAO, *COVID-19 Air Traffic Dashboard* (ICAO) <www.icao.int/sustainability/Pages/COVID-19-Air-Traffic-Dashboard.aspx> accessed 9 February 2022.

[14] ICAO, *Economic Impacts of COVID-19 on Civil Aviation* (ICAO) <www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx> accessed 10 February 2022.

[15] UNWTO, *International Tourism and covid-19* (UNWTO) <www.unwto.org/international-tourism-and-covid-19> accessed 10 February 2022.

[16] Ibid.

[17] Emma Seery, *Rising to the challenge - The case for permanent progressive policies to tackle Asia's coronavirus and inequality crisis* (Oxfam International, January 2022) <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621343/bp-rising-challenge-asia-coronavirus-inequality-120122-en.pdf;jsessionid=F5E2BF42EF9527CD6256218CB72C61EA?sequence=1> accessed 12 February 2022.

development have been significantly impacted. Over 147 million people in Asia have faced unemployment and it is estimated that 10.45 million youth will permanently drop out of school. The same Oxfam report thus concludes that the pandemic has "set back progress on equitable development by decades".[18]

Expedient co-operation to restore international travel is therefore a crucial aspect of the world's economic recovery and critical in minimising further development setbacks.

1.2. International regulatory co-operation

1.2.1. What is international regulatory co-operation (IRC)?

The OECD defines IRC as:

> "any agreement or organisational arrangement, formal or informal, between countries to promote some form of co-operation in the design, monitoring, enforcement, or ex-post management of regulation."[19]

The OECD has conducted extensive work exploring the importance of IRC and its effective implementation. IRC was first highlighted in a 2012 Recommendation by the OECD Regulatory Policy Committee addressing the need for policy makers around the world to work together to strengthen and ensure the quality of regulations.[20]

Generally, IRC helps to ensure the effectiveness of regulatory measures where challenges are of a global nature, by resulting in important administrative cost savings and by ensuring that good regulatory practices are transferred. This need is especially relevant in today's globalised and highly interconnected world. IRC can also promote the interoperability of legal and regulatory frameworks and ensure that such frameworks are operable and resilient, especially considering

[18] Emma Seery, *Rising to the challenge - The case for permanent progressive policies to tackle Asia's coronavirus and inequality crisis* (Oxfam International, January 2022) <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621343/bp-rising-challenge-asia-coronavirus-inequality-120122-en.pdf;jsessionid=F5E2BF42EF9527CD6256218CB72C61EA?sequence=1> accessed 12 February 2022.

[19] See OECD, *Best Practice Principles*, accessed 10 February 2022, 10, citing OECD, *International Regulatory Co-operation: Addressing Global Challenges* (OECD 2013) <https://read.oecd-ilibrary.org/governance/international-regulatory-co-operation_9789264200463-en#page1> accessed 10 February 2022, 23.

[20] OECD, Review of International Regulatory Co-operation of the United Kingdom accessed 10 February 2022, annex A.

major disruptions that, like the pandemic, test the ability of the international community to co-operate and maintain global systems.

Although it brings many benefits, IRC also faces certain challenges. It incurs direct costs for states, stemming from the need to establish and maintain an appropriate infrastructure for co-ordination. IRC may thus be hampered by differences between countries in their regulatory procedures and/or legal systems, the desire for regulatory sovereignty and the overall "political economy of regulatory co-operation."[21]

Vitally, the devastating social and economic consequences of the pandemic highlight the importance of co-operation between governments to restore travel while ensuring a safe and swift global recovery.

1.2.2. IRC in international civil aviation

Owing to the global nature of civil aviation, IRC had been dominant in the industry well before the pandemic. From a first principles perspective, the international law principle of sovereignty over a state's territory[22] is in tension with the very concept of international civil aviation. As a corollary, regulatory co-operation has been necessitated to facilitate aviation between countries. The key international treaty for international civil aviation, the 1944 Convention on International Civil Aviation (**'Chicago Convention'**), explicitly encourages states to undertake regulatory co-operation to secure uniform rules and procedures. The Chicago Convention states in Article 37 that:

> "[e]ach contracting State undertakes to *collaborate* in securing the highest practicable degree of uniformity in *regulations, standards, procedures*, and organisation in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation" [emphases added].

[21] See OECD, *Best Practice Principles*, accessed 10 February 2022, 54-55, citing OECD, *Addressing Global Challenges,* accessed 10 February 2022, 55: "States may not harmonise because i) they are battling over the gains of harmonisation; ii) the actual transaction of reaching a compromise is complex, or iii) political elites gain political rents from non-harmonisation. In some cases, the co-operation may collapse because it is deemed captured by specific interest and it loses its credibility".

[22] Article 1 of the Convention on International Civil Aviation - Doc 7300 (Chicago Convention) 1944 <www.icao.int/publications/pages/doc7300.aspx> accessed 1 February 2022.

It follows that IRC also has an important role to play in restoring international civil aviation after the pandemic.

1.3. Research questions

This report explores the role of IRC in ensuring the continued and safe operation of civil aviation during the pandemic for passengers with a focus on the Asia region. It is apposite to note that domestic civil aviation is a major part of the civil aviation industry and impacts states across the world. However, domestic civil aviation has faced a different set of problems and trends, which are beyond the scope of this report. Instead, this report addresses two main research questions:

1. How have Asian countries engaged in unilateral, bilateral, regional, and multilateral IRC to resume international civil aviation during the pandemic?

2. Have Asian countries implemented IRC measures domestically, and if so, how have they done so (i.e. through what kinds of legal and administrative mechanisms)?

1.4. Methodology

This report's analysis of IRC builds on the conceptual framework set out by the OECD in its *Best Practice Principles on IRC*,[23] which identifies 11 categories of IRC mechanisms. We have gathered publicly available information on the existence, usage and implementation of IRC mechanisms in Asia, after having first identified the various relevant regulatory actors in the civil aviation sector within the Asia region. These include public and private, international and regional, organisations as well as individual states. The types of mechanisms chosen for further analysis in this report, their classification and the report's overall organisational structure were done with consideration for the OECD's IRC categories and actors thus identified.

The scope of our research has focused on Asia, with some cross-region IRC mechanisms involving Asian states identified and examined where appropriate. All 48 countries in Asia were considered, although informational, time, and space issues have constrained the breadth of our

[23] OECD, *Best Practice Principles,* accessed 16 February 2022.

examination.[24] Moreover, greater depth of consideration into a country's bilateral and unilateral IRC mechanisms was provided depending on the availability of information and the relative significance of each country to the international or regional civil aviation market. Less significant countries in civil aviation or countries without publicly available information have thus not been extensively covered in this report, though our research regarding these countries has contributed to the overarching ideas expressed in the report.

This report generally references primary sources of information from websites of governmental agencies, websites of international organisations, and press releases. The report also references secondary sources of information from journals and news reporting. Given that the pandemic is ongoing, comprehensive assessments of regulatory co-operation in international civil aviation have not been undertaken. While publicly available information has detailed the substance of IRC mechanisms at length, there is considerably less information regarding the processes and steps culminating in such mechanisms, and their implementation at the domestic level.

[24] Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam, China (including HKSAR and MSAR), Japan, Mongolia, North Korea, South Korea, Afghanistan, Bangladesh, Bhutan, India, Pakistan, Maldives, Nepal, Sri Lanka, Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates (UAE), Yemen, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. Taiwan was also considered.

2. Analytical framework

Section 2 clarifies this report's analytical framework before the substantive analysis undertaken in **PART B**. This section provides a general overview of the OECD categories of IRC mechanisms, linking them to measures enacted by various actors in Asia to maintain the health and safety of civil aviation passengers, while noting the complementary character of both the OECD categories and the identified IRC mechanisms.

2.1. OECD IRC categories

Following the 2012 Recommendation, the OECD Regulatory Policy Committee ('**RPC**') has classified IRC into eleven categories.[25] (**Table 1**) Each of these forms presents its own unique regulatory benefits and challenges.[26] For example, more formal and legally binding forms of IRC (e.g. integration/harmonisation) may result in greater compliance and neutrality but correspondingly attract higher administrative costs and longer implementation processes. Meanwhile, less formal forms of IRC (e.g. informal exchange of information) are low-cost and easy to implement but may never result in any actual, meaningful co-operation in practice.

	IRC form	Definition
1	**Integration / harmonisation through supranational or joint institutions**	National regulatory competences leave way to supra-national law making and institutions. Regulatory co-operation takes place primarily through harmonisation of rules.
2	**Specific negotiated agreements (treaties/conventions)**	Formal forms of regulatory co-operation signed by states and binding under international law, whereby each participating government agrees details of regulatory requirements, legal obligations and responsibilities on a specific topic/area. These include treaties, conventions and protocols. The agreements may or may not be supported by a specific institution.
3	**Regulatory partnerships between countries**	Formal, umbrella-type, broad political agreements between countries that they will co-operate to promote better quality regulation and minimise unnecessary regulatory divergences.

[25] OECD, Review of International Regulatory Co-operation of the United Kingdom, accessed 14 February 2022, annex A.

[26] OECD, *Best Practice Principles,* accessed 16 February 2022, 54.

4	**Inter-governmental organisations**	Membership in international organisations (established by treaty) promoting regulatory co-operation.
5	**Regional agreements with regulatory provisions**	Formal regional agreements including regulatory provisions among other provisions aimed at facilitating economic and trade integration, such as regional trade agreements or economic co-operation.
6	**Mutual recognition agreements (MRAs)**	Principle of international law whereby states party to mutual recognition agreements recognise and uphold legal decisions taken by competent authorities in another member state.
7	**Transgovernmental networks**	Co-operation based on loosely-structured, peer-to-peer ties developed through frequent interaction, rather than formal negotiation, involving specialised domestic officials (typically regulators) directly interacting with each other (through structured dialogues, MoUs), often with minimal supervision by foreign ministries.
8	**Formal requirements to consider IRC when developing regulations**	Cross-sectoral and cross-governmental requirements imposed on responsible authorities to consider all relevant international standards and frameworks for co-operation in the same field when developing regulatory measures. When this process leads to the adoption or recognition of another jurisdiction's laws or standards, it can be assimilated to a case of unilateral co-ordination.
9	**Recognition of international standards**	Incorporation of international standards in legislative instruments by means of a reference to one or more standards, or the replacement of the entire text in the drafting of a code or regulation.
10	**Soft law**	Co-operation based on instruments which are not legally binding, or whose binding force is somewhat 'weaker' than that of traditional law, such as codes of conduct, guidelines, roadmaps, peer reviews, etc.
11	**Dialogue/Informal exchange of information**	Conferences, forums and similar settings where regulators and various stakeholders from different jurisdictions meet to exchange on regulatory issues.

Table 1. OECD categories of IRC

(Source: OECD.)[27]

[27] OECD, *Best Practice Principles*, 56-57, table A A.1; OECD, *Addressing Global Challenges,* accessed 10 February 2022, 23 - 25, table 1.1; OECD, *The International Regulatory Co-operation Toolkit* (OECD) <www.oecd.org/gov/regulatory-policy/irc- toolkit.htm> accessed 11 February 2022.

In line with the OECD's literature, this report will also consider area-specific legally binding agreements and transnational private regulation as forms of IRC.[28] Additionally, public-private partnerships will be considered alongside the IRC categories. Although public-private partnerships do not fall within the OECD's definition of IRC mechanisms by definition (the latter requiring co-operation between countries), the involvement of private actors is an emerging characteristic of international rule-making and regulatory co-operation.[29]

	IRC form	Definition
12	**Area-specific legally binding agreements**	Formal binding agreements, usually bilateral, which cover a specific area.
13	**Transnational private regulation**	Privately (i.e. non-state) created, voluntary norms, rules or standards that are adopted by others for the provision of global public goods.[30]
14	**Public-private partnerships**	Collaboration between private and public actors which may result in the creation of a task force or a specific forum, where guidelines and commonly agreed strategies are developed.

Table 2. Additional categories of IRC

(Source: OECD.) [31]

2.2. Mapping IRC Categories onto international civil aviation mechanisms

Based on our research, five key areas of co-operation have been prevalent in securing the safety of international civil aviation passengers in the Asia region: (1) Co-operation Forums; (2) Safe Travel Standards, Guidelines and Regulations; (3) Information Sharing; (4) Travel Corridors; and (5) Vaccination Certification. Mapped in accordance with the 14 IRC categories, the five areas of co-operation identified correspond to the categories seen in **Table 3** below.

[28] OECD, *Best Practice Principles*, 56-57, table A A.1; OECD, *Addressing Global Challenges,* accessed 10 February 2022, 95-96, table 1.1.

[29] For further discussion on the role of private actors in IRC and civil aviation, see Section 9. As seen in Table 2, the total number of categories of co-operation mechanisms under examination in this report is 14.

[30] Biou Wang, 'How do Transnational Private Regulations Emerge? A Causal Process Tracing Study on the Open Contracting Partnership' (2022) GWU ProQuest Dissertations Publishing <www.proquest.com/openview/311d2ce4c6efdfb6005a86bc1c9a1251/1?pq-origsite=gscholar&cbl=18750&diss=y> accessed 5 April 2022, 20-21.

[31] OECD, *Best Practice Principles*, 56-57, table A A.1; OECD, *Addressing Global Challenges,* accessed 10 February 2022, 95-96, table 1.1.

Mechanism	IRC Category
Co-operation Forums	1. Inter-governmental organisations 2. Transgovernmental networks 3. Dialogue/Informal exchange of information 4. Public-private partnerships 5. Mutual recognition agreements
Safe travel guidelines and regulations	1. Soft law: guidelines, peer review mechanisms 2. Transnational private regulation
Information sharing	1. Dialogue/Informal exchange of information 2. Inter-governmental organisations 3. Transnational private regulation
Travel corridors	1. Soft law 2. Inter-governmental organisations 3. Area-specific legally binding agreements 4. Dialogue/Informal exchange of information
Vaccination certification	1. Soft law 2. Public-private partnerships 3. Mutual recognition agreements 4. Transnational private regulation

Table 3. List of mechanisms with corresponding IRC category

2.3. Multi-level approach

We note that, according to the OECD, "[s]everal co-operation mechanisms can co-exist in a given area or sector of regulation and involve a variety of instruments and actors".[32] Thus, mechanisms under each identified area of co-operation are further divided into multilateral, regional and bilateral mechanisms for conceptual clarity. This also reflects the OECD's approach as seen in **Figure 3**.

[32] OECD, *Addressing Global Challenges,* accessed 16 February 2022.

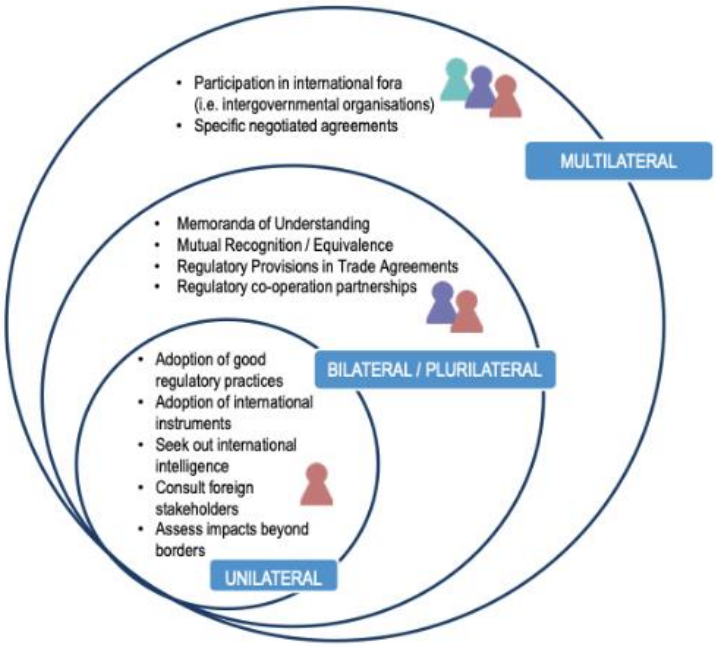

Figure 3. IRC categories by multilateral, bilateral/plurilateral and unilateral categorization (Source: OECD.)[33]

3. Main Actors in international civil aviation IRC

Section 3 provides an overview of the main regulatory actors in the field of civil aviation. It distinguishes between actors at the multilateral, regional and bilateral/unilateral level that have played a role in civil aviation IRC during the pandemic.

3.1. World Health Organisation (WHO)

The WHO is a specialised agency of the United Nations that promotes health and has 194 member states.[34] It has issued a vast series of guidelines, recommendations, and information

[33] OECD, Addressing Global Challenges, accessed 16 February 2022; OECD, No policy maker is an island: the international regulatory co-operation response to the COVID-19 crisis (OECD 2020) <www.oecd.org/coronavirus/policy-responses/no-policy-maker-is-an-island-the-international-regulatory-co-operation-response-to-the-covid-19-crisis-3011ccd0/> accessed 10 February 2022. Note: this figure does not include all the IRC categories this paper has identified.

[34] WHO, *About WHO* (WHO) <www.who.int/about> accessed 9 February 2022.

boards on the pandemic covering various sectors.[35] While the WHO is engaged generally across public health-related areas, its work has covered international travel and it engages closely with aviation focussed organisations. Notably, the WHO has founded the CAPSCA programme in collaboration with ICAO (see **Section 4.1.2** for discussion about the CAPSCA program).

3.2. International Civil Aviation Organisation (ICAO)

ICAO is a specialised agency of the United Nations. It was founded in 1944 following the Chicago Convention, has 193 member states and aims to support diplomacy and co-operation in air transport among its members.[36] ICAO's mandate is to provide administrative and expert support to its members, as well as to develop new policies, international standards and recommended practices for civil aviation, often by collaborating with private actors and other regional and international organisations.[37] ICAO maintains numerous regional offices to provide closer support and coordination, including an Asia and Pacific Office in Bangkok, Thailand.[38]

3.3. International Air Transport Association (IATA)

Founded in 1945, IATA is an international trade association of 290 airlines covering 83% of total air traffic.[39] IATA has three main aims: (1) advocacy—representing the airline industry, enhancing an understanding of the industry among decision makers and advocating for airlines; (2) standard setting—leading the airline industry by developing global commercial standards; and (3) operational safety and efficiency—providing support to its member airlines to operate safely, securely, efficiently and economically.[40] IATA issues standardised regulations, industry guidelines and manuals that are heavily relied upon by the main actors in the airline industry (e.g. airlines,

[35] WHO, *Technical guidance publications* (WHO) <www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance-publications?publicationtypes=07066450-9832-439a-a4d0-0dea7013bdce> accessed 9 February 2022.

[36] ICAO, *About ICAO* (ICAO) <www.icao.int/about-icao/Pages/default.aspx> accessed 14 March 2022.

[37] ICAO, *About ICAO* (ICAO) <www.icao.int/about-icao/Pages/default.aspx> accessed 14 March 2022.

[38] ICAO, *ICAO's Regional Presence* (ICAO) www.icao.int/secretariat/RegionalOffice/Pages/default.aspx accessed 14 March 2022.

[39] IATA, *About us* (IATA) <www.iata.org/en/about> accessed 16 February 2022.

[40] IATA, *Vision and Mission* (IATA) <www.iata.org/en/about/mission/> accessed 16 February 2022.

airports, ground service providers).[41] Such guidance is often developed in conjunction with states and international organisations, including ICAO. While not legally binding, IATA guidance has gained significant international recognition in practice and is generally abided by airlines.

3.4. Airports Council International (ACI)

Established in 1991, ACI is an international trade association that represents 1,950 airports throughout the world. It acts as a lobbyist to states and international organisations, most importantly ICAO.[42] ACI's mission is to: promote the industry's excellence by providing its members with innovative tools and expertise; support the capacity of airports to provide safe, secure air transportation; represent the interests of airports before international and national policy makers; foster collaboration between all stakeholders; maximise co-operation and assistance between airports; and increase public awareness of the social and economic importance of airports.[43] Among the actions taken by ACI is to actively partake in the development of policies, programs and best practices affecting airports and other actors in the industry.[44]

3.5. Association of Southeast Asian Nations (ASEAN)

ASEAN is a regional grouping founded in 1967, currently comprising 10 member states (**Figure 4**).[45] It aims to: accelerate economic growth, social progress and cultural development in the Southeast Asia region; promote active collaboration and mutual assistance on matters of common interest to the member states; and maintain close and beneficial co-operation with existing international and regional organisations that share similar aims and purposes as ASEAN.[46]

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[41] IATA, 'Why Should you Use IATA Regulations Manuals?' (IATA Newsletter, 30 August 2021) <www.iata.org/en/publications/newsletters/iata-knowledge-hub/why-should-you-use-iata-regulations-manuals/> accessed 16 February 2022.

[42] Aviationpros, 'ACI relocates to Montreal' (Aviationpros, 4 November 2010) <www.aviationpros.com/home/news/10378691/aci-relocates-to-montreal> accessed 14 March 2022.

[43] ACI, *About ACI* (ACI) <https://aci.aero/about-aci/> accessed 16 February 2022.

[44] Ibid.

[45] ASEAN, *ASEAN Member States* (ASEAN) <https://asean.org/about-asean/member-states/#:~:text=Member%20States%20%2D%20ASEAN&text=The%20Association%20of%20Southeast%20Asian,%2C%20Philippines%2C%20Singapore%20and%20Thailand> accessed 10 February 2022.

[46] ASEAN, *What we do* (ASEAN) <https://asean.org/what-we-do/> accessed 10 February 2022.

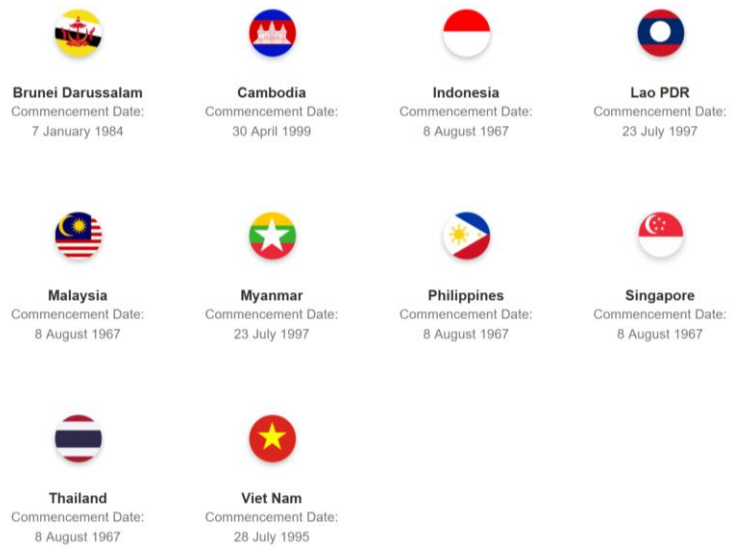

Figure 4. ASEAN Member States

(Source: ASEAN.)[47]

Three ASEAN organs are of particular relevance for this report: (1) the ASEAN Coordinating Council (**'ACC'**); (2) the ASEAN Transport Ministers Meeting (**'ATM'**); and (3) the ASEAN Health Sector co-operation (**'AHS'**). Each is examined in brief below.

3.5.1. ASEAN Coordinating Council (ACC)

Established by the 2007 ASEAN Charter, the ACC is composed of the ASEAN member states' foreign ministers. The Council's functions include, inter alia, coordinating the implementation of agreements and decisions of the ASEAN Summit, coordinating with the ASEAN Community Councils to enhance policy coherence, efficiency and co-operation among them, and undertaking other functions as may assigned to it by the ASEAN Summit.[48] The ACC has played a prominent role in the discussions on ASEAN's direction towards collective efforts in responding to the pandemic.[49]

[47] ASEAN, *ASEAN Member States* (ASEAN) <https://asean.org/about-asean/member-states/#:~:text=Member%20States%20%2D%20ASEAN&text=The%20Association%20of%20Southeast%20Asian,%2C%20Philippines%2C%20Singapore%20and%20Thailand> accessed 10 February 2022.

[48] ASEAN, *About ASEAN* (ASEAN) <https://asean.org/about-us/#:~:text=Established%20in%202008%2C%20the%20ASEAN,cross%2Dpillar%20initiatives%20of%20ASEAN> accessed 10 February 2022.

[49] ASEAN, *ASEAN Coordination Council* (ASEAN) <https://asean.org/about-us/asean-coordinating-council/> accessed 11 February 2022.

3.5.2. ASEAN Transport Ministers Meeting (ATM)

The ATM is ASEAN's highest transport body. It is composed of the ASEAN member states' transport ministers and sets policy directions in the transport sector. ASEAN transport co-operation has a complex structure (**Figure 5**). Of particular interest for present purposes are the ASEAN Senior Transport Officials Meeting and the ASEAN Air Transport Working Group.

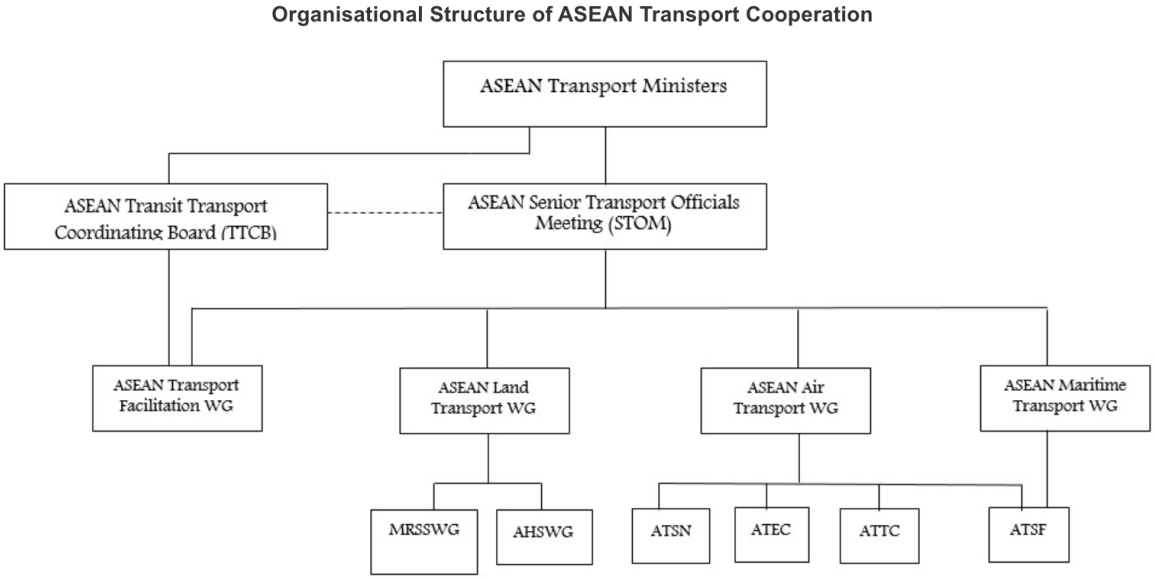

Figure 5. Organisational Structure of ASEAN Transport co-operation

(Source: ASEAN.)[50]

The ASEAN Senior Transport Officials Meeting (**'STOM'**) is ATM's executive body. STOM supervises, coordinates, and reviews programmes and directions set by ASEAN transport ministers. The principal coordinating and implementing arms of STOM are working groups, including the ASEAN Air Transport Working Group (below), the ASEAN Land Transport Working Group, the ASEAN Maritime Transport Working Group, and the ASEAN Transport Facilitation Working Group.

The ASEAN Air Transport Working Group (**'ATWG'**) is responsible for setting policy directions for the air transport sector and discussing issues of common interest across the member states.

[50] ASEAN, *Transport* (ASEAN) <asean.org/our-communities/economic-community/transport/> accessed 14 February 2022.

Following the pandemic and its effects on the regional aviation industry, the ATWG has taken an active role in reaching a rapid recovery in air transport and progressively improving air connectivity in a safe manner and without prejudice to public health.[51]

3.5.3. ASEAN Health Sector Co-operation (AHS)

The AHS is comprised of two main governing bodies: the ASEAN Health Ministers' Meeting and the Senior Officials' Meeting on Health Development ('**SOMHD**'). AHS deploys and operationalises public health-related mechanisms such as technical exchanges, information sharing, and updates on policy-related measures. AHS has sought to address the pandemic threat with measures for the preparedness, detection, mitigation, and response to COVID-19. Through SOMHD, all ASEAN member states have reaffirmed their commitment to further enhance coordination and co-operation to control the spread of the virus.[52]

[51] ASEAN, 'ASEAN Air Transport: Join Hands to Reopen Safely' (ASEAN, 3 July 2020) <https://asean.org/asean-air-transport-join-hands-to-reopen-safely-2/> accessed 13 February 2022.

[52] ASEAN, *ASEAN Senior Officials (SOMHD)* (ASEAN) <https://aseanphe.org/phe-mechanism/asean-senior-officials-somhd/> accessed 13 February 2022.

PART B – Areas of international regulatory co-operation in Asia

4. Co-operation forums

A variety of stakeholders, including states, international organisations and private actors have been meeting regularly on several platforms to discuss and develop harmonised solutions to the pandemic. ICAO has proven to be a very efficient provider of such discussion forums in the field of civil aviation at the multilateral level; whereas ASEAN has been a prominent discussion forum at the regional level. Collectively, these platforms will be addressed in this section as co-operation forums, falling under the following broad categories of IRC: **Inter-governmental organisations, Transgovernmental networks, Mutual recognition agreements, Dialogue/informal exchange of information** and **Public-private partnerships**.

Section 4 presents the various co-operation forums we have identified. The product of dialogue includes: in-principle agreements, practical guidelines, guidance packages, actual tools and other practical solutions agreed upon by participating countries. All these are discussed in greater detail under **Sections 5–8**.

Mechanism	Actor	Level	Status	Types of IRC (extended)
Council Aviation Recovery Taskforce (CART)	ICAO; various states; various public and private international organisations	Multilateral	Active	Inter-governmental organisations; Dialogue/Informal exchanges of information; Public-private partnerships
Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA)	ICAO; various states; various public and private international organisations	Multilateral	Active	Inter-governmental organisations; Dialogue/Informal exchange of information; Public-private partnerships
ICAO APAC COVID-19 Contingency and Recovery Planning Group (ACCRPG)	ICAO	Multilateral	Active	Inter-governmental organisations; Dialogue/Informal exchange of information
ASEAN Comprehensive Recovery Framework (ACRF)	ASEAN	Regional	Active	Inter-governmental organisations; Dialogue/Informal exchange of information; Transgovernmental networks
ASEAN-OECD Good Regulatory Practice Network	ASEAN; OECD	Regional	Active	Inter-governmental organisations; Transgovernmental networks; Dialogue/Informal exchange of information

Kuala Lumpur Transport Strategic Plan 2016–2025 (KLTSP)	ASEAN; various Asian states	Regional	Active	Mutual recognition agreements, Transgovernmental network

Table 4. Summary of co-operation forum mechanisms with OECD IRC categories

4.1. ICAO

4.1.1. Council Aviation Recovery Taskforce (CART)

CART was established by ICAO shortly after the WHO declared COVID-19 a pandemic and ICAO adopted its Council Declaration on novel coronavirus on 9 March 2020.[53] CART is supported by the ICAO Secretariat and comprises states, international and regional organisations, as well as a number of industry organisations.[54] CART aims to "provid[e] practical, aligned guidance to governments and industry operators in order to restart the international air transport sector and recover from the impacts of the pandemic on a coordinated global basis."[55]

As a result, CART has issued a series of recommendations and guidelines which are continuously revised following the latest developments. In a nutshell, the CART guidance is meant "to harmonise and not replace the COVID-19 recovery roadmaps currently established by states, regions, or industry groups."[56] At present, CART has issued two types of documents:[57]

1. CART Reports (see **Section 5.1.1**); and
2. Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis ('**CART Take-off guidance'**) (see **Section 5.1.2**).

[53] ICAO, *CART Report – Context and Key Principles* (ICAO) <www.icao.int/covid/cart/Pages/CART-Report–-Context-and-Key-Principles.aspx> accessed 15 February 2022.

[54] In December 2020, CART comprised the following actors: Australia, Canada, China, Colombia, Costa Rica, Côte d'Ivoire, France, Saudi Arabia, Singapore, Spain, United Arab Emirates, United Kingdom, United States and Zambia; UNWTO, WHO AUC, EU/EASA, ACAO, ECAC and LACAC; ACI, CANSO, IATA and ICCAIA. See ICAO, 'International Aviation and COVID-19: Successes and Challenges' (3rd Informal Multidisciplinary Advisory Group Meeting on Transport Responses to the COVID-19 Crisis, online, 29 June 2021) <https://unece.org/sites/default/files/2021-07/5_3rd%20AGM%20on%20response%20to%20COVID_29%20June%2721_Robinson_ICAO.pdf> accessed 14 February 2022.

[55] ICAO, *Council Aviation Recovery Taskforce (CART)* (ICAO) <www.icao.int/covid/cart/Pages/ default.aspx> accessed 16 February 2022.

[56] Ibid.

[57] The various documents can be found at ICAO, *Documents and Forms* (ICAO) <www.icao.int/covid/cart/Pages/Documents.aspx> accessed 14 February 2022.

4.1.2. Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA)

CAPSCA is a voluntary, cross-sectional and multi-organisational programme established by ICAO with the support of the WHO in 2006.[58] The programme fosters collaboration between international, regional, national and local organisations (private and public). These organisations include ICAO member states, WHO, WFP,[59] ACI, IATA, CANSO,[60] AAPA,[61] CDC,[62] IFALPA[63] and IFATCA.[64] (**Figure 6**)

Figure 6. CAPSCA members

(Source: CAPSCA.)[65]

[58] ICAO, *Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation - CAPSCA* (CAPSCA) <www.icao.int/safety/CAPSCA/Pages/About-CAPSCA.aspx> accessed 14 February 2022.

[59] World Food Programme (UNO agency).

[60] Civil Air Navigation Services Organisation (private organisation).

[61] Association of Asia Pacific Airlines (private organisation).

[62] Center for Disease Control and Prevention (US agency).

[63] International Federation of Air Line Pilots' Associations (private organisation).

[64] International Federation of Air Traffic Controllers' Associations (private organisation).

[65] ICAO, *Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation - CAPSCA* <www.icao.int/safety/CAPSCA/Pages/default.aspx> accessed 14 February 2022.

The programme's legal framework is found in the Chicago Convention, ICAO Annexes and Assembly Resolutions, and the WHO International Health Regulations (**'IHRs'**).[66] CAPSCA aims to improve planning and response to public health events that affect the aviation sector caused by, inter alia, communicable diseases. The programme targets key issues including public health protection, the safety and economic viability of air transport, and assistance to states with the implementation of ICAO Standards and Recommended Practises ('**SARPs'**) and WHO IHRs.

CAPSCA also facilitates cross-sector co-operation (e.g. between civil aviation authorities, public health authorities, airports, airlines, immigration, customs, security) and assists states to establish national aviation pandemic preparedness plans.[67] One of the main initiatives developed by CAPSCA is the Public Health Corridor ('**PHC**') Implementation, which is also part of the CART Take-off guidance (see **Section 7.1.1** for a detailed presentation of the PHC initiative).

4.1.3. ICAO APAC COVID-19 Contingency and Recovery Planning Group (ACCRPG)

The ICAO APAC COVID-19 Contingency and Recovery Planning Group (**'ACCRPG'**) was formed in 2020 to assist the Director-General of Civil Aviation of the ICAO Asia-Pacific's ('**APAC**') office in coordinating their approach to the management of civil aviation during the pandemic. The ACCRPG assists the ICAO by:

a. conducting high and technical level information sharing activities for APAC states with the aim of facilitating and encouraging their implementation of the ICAO CART Recommendations and Guidance;[68]

b. supporting the development and adoption of ICAO's COVID-19 Response and Recovery Implementation Centre (**'CRRIC'**), the primary information sharing platform for member states relating to the domestic implementation of the measures contained in the CART Report**;**[69]

[66] For more details: ICAO, *What is the framework of CAPSCA* (CAPSCA) <www.icao.int/safety/CAPSCA/Pages/About.aspx> accessed 13 February 2022.

[67] ICAO, *Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation – CAPSCA* (CAPSCA) <www.icao.int/safety/CAPSCA/Pages/About-CAPSCA.aspx> accessed 14 February 2022.

[68] ACCRPG, *First Annual Report* (ICAO APAC Office, Bangkok, July 2021) <www.icao.int/APAC/Meetings/2021%20CISSAD1/ACCRPG_1st-Annual-Report_FINAL.pdf> accessed 14 March 2022, 3, pt 3.2.

[69] ACCRPG, *First Annual Report,* accessed 14 March 2022, 3, pt 3.2.

c. supporting ICAO with the development of information sharing initiatives and events to facilitate implementation by APAC states of CART Recommendations and Guidance;[70]

d. supporting information sharing initiatives and events such as the CAPSCA-APAC Meeting, the Joint WHO-ICAO Webinar and the Aviation/Public Health Experts' Roundtable Discussion, to facilitate enhanced collaboration between civil aviation and public health authorities on the removal of impediments to aviation recovery and strengthening public confidence in air travel;[71] and

e. supporting ICAO with the development and promotion of various guidance material, to facilitate states with restarting their international air transport sector and with recovering from the impact of COVID-19.[72]

According to the ACCRPG First Annual Report, as at July 2021, 72% of APAC states completed the data analysis required for CART Phase I Recommendations and 67% of APAC states have finished reviewing CART's Take-off guidance document and public health risk mitigation measures.[73] However, the report does not specify the exact states that have or have not completed these actions.

4.2. ASEAN

4.2.1. ASEAN Comprehensive Recovery Framework (ACRF)

ASEAN has expressed recognition of international guidelines in their region-wide framework in preparation for a coordinated recovery process and the strengthening of the ASEAN Air Transport Sector.[74] The ASEAN Comprehensive Recovery Framework ('**ACRF**') serves as the organisation's "consolidated exit strategy" from the crisis. ACRF is a comprehensive framework detailing the ASEAN response through the different stages of recovery, targeting the most affected sectors and segments of society, setting broad strategies and identifying measures for

[70] ACCRPG, *First Annual Report,* accessed 14 March 2022, 4, pt 3.5.

[71] ACCRPG, *First Annual Report,* accessed 14 March 2022, 4, pt 3.6.

[72] See ACCRPG, *First Annual Report,* accessed 16 February 2022, 4, pt 3.7.

[73] ACCRPG, *First Annual Report,* accessed 14 March 2022, 3, pt 3.2.

[74] ASEAN, *Transport* (ASEAN) <asean.org/our-communities/economic-community/transport/> accessed 14 February 2022.

recovery.[75] This framework was developed with regard to existing international guidelines, notably that of ICAO CART, and generally sought to ensure coordination with ASEAN's external partners.[76]

4.2.2. ASEAN-OECD Good Regulatory Practice Network (GRPN)

The GRPN is a network that existed prior to the pandemic. It comprises around 70 senior officials from ASEAN member states and OECD member countries responsible for Good Regulatory Practice initiatives, as well as representatives from regional and international organisations. The role of the GRPN is to provide a platform for mutual learning and the exchange of good practices among policy makers.[77]

The sixth and seventh meetings of the GRPN were focussed on pandemic-related regulatory policy and involved presentations given by representatives of various GRPN participants. They addressed: (1) COVID-19's impact on regulatory policy, including how regulatory reform can support the pandemic recovery and ensure future regulatory agility (sixth meeting);[78] and (2) how regulatory reform can help turn the pandemic's challenges into "opportunities for sustainable development during the recovery" (seventh meeting).[79]

[75] ASEAN, 'ASEAN Comprehensive Recovery Framework and its Implementation Plan' (ASEAN, 12 November 2020) <https://asean.org/asean-comprehensive-recovery-framework-and-its-implementation-plan/> accessed on 14 March 2022.

[76] Brendan Sobie, 'ASI White Paper Update: Restarting International Air Travel Within ASEAN' (Singapore University of Technology and Design, June 2021) <https://asi.sutd.edu.sg/white-papers/white-paper-update/> accessed 12 February 2022, 20.

[77] OECD, *ASEAN-OECD Good Regulatory Practice Network* (OECD) <www.oecd.org/gov/regulatory-policy/asean-oecd-good-regulatory-practice-network.htm> accessed on 10 March 2022.

[78] OECD, *Sixth meeting of the ASEAN-OECD Good Regulatory Practices Network* (OECD) <www.oecd.org/gov/regulatory-policy/sixth-meeting-of-the-asean-oecd-good-regulatory-practices-network.htm> accessed 4 April 2022.

[79] OECD, *Seventh meeting of the ASEAN-OECD Good Regulatory Practices Network* (OECD) <www.oecd.org/gov/regulatory-policy/seventh-meeting-of-the-asean-oecd-good-regulatory-practices-network.htm> accessed 4 April 2022.

4.2.3. Kuala Lumpur Transport Strategic Plan 2016–2025 (KLTSP)

The Kuala Lumpur Transport Strategic Plan 2016–2025 ('**KLTSP**') is an ASEAN transport strategic plan that was already in place before the pandemic.[80] Its ultimate goal is to provide regional policy guidance for an efficient and integrated transport system throughout the ASEAN region. The KLTSP addresses aviation safety issues through the establishment of a mechanism to facilitate mutual recognition of approvals, certificates and licences, and ASEAN member states are also encouraged to develop and implement the ASEAN Air Traffic Management Master Plan in accordance with relevant ICAO guidance.[81] Moreover, member states have agreed to conclude more liberal and mutually beneficial air transport agreements amongst themselves and with other non-ASEAN countries. The goals embodied in the KLTSP have become particularly relevant in light of the pandemic's disruption to existing aviation frameworks.[82]

A particular case reflecting this approach is the ASEAN-EU Comprehensive Air Transport Agreement ('**AE CATA**')[83] which is built on existing initiatives. Concluded on 2 June 2021, this is the first region-to-region aviation agreement in the world. Under this agreement, airlines of ASEAN and the EU have greater opportunities to operate passenger and cargo services between and beyond both regions. The AE CATA enhances air connectivity between ASEAN and Europe and facilitates people-to-people and business exchanges, thereby supporting economic development and recovery from the pandemic. In addition to air services liberalisation, the AE CATA provides for co-operation in areas such as aviation safety, air traffic management, consumer protection, and environmental and social issues.

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[80] Department of Transportation of the Republic of the Philippines, 'DOTR calls for resilient air transport in Southeast Asia region amid the pandemic' (DOTR, 2022) <https://dotr.gov.ph/2014-09-02-05-02-02/ 2014-09-03-06-36-40/2014-09-03-06-38-40/55-dotrnews/4012-dotr-calls-for-resilient-air-transport-in-southeast-asia-region-amid-the-pandemic.html> accessed 12 March 2022.

[81] Notably ICAO's Asia Pacific Seamless ATM Plan and the Global Air Navigation Plan's ASBU Framework; see ASEAN, *Kuala Lumpur Transport Strategic Plan (ASEAN Transport Strategic Plan) 2016-2025* (ASEAN, December 2015) <https://asean.org/book/kuala-lumpur-transport-strategic-plan-asean-transport-strategic-plan-2016-2025-2/> accessed 12 March 2022.

[82] Department of Transportation of the Republic of the Philippines, 'DOTR calls for resilient air transport in Southeast Asia region amid the pandemic' (DOTR, 2022) <https://dotr.gov.ph/2014-09-02-05-02-02/ 2014-09-03-06-36-40/2014-09-03-06-38-40/55-dotrnews/4012-dotr-calls-for-resilient-air-transport-in-southeast-asia-region-amid-the-pandemic.html> accessed 12 March 2022.

[83] Singapore Ministry of Transport, 'Successful Conclusion of the ASEAN-EU Comprehensive Air Transport Agreement' (Government of Singapore, 4 June 2021) <https://www.sgpc.gov.sg/sgpcmedia/media_releases/mot/press_release/P-20210604-1/attachment/MOT%20Media%20Release%20-%20Successful%20conclusion%20of%20the%20ASEAN-EU%20Comprehensive%20Air%20Transport%20Agreement.pdf> accessed 12 March 2022.

5. Safe travel standards, regulations and guidelines

Section 5 addresses the different standards, regulations and guidelines that have been adopted at the international, regional and bilateral levels to facilitate international civil aviation in Asia. Coherent standards can contribute to the efficient, safe, secure, and sustainable air transport of an increasing number of passengers by minimising the risk of virus transmission among passengers, and between passengers and the general public. In this vein, passengers are provided with a more predictable travel experience.[84] These so-called safe travel standards, regulations and guidelines fall under the following four OECD categories of IRC mechanisms: **Soft law**[85] and **Transnational private regulations**.

Mechanism	Actor	Level	Status	Types of IRC (extended)
CART Reports	ICAO	Multilateral	Active	Soft law
CART Take-off guidance	ICAO	Multilateral	Active	Soft law
ICAO Guidelines for Aviation Security Contingency Measures during the COVID-19 Pandemic	ICAO	Multilateral	Active	Soft law
ICAO Handbook for CAAs on the Management of Aviation Safety Risks related to COVID-19 (Doc 10144)	ICAO	Multilateral	Active	Soft law
CAPSCA Manual on COVID-19 Cross-border Risk Management (Doc 10152)	ICAO	Multilateral	Active	Soft law
IATA Safely Reopening Borders – A Practical Guide	IATA	Multilateral	Active	Soft law; Transnational private regulation
IATA From Restart to Recovery – A blueprint for simplifying air travel	IATA	Multilateral	Active	Soft law; Transnational private regulation
ACI Airport Health accreditation	ACI	Multilateral	Active	Soft law; Transnational private regulation

[84] IATA, 'Latest Travel Restrictions and Guidance' (IATA Newsletter, 21 November 2021) <www.iata.org/en/publications/newsletters/iata-knowledge-hub/latest-travel-restrictions-and-guidance/> accessed 17 February 2022.

[85] Barbara Boschetti and Maria Daniela, 'A Comparative Study on Soft Law: Lessons from the COVID-19 Pandemic' (2021) 23 Cambridge Yearbook of European Legal Studies 20.

OECD initiative for safe international mobility during the COVID-19 pandemic	OECD	Multilateral	Active	Soft law
Guidelines from ASEAN Comprehensive Recovery Framework	ASEAN	Regional	Active	Soft law
EU–Singapore Memorandum of Cooperation	EU; Singapore	Bilateral	Active	Soft law

Table 5. Summary of safe travel guidelines and regulations with OECD IRC categories

5.1. ICAO

5.1.1. CART Reports

CART Reports have been issued in three successive phases and endorsed by the ICAO Council. The content of the various CART Reports may be summarised as follows:

The Phase I Report (27 May 2020) set out ten key principles for the restart and recovery of civil aviation[86] and provided a list of eleven practical recommendations to ICAO member states. Further, the report listed four main groups of measures: (i) aviation safety-related measures, (ii) aviation public health-related measures, (iii) security- and facilitation-related measures, and (iv) economic and financial measures.[87]

The Phase II CART – High Level Cover Document (5 November 2020) made additional recommendations (including iPacks), bringing the total number of recommendations to 14.[88] (See **Section 7.1.1** for a detailed presentation of iPacks).

[86] The ten key principles are: (1) protecting people through harmonised but flexible measures; (2) working as one aviation team and showing solidarity; (3) ensuring essential connectivity; (4) actively managing risks related to safety, security and health; (5) making aviation public health measures work with aviation safety and security systems; (6) strengthening public confidence; (7) distinguishing industry restart from industry recovery; (8) supporting financial relief strategies to help the aviation industry; (9) ensuring sustainability; and (10) learning lessons to improve industry resilience.

[87] Letter from ICAO to its members (8 June 2020) <www.icao.int/covid/cart/Documents/067e.pdf> accessed 16 February 2022 ; ICAO, *Council Aviation Recovery Task Force (CART) - Report* (CART, 27 May 2020) <www.icao.int/covid/cart/Documents/CART%20Report%20Final.pdf> accessed 16 February 2022.

[88] ICAO, *Council Aviation Recovery Task Force (CART) - High-Level Cover document* (CART, 5 November 2020), <www.icao.int/covid/cart/Documents/Phase%20II%20CART-HLCD%20and%202nd%20Ed%20TOGD_full.pdf> accessed 16 February 2022.

The Phase III – CART High Level Cover Document (10 March 2021 and its 5 October 2021 revised edition) further revised previous recommendations and made additional ones bringing the total number of recommendations to 20.[89]

5.1.2. CART Take-off Guidance

Alongside CART Reports, the CART Take-off guidance encompasses public health risk mitigation measures pertaining to airports, aircrafts, crew and cargo, as well as risk-based stages for such mitigation measures. It also includes the ICAO Manual on Testing and Cross-border Risk Management Measures. The CART Take-off guidance is in its fourth edition, with the most recent edition published on 5 October 2021.[90]

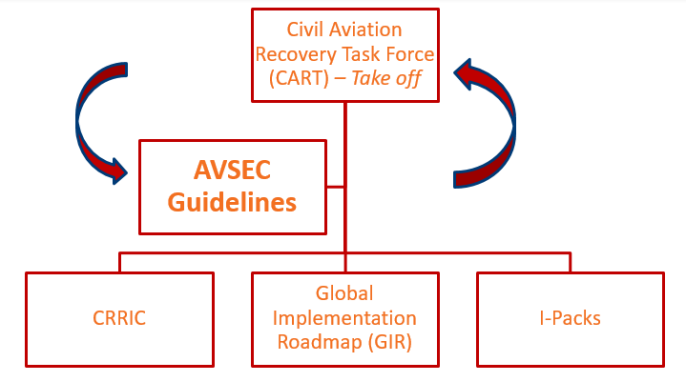

Figure 7. Relationship between different ICAO guidance

(Source: ICAO.)[91]

[89] ICAO, *Council Aviation Recovery Task Force (CART) - Phase III - High-Level Cover document* (CART, 10 March 2020) <www.icao.int/covid/cart/Documents/CART%20III%20High-Level%20Cover%20Document.final.en.pdf> accessed 14 February 2022; ICAO, *Council Aviation Recovery Task Force (CART) - Updated List of Key Principles and Recommendations* (CART, 5 October 2021) <www.icao.int/covid/cart/Documents/CART%20Updated%20Recommendations.en.pdf> accessed 14 February 2022.

[90] ICAO, Council Aviation Recovery Task Force (CART) - Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis - Fourth Edition (CART, 5 October 2021) <www.icao.int/covid/cart/Documents/Fourth%20Edition%20CART%20Takeoff%20Guidance.en.pdf> accessed 17 February 2022.

[91] ICAO, *Aviation Security and COVID-19* (ICAO) <www.icao.int/Security/Pages/Security-and-COVID-19.aspx> accessed 16 February 2022.

Box 1. Case study: Domestic Implementation of CART Take-off Guidance

Singapore-United Kingdom CART Take-off Guidance Trials

In July 2020, Singapore and the United Kingdom agreed to test the crew module of the CART Take-off guidance through a series of trial flights between Singapore and the United Kingdom. Specifically, the safe management measures under testing included maintaining safe distancing, meeting all relevant customs, immigration and health requirements, observing good hand hygiene and ensuring reduced interactions with passengers. Moreover, air crew were told to remain in their designated accommodation at all times during layovers.[92]

The trials were conducted with the close involvement of private actors including Changi Airport, Heathrow Airport, British Airways and Singapore Airlines. ICAO, Singapore and the United Kingdom used the trials to collect, analyse and review data in order to improve the CART Take-off guidance. We were unable to find data regarding the success and outcomes of the trial or information regarding administrative and legal challenges surrounding the implementation of the trials.

Singapore Domestic Implementation

The Civil Aviation Authority of Singapore's Health Safety Measures to Mitigate Risk of Covid-19 in Aviation Guidance includes recommendations by ICAO and specifically cites the ICAO Take-off guidance as a reference material.[93]

[92] CAAS Newsroom, 'Singapore and the United Kingdom Commence Trials to Improve Public Health Safety for Air Crew' (CAAS, 2020) <www.caas.gov.sg/who-we-are/newsroom/Detail/singapore-and-the-united- kingdom-commence-trials-to-improve-public-health-safety-for-air-crew/> accessed 14 March 2022; ICAO, 'Singapore and the United Kingdom commence trials to improve public health safety for aircrew' (ICAO Newsroom, 6 July 2020) <www.icao.int/Newsroom/Pages/Singapore-and-the-United-Kingdom-commence-trials-to-improve-public-health-safety-for-aircrew.aspx#:~:text=The%20trials%20will%20test%20the,and%20reduced%20interactions%20with%20passengers> accessed 14 March 2022.

[93] CAAS, *Health Safety Measures to Mitigate Risk of COVID-19 in Aviation* (CAAS, 28 December 2020) <www.caas.gov.sg/docs/default-source/docs---spp/caas-document-on-health-safety-measures-for-covid-19.pdf> accessed 14 March 2022.

5.1.3. ICAO Guidelines for Aviation Security Contingency Measures during the COVID-19 Pandemic (AVSEC Guidelines)

To ensure aviation security during the pandemic, ICAO has developed the ICAO Guidelines for Aviation Security Contingency Measures during the COVID-19 Pandemic ('**AVSEC Guidelines**') as a subset of the CART Take-off guidance. It comprises of best practices shared by industry and state experts and aims to: help states to ensure implementation of aviation security-related Standards and Recommended Practices during the pandemic;[94] harmonise the security contingency measures taken; help protect travellers and aviation workers; and ensure that security objectives and measures are preserved.[95]

5.1.4. ICAO Handbook for CAAs on the Management of Aviation Safety Risks related to COVID-19 (Doc 10144)

Published in May 2020, this ICAO guidance supports Civil Aviation Authorities (**'CAA'**) in managing aviation safety risks during the pandemic. It focuses on risk assessment based on collection and analysis of data, application of safety management principles and monitoring of CAA licences and approvals.

5.1.5. CAPSCA Manual on COVID-19 Cross-border Risk Management (Doc 10152)

CAPSCA developed the Manual on COVID-19 Cross-border Risk Management (Doc 10152) in collaboration with CART and various states' public health authorities. This document provides guidance on testing and vaccination in relation to pandemic risk management. It includes a baseline model for risk assessment and covers measures about testing, vaccination and cross-border risk management.[96] The CAPSCA Manual was first issued in November 2020. It was

[94] Detailed in Annex 17 of the Chicago Convention; see ICAO SHARPs are incorporated into 19 technical annexes. Annex 17 to the Chicago Convention focuses on international aviation security and lays down standards and practical recommendations in this regard: ICAO, *Annex 17* (ICAO) <www.icao.int/security/sfp/pages/annex17.aspx> accessed 17 February 2022.

[95] ICAO, *Annex 17* (ICAO) <www.icao.int/security/sfp/pages/annex17.aspx> accessed 17 February 2022.

[96] ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022.

updated in March 2021 along with the publication of the Phase III CART High Level Cover Document.[97] Its third and current edition was released in October 2021.

For vaccination certification, ICAO recommends the use of the WHO International Certificate of Vaccination or Prophylaxis as an international standardised vaccination certificate.[98] It also refers to other potential solutions, such as a virtual vaccination pass (see **Section 8.1.1** for a detailed presentation of the vaccination certification mechanism suggested by CAPSCA).

5.2. IATA

5.2.1. IATA Safely Reopening Borders – A Practical Guide

IATA published Safely Reopening Borders – A Practical Guide in November 2020.[99] The guide complements the CASPCA Manual on Testing and Cross-Border Risk Management Measures with practical tools and recommendations to assist governments in reopening their borders. It covers risk management and assessment, the implementation of COVID-19 testing during travel and the management of health credentials through a platform for the mutual recognition of test results, and vaccination certificates.

5.2.2. IATA From Restart to Recovery – A blueprint for simplifying air travel

IATA published From Restart to Recovery – A blueprint for simplifying air travel in November 2021.[100] The policy paper lays out IATA's aim to restart international air travel, with a focus on three key aspects: (1) simplifying health protocols; (2) providing digital solutions for the processing of health credentials; (3) and ensuring that public health measures are proportionate to risk and reflective of changing circumstances.

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[97] International Airport Review, 'ICAO Council approves updated CART recovery guidelines' (International Airport Review, 15 March 2021) <www.internationalairportreview.com/news/154790/icao-council-updated-recovery-guidelines/> accessed 16 February 2022.

[98] ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022, 3-15, para 3.3.8.7.

[99] IATA, *Safely Reopening Borders – a practical guide* (IATA 2020) <www.icao.int/safety/CAPSCA/PublishingImages/Pages/Other-Guidance/IATA%20roadmap-safely-reopening-international-borders.pdf> accessed 15 February 2022.

[100] IATA, *From Restart to Recovery – A blueprint for simplifying air travel* (ICAO 2021) <www.iata.org/globalassets/iata/programs/covid/blueprint-restart-to-recovery.pdf> accessed 4 April 2022.

Particular emphasis is placed on the need to address the multitude of un-coordinated pandemic-related actions taken by states, which have created significant barriers to cross-border travel. A notable issue caused by this is rising airport processing times. According to IATA research, if air traffic improves to pre-pandemic levels with current pandemic measures in place, airport processing times could reach eight hours per trip and effectively bring travel to a standstill.[101]

The aims embodied in this paper were highlighted by IATA's Asia-Pacific Office as being of particular importance to the APAC region.[102] As noted in **Section 1**, the APAC region has seen the lowest international air traffic in 2021 and sits in stark contrast to the general improvement of air traffic globally, which could be the result of the more restrictive border control measures taken by Asian states.

5.3. ACI Airport Health accreditation programme

ACI launched the ACI Airport Health accreditation programme in July 2020 with the support of ICAO, and it has now been adopted by more than 600 airports.[103] The accreditation programme aims to enable participating airports to demonstrate their commitment to the protection of passengers' health in order to reassure passengers and state regulators alike.[104] ACI accreditation requires an assessment of each participating airport's safe management measures, with regard to ACI guidelines, ICAO CART recommendations and industry best practices. ACI accreditation is granted for a period of 12 months and may be renewed thereafter.[105]

[101] See also Mark Caswell, 'IATA warns of eight-hour processing times at airports' (Business Traveller, 31 May 2021) <www.businesstraveller.com/business-travel/2021/05/31/iata-warns-of-eight-hour-processing-times-at-airports/> accessed 4 April 2022.

[102] Meeting with representatives from IATA's Asia-Pacific Office.

[103] ACI, *ACI Airport Health Accreditation* (ACI) <https://aci.aero/programs-and-services/airport-operations/aci-airport-health-accreditation-program/> accessed 15 February 2022.

[104] ACI, 'ACI extends global Airport Health Accreditation programme' (Press Releases, 14 June 2021) <https://aci.aero/2021/06/14/aci-extends-global-airport-health-accreditation-programme/> accessed 15 February 2022.

[105] ACI, 'ACI extends global Airport Health Accreditation programme' (Press Releases, 14 June 2021) <https://aci.aero/2021/06/14/aci-extends-global-airport-health-accreditation-programme/> accessed 15 February 2022.

5.4. OECD initiative for safe international mobility during the COVID-19 pandemic

During the OECD's annual Ministerial meeting in May 2021, OECD ministers endorsed the initiative for safe international mobility during the COVID-19 pandemic. The initiative includes a blueprint that seeks to promote "greater certainty, safety and security in travel as reopening takes place", by building upon existing initiatives by other organisations and promoting "interoperability amongst travel regimes".[106] It includes guidance in relation to risk classification systems, vaccination recognition, COVID-19 testing and digital certificates.[107] This guidance is available for all states and can be adopted on a voluntary basis, particularly in accordance with existing travel standards.

The initiative also includes a temporary forum for information sharing for civil aviation actors across sectors, which seeks to "allow governments and stakeholders to share information in real time on plans and approaches facilitating travel".[108]

5.5. ASEAN

Under Key Priority 3f of the ASEAN Comprehensive Recovery Framework, ASEAN member states are seeking to develop regional operational guidelines for flights to restore passenger confidence in air transport. It is intended for the guidelines to be drafted in accordance with the ICAO CART guidelines, including protocols for flight and cabin crew, cleaning and disinfection of aircraft. Discussions of this ASEAN-wide operational guidelines began in November 2020 and are projected to be concluded by December 2025.[109]

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[106] OECD, 'OECD Ministers launch new initiative for safe international travel' (OECD, 31 May 2021) <www.oecd.org/health/oecd-ministers-launch-new-initiative-for-safe-international-travel.htm> accessed 5 April 2022.

[107] OECD, *OECD initiative for safe international mobility during the COVID-19 pandemic (including blueprint)* (OECD, 31 May 2021) <www.oecd.org/coronavirus/policy-responses/oecd-initiative-for-safe-international-mobility-during-the-covid-19-pandemic-including-blueprint-d0594162/> accessed 5 April 2022.

[108] OECD, 'OECD Ministers launch new initiative for safe international travel' (OECD, 31 May 2021) <www.oecd.org/health/oecd-ministers-launch-new-initiative-for-safe-international-travel.htm> accessed 5 April 2022.

[109] ASEAN, *ASEAN Comprehensive Recovery Framework* (ASEAN, 2020) <https://asean.org/wp-content/uploads/2021/09/ASEAN-Comprehensive-Recovery-Framework_Pub_2020_1.pdf> accessed 12 February 2022.

ASEAN's Senior Transport Officials Meeting (STOM) and its ASEAN Air Transport Working Group (ATWG) will be leading the development of these ASEAN-wide operational guidelines. The ATWG has expressed full support of the guidelines and recommendations published by the ICAO, and was encouraged to take guidance from these guidelines and recommendations to implement measures that enable the safe and orderly recovery of the civil aviation sector in a phased approach.[110] However, the ATWG has taken the position that, although the measures need to be consistent and harmonised to the maximum extent appropriate, they also need to be flexible enough for states to implement based on the different stages of outbreak, risk-assessment and risk-tolerance.[111]

5.6. Bilateral level

In July 2020, the Civil Aviation Authority of Singapore and the European Union Aviation Safety Agency (**'EASA'**) signed a memorandum of co-operation with the aim to validate and harmonise health safety measures for air travel, notably by implementing the standards and guidelines set out in EASA's Aviation Industry Charter.[112] This measure is a unique example of an Asian state's aviation authority formally participating in a foreign regulator's regional IRC mechanisms, with this memorandum being the first of its kind in Asia. It should be noted that EASA's standards and guidelines, and Singapore's actions, are intended to be in accordance with ICAO CART guidelines.

[110] Brendan Sobie, 'ASI White Paper Update: Restarting International Air Travel Within ASEAN' (Singapore University of Technology and Design, June 2021) <https://asi.sutd.edu.sg/white-papers/white-paper-update/> accessed 12 February 2022.

[111] ASEAN, 'ASEAN Air Transport: Join Hands to Reopen Safely' (ASEAN, 3 July 2020) <https://asean.org/asean-air-transport-join-hands-to-reopen-safely-2/> accessed 11 March 2022.

[112] EASA, 'CAAS and EASA cooperate to harmonise aviation health safety measures for air travel between Singapore and Europe' (EASA, 22 July 2020) <www.easa.europa.eu/newsroom-and-events/press-releases/caas-and-easa-cooperate-harmonise-aviation-health-safety> accessed 5 April 2022.

6. Information sharing

Section 6 addresses the information sharing mechanisms adopted at the international, regional and bilateral levels. Regulators and other stakeholders have gathered in co-operation forum settings, such as those mentioned in **Section 4**, to exchange information and experiences on regulatory issues pertaining to civil aviation during the pandemic and to develop policies of domestic implementation.[113] Information sharing mechanisms fall under the following three OECD categories of IRC mechanisms: **Informal exchange of information, Inter-governmental organisations** and **Transnational private regulation**. Most have been taking place in Inter-governmental organizations (ICAO, ASEAN), others in transnational private standard setting bodies (IATA).

This section explains how ICAO and IATA in particular have played a crucial role in bolstering and complementing national institutions by providing a platform to share and develop solutions at the international level. At the regional level, this section examines how ASEAN's multiple information sharing platforms have sought to coordinate and enhance the region's approach to handling the pandemic and, more specifically, reviving the aviation sector.

Mechanism	Actor	Level	Status	Types of IRC (extended)
Covid-19 Response and Recovery Implementation Centre (CRRIC)	ICAO	Multilateral	Active	Dialogue/informal exchange of information; Inter-governmental organisations
ICAO Web Applications	ICAO	Multilateral	Active	Dialogue/informal exchange of information; Inter-governmental organisations
Covid-19 Contingency Related Differences (CCRD)	ICAO	Multilateral	Replaced by CRRIC	Dialogue/informal exchange of information; Inter-governmental organisations
IATA Web Applications	IATA	Multilateral	Active	Dialogue/informal exchange of information; Transnational private regulation
ATWG Quick Information Exchange Group	ASEAN	Regional	Active	Dialogue/informal exchange of information; Inter-governmental organisations
ASEAN BioDiaspora Virtual Centre	ASEAN	Regional	Active	Dialogue/informal exchange of information; Inter-governmental organisations

[113] OECD, *No policy maker is an island,* accessed 17 February 2022, 12.

Bilateral information sharing	Singapore; Malaysia	Bilateral	Active	Dialogue/informal exchange of information

Table 6. Summary of information sharing with OECD IRC categories

6.1. ICAO

6.1.1. COVID-19 Response and Recovery Implementation Centre (CRRIC)

Created by ICAO in July 2020, the CRRIC is a platform that provides resources and tools to assist "implementation support, coordination, monitoring and reporting activities" in relation to international civil aviation during the pandemic. The resources provided include, among others, access to all CART reports and the CART Take-off guidance package, webinars related to CART recommendations and guidance, as well as a list of focal points in regions and member states and an email support hotline.[114] ICAO has also conducted five webinars[115] in multiple languages to demonstrate the use of these tools,[116] and has provided new users with an introductory lab guiding them through the CRRIC. Access to the CRRIC platform is limited to state representatives and the stakeholders and partners involved in implementing CART recommendations.

According to the ACCRPG's first annual report (see **Section 4.1.3**), APAC states have widely supported the CRRIC and "virtually all" are registered and active users.[117] However, the report does not identify the number or the identity of particular states that are (or are not) using the CRRIC or the extent of each state's participation in information sharing with the platform.

[114] ICAO, *COVID-19 Response and Recovery Implementation Centre (CRRIC)* (ICAO) <www.icao.int/covid/Pages/crric.aspx> accessed 13 February 2022.

[115] ICAO, *Date & Time* (ICAO) <www.icao.int/Meetings/webinar-series/Pages/COVID-19-Response-and- Recovery-Implementation-Centre-(CCRIC).aspx> accessed 13 February 2022.

[116] ICAO, *COVID-19 Response and Recovery Implementation Centre (CRRIC)* (ICAO) <www.icao.int/covid/Pages/crric.aspx> accessed 13 February 2022.

[117] ACCRPG, *First Annual Report,* accessed 14 March 2022, 3, pt 3.2.

6.1.2. Web Applications

ICAO developed the Global COVID-19 Airport Status[118] and the Flight Data Application (Infectious disease).[119] These are centralised web applications that provide information regarding the number of daily departures, weekly cases, and other pertinent information such as Notices to airmen worldwide. These web applications are publicly available online, and the detailed data behind them can be obtained using ICAO's Data Service.[120] The Data Service is accessible by any interested party for a fee, although it is principally targeted towards government bodies, air traffic management entities, airports, airlines and researchers.

6.1.3. COVID-19 Contingency Related Differences (CCRD)

In April 2020, ICAO created the CCRD system as an interim measure to support continued operations at the beginning of the pandemic. Anticipating that states would implement contingency measures that deviate from ICAO's SARPs (especially in relation to certificates and licences), the system facilitated the notification and dissemination of such temporary deviations to ICAO. This ensured states' compliance with Article 38 of the Chicago Convention which obligates states to notify of any deviation from SARPs.

The CCRD system was accessible by states a sub-system of ICAO's Electronic Filing of Differences dashboard. It was discontinued in March 2021 and was replaced with planning tools, approaches and guidance supporting the restart of air operations in a manner that is compliant with SARP requirements (e.g., guidance in relation aviation security measured, discussed in **Section 5.1.3**).[121]

[118] ICAO, *COVID-19 Airport Status* (ICAO) <www.icao.int/safety/Pages/COVID-19-Airport-Status.aspx> accessed 13 February 2022.

[119] ICAO, *App for Disease version 2.2* (ICAO) <http://quips.anbdata.com/project/dev/5c1c21b205c09f70bfe60eeeeb46316af89506e9.html> accessed 13 February 2022.

[120] ICAO, *API Data Service* (ICAO) <www.icao.int/Aviation-API-Data-Service/Pages/default.aspx> accessed 4 April 2022.

[121] ICAO, *COVID-19 Safety Operational Measures* (ICAO) <www.icao.int/safety/COVID-19OPS/Pages/default.aspx> accessed 13 February 2022.

6.2. IATA Web Applications

Similarly to ICAO, IATA has also developed various web resources for public use, such as the COVID-19 Travel Regulations Map[122] and Destination Tracker,[123] in collaboration with the World Tourism Organisation. These web applications provide country-specific information and analysis on domestic requirements for incoming travellers, the spread of COVID-19 and prevailing health regulations. The tools help travellers stay informed about changes to regulations, and aid states to compare and learn from different regulatory regimes.[124] IATA's web applications are publicly available online, accessible for all interested parties. The data behind these applications are available for a fee as part of IATA's Timatic platform.

6.3. ASEAN

6.3.1. ATWG Quick Information Exchange Group

Prior to the pandemic, ASEAN had established mechanisms and working groups among its member states (discussed in **Section 4**) to facilitate the exchange of information regarding intra-regional travel. These forums transcending the transport and tourism sectors have also been utilised during the pandemic to exchange information on developments related to the pandemic and to share best practises among member states with the aim of achieving an effective recovery.

Of mention here is the ATWG, which established the ATWG Quick Information Exchange Group.[125] The Group's aim is to facilitate timely and transparent exchanges of information between ASEAN member states through a secure IT platform that includes real-time information about the pandemic situation among member states and a list of best practices followed by member states.[126]

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[122] IATA, *COVID-19 Travel Regulations Map* (powered by Timatic)* (IATA) <www.iatatravelcentre.com/world.php> accessed 14 February 2022.

[123] IATA, *Destination Tracker* (IATA) <www.iata.org/en/programs/covid-19-resources-guidelines/destination-tracker/> accessed 14 February 2022.

[124] Ibid.

[125] ASEAN, 'ASEAN Air Transport: Join Hands to Reopen Safely' (ASEAN, 3 July 2020) <https://asean.org/asean-air-transport-join-hands-to-reopen-safely-2/> accessed 13 February 2022.

[126] Ibid.

6.3.2. ASEAN BioDiaspora Virtual Centre

Concurrently, ASEAN member states have developed new mechanisms during the pandemic to facilitate information sharing. The ASEAN BioDiaspora Virtual Centre (ABVC), established in January 2020, is one of the many ongoing regional initiatives led by the ASEAN Health Sector specifically designed to address gaps in and improve member states' health systems.

The ABVC produces a regular Risk Assessment Report published every few days. The report provides, inter alia, the highlights and situational overview of the pandemic, public health outlook and the risk of COVID-19 importation through air travel.[127] It also consolidates and reports on COVID-19 cases and deaths, and travel advisories among member states. One of its aims is to provide useful information for public health officials, such as about air-travel volume, thus enabling them to take necessary precautionary measures against the spread of COVID-19 through air travel.

6.4. Bilateral level

Singapore and Malaysia have set up a joint working group to strengthen co-operation between them in managing the pandemic. According to Malaysian Health Minister, Dzulkefly Ahmad, the two-way co-operation would "focus on sharing information on public health, medicine and research to ensure that the outbreak is handled efficiently" and "consolidate various cross-border efforts".[128] Singapore and Malaysia had been in close touch already since the start of the pandemic, for instance by "expeditiously sharing information on cross-border cases".[129]

[127] ASEAN, *ASEAN Bio Diaspora Virtual Centre (ABVC) Response to COVID-19* (ASEAN) <https://aseanphe.org/phe-mechanism/asean-biodiaspora-virtual-centre-abvc/asean-bio-diaspora-virtual-centre-abvc-response-to-covid-19/> accessed 10 February 2022.

[128] D Kanyakumari, 'Malaysian Health Minister announces joint working committee with Singapore to tackle novel coronavirus' (Channel News Asia, 11 February 2022) <www.channelnewsasia.com/asia/wuhan-coronavirus-malaysia-singapore-joint-working-committee-776426> accessed on 10 February 2022.

[129] MOH, 'Singapore and Malaysia to Establish A Joint Working Group for the 2019 Novel Coronavirus' (Singapore Ministry of Health, 11 February 2022) <www.moh.gov.sg/news-highlights/details/singapore-and-malaysia-to-establish-a-joint-working-group-for-the-2019-novel-coronavirus> accessed 10 March 2022.

7. Travel corridors

Section 7 addresses the various travel corridor[130] mechanisms adopted at the multilateral, regional, bilateral, and unilateral levels to maintain air travel and reopen cross-border travel markets during the pandemic. Although ASEAN's domestic aviation market has started recovering, revenues for domestic travel are much lower than for cross-border travel. Recovery of international passenger traffic for business and leisure purposes underpin efforts at economic recovery from the pandemic.[131] Travel corridors seek to achieve these goals by facilitating travel amongst states, often with less stringent requirements.

Travel corridor mechanisms fall under the following OECD categories of IRC mechanisms: **Soft law; Inter-governmental organisations; Dialogue/informal exchange of information** and **Area-specific legally binding agreements**. The predominant approach as of the time of writing appears to be bilateral co-operation, exemplifying the Area-specific legally binding agreements IRC mechanism.

This section examines how international and regional actors, like ICAO and ASEAN, have sought to develop the necessary frameworks to restore air travel through travel corridors and highlights the manner in which these frameworks have been implemented at the bilateral or unilateral level. The success or failure of travel corridors reflects the flexibility required to face the rapidly evolving pandemic situation and the need to balance restoring travel with public health concerns. Travel corridor arrangements traverse multiple sectors and stakeholders from the transport, tourism and travel industry, thus requiring co-operation between multiple stakeholders at different levels.

Mechanism	Actor	Level	Status	Types of IRC (extended)
PHC + iPack	ICAO	Multilateral	Active	Soft law; Dialogue/informal exchange of information
ACCRPG	ICAO	Regional	Active	Inter-governmental organisations
ASEAN Travel Corridor	ASEAN	Regional	In progress	Inter-governmental organisations

[130] Travel corridors can come under various names such as: 'Public Health Corridor', 'Reciprocal Green Lane', 'Fast Lane', 'Safe Travel Corridor Arrangement', 'Air Travel Arrangement', 'Vaccinated Travel Lane', and 'Travel Bubble'.

[131] Ovais Subhani, 'Safe border reopening needed to boost economic recovery in Asia-Pacific region: Gan Kim Yong' (The Straits Times, 16 February 2022) <www.straitstimes.com/business/economy/safe-border-reopening-needed-to-boost-economic-recovery-in-asia-pacific-region-gan-kim-yong> accessed 17 March 2022.

Bilateral Travel Corridor Agreements	Various states	Bilateral	Active	Soft law; Area-specific legally binding agreements
Bilateral VTLs	Singapore & various states	Bilateral	Active	Soft law: Area-specific legally binding agreements
Unilateral VTLs	Singapore	Unilateral	Active	-
Unilateral Travel Corridors	Various states	Unilateral	Active	-
Air Travel Pass	Various states	Unilateral	Active	-
Regulatory Sandboxes	Various states	Unilateral	Active	-

Table 7. Summary of travel corridor mechanisms with OECD IRC categories

7.1. ICAO

7.1.1. CART Recommendation 14: Public Health Corridor (PHC) Implementation

Following Recommendation 14 of the Phase II CART High Level Cover Document, ICAO has encouraged the implementation of PHCs (i.e. travel corridors) between states. According to ICAO's definition:

> "A PHC is formed when two or more States agree to *mutually recognize* the implemented public health mitigation measures on one or more routes between their States. To enable such mutual recognition, States are strongly encouraged to actively collaborate and *share information* with other States and enter into *bilateral or multilateral discussions* with each other to implement PHCs in a harmonized manner and mitigate the spread of COVID-19".[132]

To achieve the goal of PHCs, ICAO promoted its PHC Implementation initiative using the tools it had developed during the pandemic, i.e. the Implementation Packages (**'iPacks'**).[133] iPacks are a collection of resources provided by ICAO to assist states, aviation service providers, supply chain stakeholders, and all personnel related to aviation. iPacks contain everything needed to implement ICAO provisions, including relevant guidance materials, standardised training, web

[132] ICAO, *Public Health Corridor (PHC) Implementation* (ICAO) <www.icao.int/safety/CAPSCA/Pages/Public-Health-Corridor-(PHC)-Implementation-.aspx> accessed 10 February 2022, emphasis added; ICAO, *Establishing a Public Health Corridor* <www.icao.int/secretariat/TechnicalCooperation/Pages/establishing-a-public-health-corridor.aspx> accessed 3 April 2022.

[133] Ibid.

tools, contact with subject matter experts, and guidance for the procurement of necessary infrastructure. The cost of iPacks varies between US$ 18,000 and 30,000. Despite having been developed in the context of the pandemic, iPacks do not necessarily address pandemic related matters but also extend to broader subjects, such as developing a national aviation safety plan and establishing a regulatory framework for unmanned aircraft systems.[134]

In relation to the IRC mechanism of travel corridors, the focus is here placed on the iPack Establishing a PHC.[135] The PHC iPack includes specific travel corridor guidance, frameworks and decision-making aids and virtual workshops, in addition to other tools designed to support State authorities in establishing travel corridors while minimising transmission and risk. The target audience of the iPack are mainly national civil aviation authorities and/or public health authorities, as well as any other relevant national authorities such as airport and aircraft operators.[136] The PHC iPack costs $25,050 USD for deployment in a single state,[137] which seems a reasonable fee compared to states' financial means. Still, the uptake of the PHC iPack has been quite low to date. As of June 2021, only seven PHC iPacks have reportedly been deployed worldwide including two by APAC states.[138] It has not been possible to identify which two APAC countries have deployed the PHC iPack.

7.1.2. APAC COVID-19 Contingency and Recovery Planning Group (ACCRPG)

As previously mentioned in **section 4.1.3**, ACCRPG is an expert group created to support APAC states' civil aviation authorities in the management of civil aviation during the pandemic. ACCRPG's meetings serve as a forum for discussion and information sharing between aviation authority representatives and international organisations. Eleven such meetings have been held

[134] ICAO, *Implementation Package (iPack)* (ICAO) <www.icao.int/secretariat/TechnicalCooperation/Pages/iPACK.aspx> accessed 10 February 2022.

[135] ICAO, *Implementation Package (iPack)* (ICAO) <www.icao.int/secretariat/TechnicalCooperation/Pages/iPACK.aspx> accessed 10 February 2022.

[136] ICAO, *Establishing a Public Health Corridor* (ICAO) <www.icao.int/secretariat/TechnicalCooperation/Pages/establishing-a-public-health-corridor.aspx > accessed 10 February 2022.

[137] ICAO, *Establishing a Public Health Corridor* (ICAO) <www.icao.int/secretariat/TechnicalCooperation/Pages/establishing-a-public-health-corridor.aspx > accessed 10 February 2022.

[138] ICAO, 'Summary of the 17th Telecom of the Aviation Safety Implementation Assistance Partnership' (ICAO ASIAP, 27 July 2021) <www.icao.int/safety/ASIAP/Documents/Summary%20of%2017th%20ASIAP%20telecon%2027%20July%202021.pdf> accessed 10 February 2022, 9.

as of March 2022,[139] discussing topics ranging from states' individual experiences in relation to the management of the pandemic to developing ways to re-establish air connectivity.[140]

It is reported that the ACCRPG has helped to facilitate ICAO's development, and APAC states' implementation, of iPacks,[141] though not, it seems, their overall uptake by states. Indeed, although state participation in ACCRPG meetings is common, this has failed to result in high uptake of iPacks by APAC countries. As previously mentioned, only two APAC countries have implemented or are in the process of implementing the PHC iPack.[142] Overall, as of July 2021, a mere six countries, namely, Lao People's Democratic Republic (Lao PDR), Nepal, Bhutan, Papua New Guinea, Fiji, and the Solomon Islands, have reportedly implemented or are in the process of implementing other iPacks that could form the basis for the future implementation of travel corridors. (**Table 8**)

State	iPack	Status
Lao PDR	Strengthening National Air Transport Facilitation Committees for the Restart and the Resilience of Civil Aviation	Completed
Nepal	Aviation Safety Risk Management related to COVID-19 for CAAs	Completed
Bhutan	COVID-19 Aviation Security Quality Control Oversight	In progress
Papua New Guinea	COVID-19 Aviation Security Quality Control Oversight	In progress
Fiji	Aerodrome Restart	In progress
Solomon Islands	Strengthening National Air Transport Facilitation Committees for the Restart and the Resilience of Civil Aviation	In progress

Table 8. Use of iPacks in Asia

[139] ICAO, *ACCRPG Meetings* (ACCRPG) <www.icao.int/APAC/ACCRPG/Pages/ACCRPGMeetings.aspx> accessed 10 February 2022.

[140] Civil Aviation Administration of China, 'CAAC Attends the Third Teleconference of ACCRPG' (CAAC News, 16 July 2020) <www.caac.gov.cn/en/XWZX/202007/t20200716203647.html> accessed 10 February 2022.

[141] ACCRPG, *First Annual Report,* accessed 12 February 2022, 3, pt 3.3.

[142] ICAO, 'Summary of the 17th Telecom of the Aviation Safety Implementation Assistance Partnership' (ICAO ASIAP, 27 July 2021) <www.icao.int/safety/ASIAP/Documents/Summary%20of%2017th%20ASIAP%20telecon%2027%20July%202021.pdf> accessed 12 February 2022, 9.

7.2. ASEAN Travel Corridor Arrangement Framework

An ASEAN Travel Corridor was first announced in the ASEAN Declaration on an ASEAN Travel Corridor Arrangement Framework of November 2020.[143] However, and despite an initial timeline that proposed implementing the arrangement by the end of March 2021, the Travel Corridor has yet to be implemented.[144] Given this, in what follows we provide information about the Travel Corridor's current state of implementation and its envisaged features.

The ASEAN Coordinating Council (**'ACC'**) is in charge of coordinating and overseeing the development of the ASEAN Travel Corridor, taking into account existing bilateral arrangements of ASEAN member states. The ASEAN Travel Corridor Arrangement Framework (ATCAF) was adopted by the 29th Meeting of the ACC on 2 August 2021. ASEAN member states have agreed for a comprehensive ASEAN Travel Corridor Arrangement to be put in place to facilitate essential business travel among ASEAN member states, addressing such things as domestic institutional mechanisms (including focal points), domestic process and documentation requirements.[145] It is envisaged that digital solutions will be used to promote safe and seamless travel in Southeast Asia during and after the pandemic. This includes contactless immigration processes, payment modes and implementing interoperable mobile contact tracing applications.[146] Moreover, during the 25th Meeting of the ASEAN Tourism Ministers on 19 January 2022, ASEAN transport ministers commended the work of the Ad Hoc Task Force on the Operationalisation of ASEAN Travel Corridor Arrangement Framework (ATCAF) and tasked the ASEAN national tourism organisations to build on it and adapt it for leisure travel as well.[147]

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[143] ASEAN, 'ASEAN Declaration on an ASEAN Travel Corridor Arrangement Framework' (ASEAN Statements, 12 November 2020) <https://asean.org/asean-declaration-on-an-asean-travel-corridor-arrangement-framework/> accessed 12 February 2022.

[144] Brendan Sobie, 'ASI White Paper Update: Restarting International Air Travel Within ASEAN' (Singapore University of Technology and Design, June 2021) <https://asi.sutd.edu.sg/white-papers/white-paper-update/> accessed 12 February 2022.

[145] ASEAN, 'ASEAN Declaration on an ASEAN Travel Corridor Arrangement Framework' (ASEAN Statements, 12 November 2020) <https://asean.org/asean-declaration-on-an-asean-travel-corridor-arrangement-framework/> accessed 12 February 2022.

[146] South Asia Development Solutions, 'ASEAN Leaders Commit to Use Digital Tools to Spur Tourism' (Asian Development Bank, 13 November 2020) <https://seads.adb.org/news/asean-leaders-commit-use-digital-tools-spur-tourism> accessed 15 February 2022.

[147] ASEAN, 'Joint Media Statement from 25th Meeting of ASEAN Tourism Ministers' (ASEAN, 19 January 2022) <https://asean.org/wp-content/uploads/2022/01/JMS-25th-M-ATM-Final_Adopted.pdf> accessed 12 February 2022, 2, para 11.

The failure to see the ASEAN Travel Corridor into completion within the original timetable could be the result of ASEAN's consensus-based decision-making system, along with other factors examined in **section 7.4.2** below.[148] At the same time, some ASEAN member states have pursued bilateral and unilateral travel corridor measures as seen immediately below.

7.3. Bilateral level

Bilateral travel corridor arrangements take different names, including Reciprocal Green Lane, Fast Lane, Safe Travel Corridor Arrangement, Air Travel Arrangement, Vaccinated Travel Lane and Travel Bubble (**Table 8**). At the bilateral level, a travel corridor provides for differentiated measures to participating countries, facilitating travel from one country to another and vice versa. In the APAC region, India has been particularly active in seeking travel corridor arrangements. As of December 2021, India has such arrangements in place with 35 countries, 17 of which are other APAC states.[149]

For countries that have generally closed their borders to international travel, travel corridors may be one of the only forms of international travel that is allowed to and from them. For instance, Brunei Darussalam closed its borders to international travel by removing all countries from its Travel Green List on 1 January 2022.[150] The Reciprocal Green Lane for Essential Travel Between Brunei Darussalam and Singapore (September 2020) then became one of the few ways residents of Singapore and Brunei may travel for business or official purposes between the two countries.[151]

By contrast, for countries that have generally opened their borders to international travel, travel corridors provide for streamlined procedures for international travel. A notable benefit of travel corridors is the faculty they grant passengers to undertake COVID-19 tests in lieu of quarantine. Generally, travel corridors will impose requirements relating to sponsorship by a government

[148] In a nutshell, such other factors include the weak enforcement and compliance mechanisms of ASEAN, stemming from principle of non-interference in the member countries' affairs, and the diversity of national interests of the members, which combined result in ASEAN's inability to speak as one.

[149] Ministry of Civil Aviation, *About Air Transport Bubbles* (Government of India) <www.civilaviation.gov.in/en/about-air-transport-bubbles> accessed 15 February 2022.

[150] The Straits Times, 'Brunei removes all countries from Travel Green List, including Singapore, due to Omicron threat' (The Straits Times, 30 Dec 2021) <www.straitstimes.com/asia/se-asia/brunei- removes-all-countries-from-travel-green-list-including-singapore-due-to-omicron-threat> accessed 14 February 2022.

[151] See below, Sections 7.3 and 7.4 (States, Singapore: VTLs).

agency or company, COVID-19 tests, relevant documentation, travel insurance and, potentially, a limited self-isolation on arrival.

Name	Actors
Reciprocal Green Lane for Essential Travel Between Brunei Darussalam and Singapore[152]	Brunei, Singapore
Reciprocal Green Lane/Travel Corridor Arrangement (RGL/TCA) Singapore to Indonesia (Business and Official Purposes)[153]	Singapore, Indonesia
Indonesia-South Korea Travel Corridor Arrangement[154]	Indonesia, South Korea
Safe Travel Corridor Arrangement (Indonesia and UAE)[155]	Indonesia, UAE
Travel Corridor Arrangement/Fast Lane Indonesia-China[156]	Indonesia, China
Vaccinated Travel Lane (Land)[157]	Malaysia, Singapore

[152] Immigration & Checkpoints Authority (ICA), *RGL Overview* (Government of Singapore) <https://safetravel.ica.gov.sg/rgl/overview> accessed 15 February 2022; Reciprocal Green Lane for Essential Travel Between Brunei Darussalam and Singapore <www.mfa.gov.bn/Shared%20Documents/Annex.pdf> accessed 15 February 2022; Prime Minister's Office, *Travel Applications* (Brunei Darussalam) <www.pmo.gov.bn/travelportal/Home.aspx> accessed 15 February 2022.

[153] Ministry of Foreign Affairs, Republic of Indonesia and Ministry of Foreign Affairs, Republic of Singapore, 'Joint Press Statement by H.E. Retno L.P. Marsudi Minister for Foreign Affairs of the Republic of Indonesia and H.E. Dr Vivian Balakrishnan Minister for Foreign Affairs of the Republic of Singapore on the Reciprocal Green Lane/Travel Corridor Arrangement for Essential Business and Official Travel Between Indonesia and Singapore' (Government of Singapore, 12 October 2020) <www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2020/10/20201012---JPS-RGL-TCA-Indonesia-and-Singapore> accessed 14 February 2022; Embassy of the Republic of Indonesia in Singapore, 'Reciprocal Green Lane/Travel Corridor Arrangement (RGL/TCA) Singapore to Indonesia (Business and Officials Purposes)' (Government of Indonesia, 4 November 2020) <https://kemlu.go.id/singapore/en/news/9189/reciprocal-green-lanetravel-corridor-arrangement-rgltca-indonesia-ke-singapura-kunjungan-dinas-dan-usaha> accessed 15 February 2022; Ayman Falak Medina, 'The Indonesia-Singapore Reciprocal Green Lane: Salient Features' (ASEAN Briefing, 3 November 2020) <www.aseanbriefing.com/news/the-indonesia-singapore-reciprocal-green-lane-salient-features/> accessed 15 February 2022.

[154] Ministry of Foreign Affairs of the Republic of Indonesia, 'Indonesia-South Korea Travel Corridor Arrangement' (Government of Indonesia, 24 August 2020) <https://kemlu.go.id/portal/en/read/1602/halaman_list_lainnya/indonesia-south-korea-travel-corridor-arrangement> accessed 15 February 2022.

[155] Embassy of the Republic of Indonesia in Abu Dhabi, United Arab Emirates (PEA), 'Indonesia and United Arab Emirates Facilitate Travel Access through Safe Travel Corridor Arrangement (STCA)' (Government of Indonesia, 3 August 2020) <https://kemlu-go-id.translate.goog/abudhabi/id/news/8412/indonesia-dan-uni-emirat-arab-permudah-akses-perjalanan-melalui-safe-travel-corridor-arrangement-stca?_x_tr_sl=id&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc> accessed 15 February 2022.

[156] Ministry of Foreign Affairs of the Republic of Indonesia, 'Travel Corridor Arrangement/Fast Lane Indonesia-China' (Government of Indonesia, 26 August 2020) <https://kemlu-go-id.translate.goog/portal/id/read/1603/halaman_list_lainnya/travel-corridor-arrangementfast-lane-indonesia-tingkok?_x_tr_sl=id&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc> accessed 15 February 2022.

[157] MySafeTravel, *Vaccinated Travel Lane (VTL) - Frequently Asked Questions (MySafeTravel)* <https://faq.mysafetravel.gov.my/#faq1> accessed 14 February 2022; Immigration & Checkpoints Authority (ICA), *VTL*

Vaccinated Travel Lane (Air)[158]	Singapore, Malaysia, South Korea
Residents in the People's Republic of China using the Reciprocal Green Lane (RGL)/Singapore-China Fast Lane for Essential Travel Between the People's Republic of China and Singapore to Travel to Singapore[159]	Singapore, China
Reciprocal Green Lane/Business Track for Essential Travel Between Singapore and Japan160	Singapore, Japan
Air Transport Bubbles (India)[161]	India, Afghanistan, Australia, Bahrain, Bangladesh, Bhutan, Canada, Ethiopia, Finland, France, Germany, Iraq, Japan, Kazakhstan, Kenya, Kuwait, Maldives, Mauritius, Nepal, Netherlands, Nigeria, Oman, Qatar, Russia, Rwanda, Saudi Arabia, Seychelles, Singapore, Sri Lanka, Switzerland, Tanzania, Ukraine, UAE, UK, USA, Uzbekistan
Safe Travel Corridor[162]	UAE, Bahrain, Greece, Seychelles, Serbia

Table 9. Non-exhaustive list of bilateral corridors.

On the other hand, some bilateral initiatives have been mentioned many times without coming to any realisation. For instance, the Singapore-Hong Kong Air Travel Bubble was supposed to commence on 22 November 2020 but was deferred thrice and has yet to be enacted.[163]

(Land) for Travel to Malaysia (Government of Singapore) <https://safetravel.ica.gov.sg/vtl-land/outbound-travel> accessed 14 February 2022.

[158] Immigration & Checkpoints Authority (ICA), *Vaccinated Travel Lane (Air) Overview* <https://safetravel.ica.gov.sg/vtl/requirements-and-process> accessed 14 February 2022.

[159] Immigration & Checkpoints Authority (ICA), Terms & Conditions of SafeTravel Pass (For Residents in the People's Republic of China using the Reciprocal Green Lane (RGL)/Singapore-China Fast Lane for Essential Travel Between the People's Republic of China and Singapore to Travel to Singapore) (Government of Singapore) <https://safetravel.ica.gov.sg/china/rgl/terms-and-conditions> accessed 14 February 2022; Ministry of Foreign Affairs, Fast Lane (Government of Singapore) <www.mfa.gov.sg/Overseas-Mission/Guangzhou/Announcements/Fast-Lane> accessed 14 February 2022; Ministry of Foreign Affairs, 'Joint Press Statement by Ministry of Foreign Affairs and Ministry of Trade and Industry on the Singapore-China Fast Lane for Essential Travel' (Government of Singapore, 3 June 2020) <www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2020/06/20200603-SG-CHINA-Fast-Lane-Essential-Travel> accessed 14 February 2022; Embassy of the People's Republic of China in the Republic of Singapore, *FAQS on the China-Singapore Fast Lane* (Government of China, 14 June 2020) <www.mfa.gov.cn/ce/cesg/eng/lsfw/fhqz/t1788677.htm> accessed 14 February 2022.

[160] Ministry of Foreign Affairs, *Japan - Overview* (Government of Singapore) <www.mfa.gov.sg/Countries-Regions/J/Japan/Travel-Page> accessed 14 February 2022.

[161] Ministry of Civil Aviation, *About Air Transport Bubbles* (Government of India) <www.civilaviation.gov.in/en/about-air-transport-bubbles> accessed 15 February 2022.

[162] Arabian Business News, 'UAE expands list of 'safe travel' corridors as it eyes post-Covid tourism recovery' (Arabian Business News, 13 May 2021) <www.arabianbusiness.com/industries/travel-hospitality/ 463319-uae-expands-list-of-safe-travel-corridors-as-it-eyes-post-covid-tourism-recovery> accessed 15 February 2022.

[163] Kok Xinghui, 'Singapore-Hong Kong travel bubble: city state still hoping for quarantine-free travel, health minister says' (South China Morning Post, 24 November 2021) <www.scmp.com/week-asia/health-environment/article/3157188/singapore-hong-kong-travel-bubble-city-state-still> accessed 3 April 2022.

7.4. Unilateral level

7.4.1. Unilateral travel corridors

Unilateral travel corridors are similar to bilateral corridors but only facilitate travel in one direction. For instance, Japan's Business Track and Residence Track (currently suspended) provide for streamlined guidelines for entry by citizens and permanent residents of specified countries into Japan.[164] A similar approach is taken by Lao PDR through its Green Zone Plan.[165] Similarly to bilateral agreements, the implementation of travel corridors imposes sponsorship by a government agency or company, COVID-19 tests, relevant documentation, insurance and, potentially, self-isolation on arrival. For example, according to the Air Travel Pass ('**ATP**') developed by the Singapore government,[166] foreign short-term visitors including business and official travellers from Hong Kong, Macao, Mainland China and Taiwan could apply for an ATP for travel into Singapore regardless of vaccination status. Travellers were obligated to fulfil other requirements including being at their declared point of departure for 14 consecutive days before departing for Singapore, purchasing travel insurance, providing the relevant documentation or completing the relevant COVID-19 tests.[167] At the time, the ATP coexisted with Singapore's particular travel corridor arrangements for vaccinated short-term travellers called "Vaccinated Travel Lanes" ('**VTL**'). Currently (as at 18 April 2022), the ATP and VTL mechanisms are no longer in operation, having been replaced by the "Vaccinated Travel Framework" measure that largely enables resumption of air travel with minimum restrictions.[168]

[164] Ministry of Foreign Affairs, *Measures for Resuming Cross-Border Travel* (Republic of Japan) <www.mofa.go.jp/ca/cp/page22e000925.html> accessed 15 February 2022.

[165] Kristin Marino, '14 countries added in Laos Green Zone Plan' (Travel Daily (TD), 5 January 2022) <www.traveldailymedia.com/14-countries-added-in-laos-green-zone-plan/> accessed 15 February 2022.

[166] Immigration & Checkpoints Authority (ICA), *ATP Requirements & Process* (Government of Singapore) <https://safetravel.ica.gov.sg/atp/requirements-and-process> accessed 15 February 2022.

[167] Immigration & Checkpoints Authority (ICA), *ATP Requirements & Process* (Government of Singapore) <https://safetravel.ica.gov.sg/atp/requirements-and-process> accessed 15 February 2022.

[168] Immigration & Checkpoints Authority (ICA), *Travelling to Singapore - Overview* (Government of Singapore) <https://safetravel.ica.gov.sg/arriving/overview> accessed 18 April 2022.

Box 2. Case study: Singapore's Vaccinated Travel Lanes (VTL)

The term VTL referred to the individual travel corridor arrangements put in place by the government of Singapore. Singapore's VTLs could be bilateral or unilateral. Bilateral VTLs allowed for two-way quarantine-free travel between Singapore and another country for fully vaccinated travellers on designated flights. Unilateral VTLs allowed for one-way quarantine-free travel between Singapore and the other country for fully vaccinated travellers. Many VTLs were in fact unilateral. The majority of VTLs allowed eligible foreign travellers into Singapore but not vice versa.

The creation of a VTL often involved discussion among various administrative bodies. For instance, the VTL between the Republic of Korea and Singapore on 15 November 2021 involved the Ministry of Foreign Affairs, the Ministry of Culture, Sports and Tourism, the Ministry of Health and Welfare, and the Korean Disease Control and Prevention Agency.[169]

While VTLs were mostly by air, there was a unique land VTL between Singapore and Johor Bahru, Malaysia, owing to the specific geographical features and strong bilateral ties between the two countries.[170] The Vaccinated Travel Lane (Land) Between Singapore and Malaysia allowed fully-vaccinated citizens and permanent residents of both countries to travel from Singapore to the Malaysian city of Johor Bahru quarantine-free and vice versa.

However, there had been temporary suspensions of sales of VTL designated flights or lower quota of such flights, and even the suspension of entire VTL arrangements, when infection rates in Singapore or the other countries spike.

From 31 March 2022, Singapore's VTLs are no longer in effect and have been replaced by the Vaccinated Travel Framework.[171]

[169] Ministry of Foreign Affairs, 'Quarantine-free Travel to Singapore to be Available from 15 November' (Republic of Korea, Press Releases, 15 October 2021) <www.mofa.go.kr/eng/brd/m_5676/view.do?seq=321872&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=1&titleNm=> accessed 15 February 2022; Ministry of Transport, 'Singapore and The Republic of Korea to Jointly Launch Vaccinated Travel Lanes' (Government of Singapore, News Releases, 8 October 2021) <www.mot.gov.sg/news-centre/news/detail/singapore-and-the-republic-of-korea-to-jointly-launch-vaccinated-travel-lanes> accessed 15 February 2022.

7.4.2. Travel Sandboxes

Some ASEAN countries like Indonesia, Vietnam and Thailand, have unilaterally provided for streamlined international travel to specific parts of their territory which are usually tourist destinations. This can be an important first step for a full re-opening of borders. For instance, in January 2022, Indonesia opened international travel into the islands of Bintan and Batam for fully vaccinated travellers from certain countries.[172] In March 2022, Indonesia extended entry in Bali to fully vaccinated international travellers from all countries.[173] Finally, on 21 March 2022, Indonesia announced the removal of all quarantine requirements for all arrivals in the country.[174] A similar opening to fully vaccinated travellers can be seen through Vietnam's pilot program.[175]

For Thailand, a travel sandbox was a precursor to free movement throughout the rest of the country. After remaining for seven days in Phuket, Samui or Pattaya, fully vaccinated international travellers are able to travel throughout Thailand.[176] This was since effectively superseded by the "Test and Go" programme that allows for immediate travel without sandbox stay.[177]

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[170] Prime Minister's Office, 'Singapore and Malaysia to launch Vaccinated Travel Lane (Land)' (Government of Singapore, 24 November 2021) <www.pmo.gov.sg/Newsroom/Singapore-and-Malaysia-to-launch-VTL-Land -Nov-2021> accessed 15 February 2022.

[171] Government of Singapore, Facilitating the resumption of travel using the Vaccinated Travel Framework (6 April 2022) <https://www.gov.sg/article/facilitating-the-resumption-of-travel-using-the-vaccinated-travel-framework> accessed 17 April 2022.

[172] Indonesia Tourism, *Frequently Asked Questions Regarding Batam Bintan - Singapore Travel Bubble* (Ministry of Tourism, Republic of Indonesia) <www.indonesia.travel/gb/en/news/frequently-asked-quest ions-regarding-batam-bintan-singapore-travel-bubble> accessed 3 April 2022.

[173] Indonesia Tourism, *Latest Travel Regulations to Enter Bali as of 23 March 2022* (Ministry of Tourism, Republic of Indonesia) <www.indonesia.travel/gb/en/news/latest-travel-regulations-to-enter-bali> accessed 3 April 2022.

[174] Reuters, 'Indonesia scraps COVID-19 quarantine for overseas arrivals' (Channel News Asia, 21 March 2022) <www.channelnewsasia.com/asia/indonesia-scraps-covid-19-quarantine-overseas-arrivals- 2577231> accessed 3 April 2022.

[175] VietnamPlus, 'Vietnam has grounds for complete reopening to int'l tourists from May: ministry' (VietnamPlus, 25 January 2022) <https://en.vietnamplus.vn/vietnam-has-grounds-for-complete-reopening-to-intl-tourists-from-may-ministry/221210.vnp> accessed 15 February 2022; VietnamPlus, 'Vietnam welcomes nearly 9,000 international tourists under pilot programme' (VietnamPlus, 9 February 2022) <https://en.vietnamplus.vn/vietnam-welcomes-nearly-9000-international-tourists-under-pilot-programme/221823.vnp> accessed 15 February 2022; Dezan Shira & Associates, 'COVID-19 in Vietnam: Travel Updates and Restrictions' (Vietnam Briefing, 16 March 2022) <www.vietnam-briefing.com/news/covid-19-vietnam-travel-updates-restrictions.html/?hilite=%27restrictions%27> accessed 15 February 2022.

[176] Thai Embassy, *Test and Go Thailand* (Siam Legal International) <www.thaiembassy.com/travel-to-thailand/test-and-go-thailand> accessed 17 March 2022.

[177] Thai Embassy, *How to Travel to Thailand in 2022* (Siam Legal International) <https://www.thaiembassy.com/travel-to-thailand/how-to-travel-to-thailand-in-2022> accessed 15 April 2022.

8. Vaccination certification

Section 8 discusses the attempts at establishing recognised vaccination certification at the multilateral, regional and bilateral level. The predominant approach currently is the mutual recognition of vaccination certificates by states on a bilateral or unilateral basis, rather than universal or regional harmonisation in this respect. Our research indicates that the following forms of IRC have been used to promote multilateral, regional and bilateral recognition of vaccination certification: **Mutual recognition agreements**, **Soft law**, **Inter-governmental organisations and Transnational private regulation**.

Mechanism	Actor	Level	Status	Types of IRC (extended)
Doc 10152	ICAO	Multilateral	Active	Soft law
Visible Digital Seals for public health proofs	ICAO	Multilateral	Active	Soft law
IATA Travel Pass Program	IATA	Multilateral	Active	Soft law; Transnational private regulation
Various ASEAN Meetings	ASEAN	Regional	Active	Inter-governmental organisations
EU Digital COVID-19 Certificate	EU – various Asian states	Bilateral	Active	Mutual recognition agreements
Mutual Recognition of COVID-19 Vaccination Agreements	Various Asian states	Bilateral	Active	Mutual recognition agreements

Table 10. Summary of vaccination certification mechanisms with OECD IRC categories.

8.1. ICAO

8.1.1. CAPSCA Manual on COVID-19 Cross-border Risk Management (Doc 10152)

As mentioned above, CAPSCA, in collaboration with CART, has developed the Manual on COVID-19 Cross-border Risk Management, also called “Doc 10152”. This section focuses on Doc 10152’s content regarding vaccination certification. In it, ICAO refers to the WHO. The latter does not recommend the issuance of an immunity passport, but rather encourages states to record proof of COVID-19 vaccination within documentation in accordance with national

policies.[178] ICAO thus recommends the use of the WHO International Certificate of Vaccination or Prophylaxis as an international standardised vaccination certificate,[179] but also refers to other potential solutions, such as a virtual vaccination pass. Based on such certificates, ICAO has suggested that vaccinated individuals may be exempted from testing and/or quarantine measures, in accordance with each state's accepted risk threshold, national framework and pandemic situation. However, ICAO has opposed any health passports based on vaccination.[180] These health passports were discussed when effective vaccines against COVID-19 first arrived. At that time, the question of making vaccination a mandatory requirement for international travel was strongly resisted by the international community as being discriminatory due to limited vaccine access and the potential to limit the freedom of movement.[181]

Following Recommendation 17 of the CART list of recommendations, as revised in October 2021,[182] ICAO lists the minimum set of protocols for proof of vaccination, to facilitate states' recognition and harmonisation of their use for air travel (the list is non-exhaustive).[183] ICAO encourages states to implement and recognise vaccination certificates based on these protocols. States should also ensure that such certificates are secure, trustworthy, verifiable, convenient to use, compliant with data protection legislation and internationally operable.[184] Overall, ICAO has encouraged states to implement any procedure to facilitate travel by: making available tools that allow travellers to submit travel-related health certificates; informing travellers of the requirements

[178] ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022, 3-23, para 3.6.4.1-3.6.4.3.

[179] Ibid., accessed 16 February 2022, 3-15, para 3.3.8.7.

[180] Here, health passport is to be understood as a passport which is delivered following COVID-19 vaccination, and which is a mandatory document for air travel. In other words, in this hypothesis, a traveller would have to be vaccinated to be allowed to travel by air internationally. This solution discussed among the different aviation stakeholders has been absolutely rejected by the international community, including WHO and ICAO.

[181] Ibid., accessed 16 February 2022,3-16, para 3.3.9.4; Alex Jarman, 'IATA's Travel Pass: How Digital Health Passports Will Shape Travel's Recovery' (Euromonitor International, 4 January 2021) <www.euromonitor.com/article/iatas-travel-pass-how-digital-health-passports-will-shape-travels-recovery-2> accessed 17 February 2022.

[182] ICAO, *Recommendations* (CART) <www.icao.int/covid/cart/Pages/Recommendations-III.aspx> accessed 16 February 2022; cf March 2020 version cited in Vicky Karantzavelou, 'ICAO Council approves new pandemic response and recovery measures' (Travel Daily News, 15 March 2021) <www.traveldailynews.com/post/icao-council-approves-new-pandemic-response-and-recovery-measures> accessed 16 February 2022.

[183] ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022, 3-15, para 3.3.8.5.

[184] ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022, 3-15, para 3.3.8.7.

with regards to testing, vaccination and verification at international airports; providing the necessary guidance, resources and support to assist all actors in the air travel field; and ensuring that these processes are in full compliance with applicable laws and regulations on data protection and privacy.[185]

8.1.2. Visible Digital Seals for public health proofs

In 2016, ICAO developed the Visible Digital Seals ('**VDS**'), having in mind that such digital seals could be issued fast and would ensure the authenticity and integrity of the documents they verify, while keeping issuance costs low. This system, commonly identified by the presence of QR codes on official documents, was used at the time to secure visas.[186] In 2021, 145 countries were using this technology for e-passports.[187]

In August 2021, WHO published its Technical Guidance on Digital Documentation of COVID-19 Certificates. In a nutshell, this guidance describes the Digital Documentation of COVID-19 Certificates: Vaccination Status ('**DDCC:VS**')[188]—which uses a technology similar to the VDS—and recommends its adoption.[189] At the same time, ICAO started to adapt its VDS to be used as proof of health in relation to travel in the Visible Digital Seals for Non-Constrained environments ('**VDS-NC**'), which is compatible with the DDCC:VS.[190] Since the VDS-NC relies on the existing ICAO model already implemented in many countries, its adoption by these countries would reduce infrastructure and training costs for border officials. In addition, the VDS-NC may be directly linked

[185] Ibid., accessed 16 February 2022, 3-15, para 3.3.8.10.

[186] ISO/IEC/JTC1/SC17/WG3/TF5 for the New Technologies Working Group (NTWG), Working group of the ICAO Technical Advisory Group on the Traveller Identification Programme (TAG/TRIP), *Visible Digital Seals for Non-Electronic Documents - Visas, Technical Report* (ICAO, version 1.31, December 2016) <www.icao.int/Security/FAL/TRIP/Documents/TR%20-%20Visible%20Digital%20Seals%20for%20Non-Electronic%20Documents%20V1.31.pdf> accessed 13 February 2022, 4.

[187] UNESCAP, *Quick Guide on Digital COVID-19 Certificates: Re-enabling Cross-Border Travel* (WTTC, 2021) <https://repository.unescap.org/bitstream/handle/20.500.12870/3955/ESCAP-2021-MN-Quick-Guide-Digital-COVID-19-Certificates.pdf?sequence=1&isAllowed=y> accessed 14 March 2022, 4.

[188] 'Digital Documentation of COVID-19 Certificates: Vaccination Status', also called 'Smart Vaccination Certificate'.

[189] WHO, *Digital Documentation of COVID-19 Certificates: Vaccination Status - Technical Specifications and Implementation Guidance* (WHO, 27 August 2021) <https://apps.who.int/iris/bitstream/handle/10665/3_43361/WHO-2019-nCoV-Digital-certificates-vaccination-2021.1-eng.pdf> accessed 13 March 2022.

[190] Garrett Mehl, 'WHO Technical Specifications and Implementation Guidance on Digital Documentation of COVID-19 Certificates, Vaccination Status' (WHO member states briefing, online, 27 August 2021) <https://apps.who.int/gb/COVID-19/pdf_files/2021/27_08/Item2.pdf> accessed 12 February 2022.

to the already issued e-passports to facilitate travel.[191] Today, the VDS-NC is officially used in Australia[192] and Japan.[193] ICAO is also working with the EU to have the VDS-NC compatible with the EUDCC.[194]

In addition to these three VDS systems (WHO DDCC:VS, ICAO VDS-NC and EUDCC), two others have been developed in parallel. The first one, Digital Infrastructure for Vaccination Open Credentialing ('**DIVOC**'), is an open source software built for India, which has been largely implemented therein, as well as in the Philippines and Sri Lanka.[195] It follows the technology found in the DDCC:VS.[196] The second is called SMART Health Card and has been mainly deployed in North America, as well as in Sydney (Australia).[197]

The various VDS presented above may summarised as follows:

Name of VDS	Issuer	Compatibility	Jurisdiction
DDCC:VS	WHO	VDS-NC, DIVOC	Republic of Korea[198]
VDS-NC	ICAO	DDCC:VS	Australia
EUDCC[199]	EU	N/A	European Union, and, among

[191] UNESCAP, *Quick Guide on Digital COVID-19 Certificates: Re-enabling Cross-Border Travel* (WTTC, 2021) <https://repository.unescap.org/bitstream/handle/20.500.12870/3955/ESCAP-2021-MN-Quick-Guide-Digital-COVID-19-Certificates.pdf?sequence=1&isAllowed=y> accessed 14 March 2022, 4; Uniting Aviation, 'ICAO's Visible Digital Seal gains acceptance for global health proof verification' (ICAO, 30 August 2021) <https://unitingaviation.com/news/safety/icaos-visible-digital-seal-gains-acceptance-for-global-health-proof-verification/> accessed 12 February 2022.

[192] Australian Passport Office, *VDS-NC Checker* (Australian Government, Department of Foreign Affairs and Trade) <www.passports.gov.au/vds-nc-checker> accessed 14 February 2022.

[193] Since December 2021. See Japan's Vaccination Certificate of COVID-19 for international travel (version 1.1, 10 December 2021) <www.vmnvd.gov.lv/lv/media/12436/download> accessed 14 February 2022, 1.

[194] The EUDCC is presented in more details below. See ICAO, 'ICAO VDS gains acceptance for global health proof verification' (ICAO Newsroom, 27 August 2021) <www.icao.int/Newsroom/Pages/ICAO-VDS-gains-acceptance-for-global-health-proof-verification.aspx> accessed 14 February 2022.

[195] Lucy Yang, 'DIVOC - Understanding the Global COVID Certificate Landscape' (LF Public Health, 13 October 2021) <www.lfph.io/2021/10/13/divoc/>accessed 14 March 2022.

[196] UNESCAP, *Quick Guide on Digital COVID-19 Certificates: Re-enabling Cross-Border Travel* (WTTC, 2021) <https://repository.unescap.org/bitstream/handle/20.500.12870/3955/ESCAP-2021-MN-Quick-Guide-Digital-COVID-19-Certificates.pdf?sequence=1&isAllowed=y> accessed 14 March 2022, 4.

[197] SMART Health Cards, *What is SMART Health Card?* <https://smarthealth.cards/en/> and *U.S. SMART Health Card Issuers* <https://smarthealth.cards/en/issuers.html> accessed March 14, 2022. A table of summary is to be found under the EU Digital COVID-19 Certificate (EUDCC) below.

[198] UNESCAP, *Quick Guide on Digital COVID-19 Certificates: Re-enabling Cross-Border Travel* (WTTC, 2021) <https://repository.unescap.org/bitstream/handle/20.500.12870/3955/ESCAP-2021-MN-Quick-Guide-Digital-COVID-19-Certificates.pdf?sequence=1&isAllowed=y> accessed 14 March 2022, 9.

[199] See Section 8.4 (EU Digital COVID-19 Certificate (EUDCC)).

			others,[200] Turkey, Israel, Singapore, Taiwan, Thailand, New Zealand[201]
DIVOC	India	DDCC:VS	India, Philippines, Sri Lanka
SMART Health Card	USA	N/A	USA, Canada, Cayman Islands and Sydney, Australia

Table 11. Summary of VDS.

It is to be noted that the above listing of VDS covers the majority of states, but it is not exhaustive. Indeed, many countries have developed their own technologies which are not always compatible with the above VDS.

8.2. IATA Travel Pass Program

The IATA Travel Pass Program[202] is a mobile application aiming at facilitating air travel while meeting domestic requirements for COVID-19 tests or vaccines. It acts as a global registry of health requirements, provides information on authorised laboratories and testing centres and enables travellers to create a digital passport to easily receive and share their testing or vaccination certificates with airlines and authorities.

[200] The complete list of states having adhered to the EUDCC may be found here: European Commission, *EU Digital COVID Certificate* (EU Commission) <https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en> accessed 14 March 2022.

[201] Schengen Visa Info, 'New Zealand Is Now Officially Part of EU Digital COVID-19 Certificate System' (Schengen Visa Info News, 16 November 2021) <www.schengenvisainfo.com/news/new-zealand-is-now-officially-part-of-eu-digital-covid-19-certificate-system/> accessed 14 March 2022.

[202] IATA, *IATA Travel Pass for Travelers* (IATA) <www.iata.org/en/youandiata/travelers/iata-travel-pass-for- travelers/> accessed 14 March 2022. For more details on the IATA Travel Pass programme: IATA, 'IATA Travel Pass Key to Reopening Borders Safely' (IATA Press Releases, 23 November 2020) <www.iata.org/en/pressroom/pr/2020-11-23-01/> accessed 14 March 2022; IATA*, Fact Sheet: IATA Travel Pass* (IATA, 3 March 2021) <www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet---iata-travel-pass/> accessed 14 March 2022.

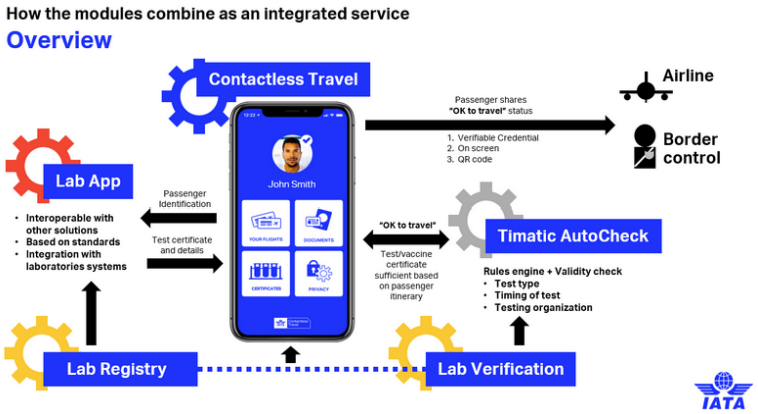

Figure 8. IATA Travel Pass operating.

(Source: IATA.)[203]

The IATA Travel Pass uses the above mentioned VDS-NC technology.[204] Only three countries have so far adhered to the IATA Travel Pass: Singapore,[205] Panama[206] and Saudi Arabia.[207] In addition, Australia has shown interest in using the IATA Travel Pass, while Spain is in the trial phase.[208]

Conversely, the program has been widely supported by airlines, with 59 airlines having adopted it as seen below:

[203] Wego Travel, 'IATA Travel Pass Aims to Help You Navigate International Travel Safely, Here's Everything You Need to Know About It' (Wego Travel Blog, 7 October 2021) <https://blog.wego.com/iata-travel-pass/> accessed 14 March 2022.

[204] IATA, *From Restart to Recovery - a blueprint for simplifying air travel* (IATA) <www.iata.org/globalassets/iata/programs/covid/blueprint-restart-to-recovery.pdf> accessed 14 February 2022, 16.

[205] IATA, 'Singapore Accepts IATA Travel Pass' (IATA Press Release nr 18, 6 April 2021) <www.iata.org/en/pressroom/pr/2021-04-06-01/> accessed 14 February 2022.

[206] IATA, 'Government of Panama Accepts IATA Travel Pass' (IATA press release, 21 April 2021) <www.iata.org/en/pressroom/pr/2021-04-21-02/> accessed 14 February 2022.

[207] IATA, 'Kingdom of Saudi Arabia Amongst the First to Accept IATA Travel Pass' (IATA press release nr 57, 18 August 2021) <www.iata.org/en/pressroom/2021-releases/2021-08-18-01/> accessed 14 February 2022.

[208] Wego Travel, 'IATA Travel Pass Aims to Help You Navigate International Travel Safely, Here's Everything You Need to Know About It' (Wego Travel Blog, 7 October 2021) <https://blog.wego.com/iata-travel-pass/> accessed 14 March 2022.

Figure 9. IATA Travel Pass participating airlines

(Source: IATA.)[209]

Aside from its Travel Pass, IATA has published several recommendations and statements regarding vaccination. They include recommendations that states reopen their borders to international air travel as soon as vulnerable groups have been vaccinated,[210] that vaccination should remain voluntary, and that international travel should not be conditioned on vaccination.[211] IATA has also expressed favour for a worldwide application of the EUDCC (See **Section 8.4** for a detailed presentation).[212]

[209] IATA, *IATA Travel Pass for Travelers* (IATA) <www.iata.org/en/youandiata/travelers/iata-travel-pass-for-travelers/> accessed 14 February 2022.

[210] IATA, *Vaccines and Air Travel - Position Paper* (IATA, December 2020) <www.iata.org/contentassets/5c8786230ff34e2da406c72a52030e95/vaccines-and-air-travel-position-paper.pdf> accessed 14 February 2022.

[211] IATA, *Safely Reopening Borders: Facilitating Air Travel for Vaccinated Passengers - Position Paper* (IATA) <www.iata.org/contentassets/28ad0c2b1e4e454b88462e612917116a/facilitating-air-travel-for-vaccinated-passengers.pdf> accessed 14 February 2022.

[212] IATA, *IATA recommendations for vaccine certificate specifications* (IATA, 7 September 2021) <www.iata.org/contentassets/28ad0c2b1e4e454b88462e612917116a/iata-recommendations-for-vaccine-certificate-specifications.pdf> accessed 14 February 2022.

Box 3. Case study: Domestic implementation of IATA Travel Pass in Singapore

Singapore having recognised the IATA Travel Pass program, passengers may use the app to travel to and from Singapore. Such proof is accepted by Singapore's health and border control authorities as a valid form of vaccination certification. Hence, immigration officers are able to scan the QR code and the information it contains is automatically accessible to the airline operating the flight, provided the latter is taking part in the IATA Travel Pass program.[213]

8.3. ASEAN

In March 2021, the ASEAN Secretariat began discussions on a common digital vaccine or health passport. A proposal to create such a certificate was discussed at the ASEAN Economic Ministers Meeting. This meeting aimed at increasing the reopening of sectors which have been hit the most by the pandemic, such as tourism, as soon as possible. At the opening of the 40th ASEAN Tourism Forum in January 2022, Cambodia's Prime Minister repeated that his country was supporting ASEAN's attempts to build a common regional system for vaccine certification.[214]

This regional digital vaccine certificate would harmonise travellers' COVID-19 vaccination status, by ensuring the mutual recognition of all vaccines being administered by ASEAN countries having a system in place to verify that vaccination records are authentic. This initiative would likely further facilitate a resumption of air travel between ASEAN countries. As of today, vaccine certification in ASEAN countries is highly fragmented and operates on a bilateral or unilateral basis.[215]

[213] Lakeisha Leo, 'Travellers flying to Singapore can use IATA travel pass from May' (Channel News Asia, 5 April 2021) <www.channelnewsasia.com/singapore/iata-travel-pass-air-travellers-changi-airport-caas-196196> accessed 17 February 2022.

[214] Melinda Martinus, 'A Regional Digital Vaccine Certificate in ASEAN, Posthaste' (Fulcrum, 31 January 2022) <https://fulcrum.sg/a-regional-digital-vaccine-certificate-in-asean-posthaste/> accessed 14 March 2022.

[215] Melinda Martinus, 'A Regional Digital Vaccine Certificate in ASEAN, Posthaste' (Fulcrum, 31 January 2022) <https://fulcrum.sg/a-regional-digital-vaccine-certificate-in-asean-posthaste/> accessed 14 March 2022.

8.4. Bilateral level

Asian countries have been working with the European Commission on connecting their vaccination certification systems to the EU Digital COVID-19 Certificate ('**EUDCC**'). When successful, a country's vaccine certification will be recognised as equivalent to the EUDCC within the European Union (**'EU'**) and vice versa. On the EU side, this is enacted through an Implementing Decision (EU) on the Equivalence of COVID-19 certificates published by the European Commission. As of 12 February 2022, the EU has adopted equivalence decisions with Israel, Singapore, Taiwan, Thailand, Turkey, and the UAE.[216] On the opposite side, the other country may need to develop applications to read and create EUDCC-compatible certificates as seen in the case study of Singapore's Notarise below.

[216] EU Commission, *Implementing Decisions (EU) on the equivalence of COVID-19 certificates issued by non-EU countries* (EU Commission) <https://ec.europa.eu/info/publications/commission-implementing-decisions-eu-equivalence-covid-19-certificates-issued-non-eu-countries_en> accessed 14 March 2022.

Box 4. Case study: Singapore's Notarise[217]

The EU and Singapore have worked together to enhance the compatibility of their respective vaccination certificates. From November 2021, it is possible to have one's EUDCC recognized by the Singapore health system, and vice-versa.[218] Indeed, a vaccinated individual in Singapore does not need to present any notarised proof of his or her vaccination, since such proof is demonstrated via other local applications, such as the TraceTogether app.[219] To facilitate travellers going abroad, Singapore has thus developed a new local system called "Notarise". This system is a portal for travellers who were vaccinated in Singapore to get their Singapore vaccination certificate endorsed and authenticated by the Singapore Ministry of Health.[220] Notarisation in this sense affixes on the certificate EUDCC-compatible QR codes that can be read by the applications developed by the EU.

Similar mechanisms to ensure interoperability have been undertaken within ASEAN too. We mention two examples:

1. A traveller from Singapore to Indonesia can transfer his or her vaccination certificate from Singapore's TraceTogether to Indonesia's corresponding app PeduliLindungi.
2. A traveller from Malaysia to Viet Nam will need to undertake two actions: (1) get his or her Malaysian vaccination status certified by the Malaysian app MySejahtera; and (2) authenticate his or her vaccination status through the Vietnamese app PC-Covid.

That said, there are also ASEAN countries, such as Lao PDR, that do not have digital certificates or are still in the process of delivering digital COVID-19 vaccination certificates with a QR code.

[217] This case study is focused on the compatibility between EUDCC and the Notarise system. The question of compatibility with other VDS has not been explored.

[218] EEAS, 'Singapore connects to the EU Digital COVID certificate system (EUDCC)' (EEAS, 26 November 2021) <https://eeas.europa.eu/headquarters/headquarters-homepage/107982/singapore-connects-eu-digital-covid-certificate-system-eudcc_en> accessed 14 March 2022.

[219] The Singaporean digital application for contract tracing and displaying one's vaccination status. Similar to the Swiss Covid Cert app, the French TousAntiCovid or the German Corona-Warn-App.

[220] Notarise, *What is Notarise and other FAQs* (Notarise, 11 March 2022) <www.notarise.gov.sg/faq#fn1> accessed 17 February 2022.

PART C – Analysis

Having described the diverse IRC mechanisms and instruments in **PART B**, the purpose of **PART C** is to analyse the findings. **PART C** highlights the main characteristics of civil aviation IRC during the pandemic, as well as seek to explain the factors which have hampered effective international and regional IRC.

Section 9 explains that most IRC initiatives build on existing organisations or measures, but some have been established ad hoc in response to the pandemic. **Section 10** describes how all instruments have been of a soft law or private nature, and none have been legally binding. While this legally non-binding nature provides states with flexibility, it hinders the adoption of standardised practices and tools. This is also observed in the regional context, in which ASEAN has traditionally only cooperated by way of legally non-binding resolutions.

Moreover, while IRC traditionally focuses on governmental action and co-operation, **Section 11** explores how private actors have a very important role in influencing IRC. It also addresses the diverse ways by which said actors have engaged in or sought to influence civil aviation related IRC.

The research in this report further suggests that Asian states have preferred bilateral or unilateral action over multilateral and regional co-operation. **Section 12** describes the low engagement in multilateral or regional organizations by Asian states, as has their implementation of their measures. Further, it details the factors that have hampered international co-operation or the implementation of international guidelines. Some of these factors are not specific to the pandemic, while others are specifically related to the pandemic. The general factors identified are the lack of coordination, domestic fragmentation and lack of sufficient resources. The pandemic specific related factors have been different containment strategies, the changing nature of the pandemic, different access to vaccines and approaches to data privacy.

Finally, **Section 13** suggests that to better assess the effectiveness of current IRC mechanisms, more accountability should be introduced into IRC mechanisms and their members. In particular, two factors have been identified to be lacking or falling short: monitoring and ex post review, and transparency.

9. Working off existing measures or building from the ground up

9.1. Building on past experience

There is an extensive patchwork of pre-pandemic regulations surrounding international civil aviation, and in particular dealing with the effects of communicable diseases before the outbreak of COVID-19, which has been applied or adapted to the current pandemic.

At the outbreak of the pandemic, a declaration was adopted by the ICAO Council at the Fourth Meeting of the 219th Session on 9 March 2020.[221] In that declaration, ICAO urged its member states to participate in and use existing guidance, recommendations, regulations, networks and institutions. These include the SARPs, and other relevant international standards contained in the other Annexes to the Convention on International Civil Aviation, WHO recommendations and guidance, and CAPSCA.[222] More broadly, various international organisations and the wider civil aviation industry drew upon their previous experiences dealing with communicable diseases.

For instance, Alexandre de Juniac (then-IATA Director General and Chief Executive) stated that:

> "[t]ravellers should be reassured that the industry is prepared to deal with communicable diseases as a result of experiences with previous outbreaks."[223]

Indeed, CAPSCA draws on the experience gained following the 2003 Severe Acute Respiratory Syndrome (SARS) crisis,[224] the 2009 swine flu pandemic (caused by the H1N1 influenza virus) and, the 2014–2016 Ebola outbreak,[225] among others. In fact, Dr. Fang Liu (then-ICAO Secretary

[221] ICAO, 'Declaration adopted by the ICAO Council at the Fourth Meeting of the 219th Session on 9 March 2020 relating to the outbreak of novel coronavirus (COVID-19)' (ICAO, 9 March 2020) <www.icao.int/Security/COVID-19/Pages/Declaration.aspx> accessed 5 April 2022.

[222] Ibid.

[223] ICAO, 'Update on ICAO's efforts in the international Coronavirus response' (ICAO Newsroom, 10 January 2020) <https://www.icao.int/Newsroom/Pages/Update-on-ICAOs-efforts-in-the-international-Coronavirus-response.aspx> accessed 20 February 2022.

[224] ICAO North American, Central American and Caribbean Office (NACC), First Meeting of the Steering Committee of the ICAO Cooperative Arrangement for the Prevention of the Spread of Communicable Disease through Air Travel (CAPSCA) – Americas Project (RLA/08/901) (ICAO, 19 May 2009) <www.icao.int/Meetings/AMC/MA/CAPSCA_SCM1/capscascm01wp02.pdf> accessed 17 March 2022.

[225] ICAO, *Ebola* (ICAO) <www.icao.int/safety/CAPSCA/Pages/Ebola.aspx> accessed 1 April 2022.

General) also noted, in relation to the importance of co-operation, coordination, and the reliability of information to control the spread of contagions, that:

> "[t]he CAPSCA network is designed for this purpose, and its information is made rapidly available to key global aviation, medical, and travel organizations, as well as being posted online for prompt and easy access by anyone in the world."[226]

Further, the WHO's guidance on DDCC:VS and ICAO's VDS-NC both build upon the initial VDS technology. The latter was first introduced in 2016 in an effort to combat fraud and fraud-related activities, such as illegal immigration and human trafficking,[227] but was adapted to target vaccine certification during the pandemic. At the regional level, the ATWG[228] Quick Information Exchange Group was utilised by ASEAN to facilitate information sharing.

Additionally, private actors have also worked off their existing tools and networks. For instance, IATA's COVID-19 Travel Regulations Map and Destination Tracker is supported by its Timatic database and technology.[229] IATA first developed Timatic in 1963 to provide information regarding travel regulation rules.[230] IATA's travel pass initiative is also supported by Timatic and the existing IATA Contactless Travel App.[231]

9.2. Novel solutions built off existing networks

At the same time, the pandemic has posed unique challenges that were absent during previous outbreaks of communicable diseases, thus requiring that certain IRC efforts be built from the

[226] ICAO, 'Update on ICAO's efforts in the international Coronavirus response' (ICAO Newsroom, 10 January 2020) <www.icao.int/Newsroom/Pages/Update-on-ICAOs-efforts-in-the-international-Coronavirus-response.aspx> accessed 20 February 2022.

[227] ISO/IEC/JTC1/SC17/WG3/TF5 for the New Technologies Working Group (NTWG) - Working group of the ICAO Technical Advisory Group on the Traveller Identification Programme (TAG/TRIP), *Visible Digital Seals for Non-Electronic Documents - Visas, Technical Report* (ICAO, version 1.31, December 2016) <www.icao.int/Security/FAL/TRIP/Documents/TR%20-%20Visible%20Digital%20Seals%20for%20Non-Electronic%20Documents%20V1.31.pdf> accessed 13 February 2022.

[228] ASEAN Air Transport Working Group.

[229] IATA, *Timatic Solutions* (IATA) <https://iata.org.xy2401.com/publications/timatic/Pages/index.aspx.html> accessed 13 February 2022.

[230] IATA, 'Latest Travel Restrictions and Guidance' (IATA Newsletter, 21 November 2021) <www.iata.org/en/publications/newsletters/iata-knowledge-hub/latest-travel-restrictions-and-guidance/> accessed 1 April 2022.

[231] IATA, *IATA Travel Pass Q&A* (IATA) <www.iata.org/contentassets/2b02a4f452384b1fbae0a4c40e8a5d0c/travel-pass-faqs.pdf> accessed 3 March 2022.

ground. First, previous outbreaks were confined to specific regions. The 2014–2016 Ebola outbreak was largely confined to West Africa[232] while the 2003 SARS crisis to East and Southeast Asia.[233] By comparison, the pandemic has had profound impacts worldwide (See **Section 1**).

Second, the pandemic has lasted longer than previous outbreaks. For instance, the WHO declared the 2009 swine flu pandemic to have ended in one year and two months.[234] Similarly, the WHO declared that the SARS outbreak was contained worldwide approximately 5 months after it was first identified.[235] By contrast, the current pandemic is still ongoing at the time of writing of this report (20 April 2022), two years and one month after it was first declared.[236] Given that the pandemic was a result of a novel coronavirus, mechanisms and guidance that are new *in substance* were developed to tackle unprecedented problems, as seen in the examples below.

Beyond calling for the use of existing institutions and measures, the ICAO Council at the Fourth Meeting of the 219th Session established CART. As noted in the Letter of Transmittal attached to the CART Phase 1 report (27 May 2020), the report was a result of "an *unprecedented* collective effort which involved representatives from Member States" and various international organizations [emphasis added].[237] CART deals with unprecedented issues including the creation of travel corridors and restarting international civil aviation on a global scale.

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[232] Centre for Disease Control and Prevention, *2014-2016 Ebola Outbreak in West Africa* (CDC) <www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html> accessed 25 February 2022.

[233] Mely Caballero-Anthony, 'SARS in Asia: Crisis, Vulnerabilities, and Regional Responses' (2005) 45 Asian Survey 475.

[234] The WHO declared that it was a pandemic on 11 June 2009 and announced the end of the pandemic on 11 August 2010. See Centre for Disease Control and Prevention, *2009 H1N1 Pandemic Timelin*e (CDC) <https://www.cdc.gov/flu/pandemic-resources/2009-pandemic-timeline.html> accessed 5 March 2022.

[235] SARS was first identified in February 2003; see WHO, *Severe Acute Respiratory Syndrome (SARS)* (WHO) <www.who.int/health-topics/severe-acute-respiratory-syndrome#tab=tab_1> accessed 5 March 2022. The WHO declared that it was contained worldwide on 5 July 2003; see WHO, 'SARS outbreak contained worldwide' (News release, 5 July 2003) <www.who.int/news/item/05-07-2003-sars-outbreak-contained-worldwide> accessed 4 April 2022.

[236] The pandemic was first declared on 11 March 2020; See WHO, 'WHO Director-General's opening remarks at the media briefing on COVID-19' (WHO, 11 March 2020) <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> accessed 22 March 2022.

[237] ICAO, *Council Aviation Recovery Task Force (CART) - Report* (CART, 27 May 2020) <www.icao.int/covid/cart/Documents/CART%20Report%20Final.pdf> accessed 16 February 2022.

The creation of CRRIC[238] and CCRD[239] by ICAO and the ASEAN BioDiaspora Virtual Centre by ASEAN also reflect the unprecedented need for large-scale information sharing and reporting. Similarly, entirely new guidance and certification mechanisms were developed by private actors such as IATA and ACI. (See **Sections 5 & 6**).

Nonetheless, it should be noted that the creation of novel solutions has also been undergirded by existing networks and political ties. At the international level, participation in international organisations including ICAO and IATA in pre-pandemic times has facilitated co-operation during the pandemic. At the regional level, discussions surrounding international civil aviation during the pandemic were facilitated by ASEAN member states utilising several response mechanisms that had already been in place. (See **Section 3**)

At the bilateral level too, IRC efforts have been built off political and regulatory ties. Singapore and Malaysia had been in close touch already since the start of the pandemic, for instance by "expeditiously sharing information on cross-border cases".[240] Singapore and Malaysia also had VTLs both by land and air. This may be attributable to their historically close bilateral contact, owing to their joint history, geographical proximity and the high volume of travel between them each day. These are factors that have likely given the two countries a stronger impetus to further strengthen and enhance their bilateral co-operation during the pandemic.[241]

[238] COVID-19 Response and Recovery Implementation Centre.

[239] COVID-19 Contingency Related Differences.

[240] MOH, 'Singapore and Malaysia to Establish A Joint Working Group for the 2019 Novel Coronavirus' (Singapore Ministry of Health, 11 February 2022) <www.moh.gov.sg/news-highlights/details/singapore-and-malaysia-to-establish-a-joint-working-group-for-the-2019-novel-coronavirus> accessed 10 March 2022.

[241] D. Kanyakumari, 'Malaysian Health Minister announces joint working committee with Singapore to tackle novel coronavirus' (Channel News Asia, 11 February 2020) <www.channelnewsasia.com/asia/wuhan-coronavirus-malaysia-singapore-joint-working-committee-776426> accessed 10 February 2022.

10. Soft law or private regulatory nature of IRC

10.1.1. Generally

A majority of the IRC mechanisms observed in this report are voluntary soft law commitments, relying on consensus, goodwill and mutual trust. On the one hand, soft law (when compared to traditional rule-making) is more flexible, can be developed quickly and can be modified easily to adapt to new and emerging areas and emerging issues.[242] For instance, the CAPSCA Manual on COVID-19 Cross-border Risk Management (Doc 10152) is already at its third edition (October 2021) since its initial release in November 2020; whereas the CART High Level Cover Document has been revised multiple times to keep up to the fast pace of new information emerging on the pandemic. Given that the pandemic (and states' responses to it) has have evolved throughout, flexibility has been an integral part of regulatory co-operation in this field.

However, this soft law approach does not compel states to participate, share information, implement, or adopt any of the guidance, frameworks and standards developed. Even if participation in international multi-stakeholder forums is high, adoption of deliverables from those forums has been slow and varied. States are left to decide to what extent, if at all, to commit to IRC mechanisms.

10.1.2. Institutional limitations of ASEAN

Closely related to the lack of binding legal force, the ineffectiveness of the regional initiatives is also attributable to ASEAN's institutional weakness. Fundamentally, ASEAN is not a supranational organisation and has weak enforcement and compliance mechanisms. As a basic principle, decision-making in ASEAN is based on consultation and consensus. There is no voting procedure in ASEAN and consensus is sought through a no-objection response from all member states. As a result, a coordinated response is extremely difficult and time-consuming as it requires consensus from all member states.[243]

[242] See OECD, *Best Practice Principles*, accessed 5 April 2022, 56.

[243] Tam Chin Tiong, *ASEAN Focus, ASEAN and the EU Perspective: Brexit and Beyond* (Aug 2016 special edn, ASEAN Studies Institute 2016) <https://www.iseas.edu.sg/images/pdf/ASEANEUAUGISSUE.pdf> accessed 1 April 2022.

Further, ASEAN's principle of non-interference in internal affairs of member states has also resulted in the inability to speak as one when faced with economic and political difficulties that affect the bloc. Another hurdle lies in the distrust between ASEAN member states that is caused by inequality in standards of living

These weaknesses are manifest in the various mechanisms initiated by ASEAN.

First, the possibility of an ASEAN regional vaccination certification system was first raised at the ASEAN Economic Ministers Meeting in March 2021.[244] At the opening of the 40th ASEAN Tourism Forum (ATF), Cambodia's Prime Minister Hun Sen reiterated his support for ASEAN to study and develop a common ASEAN-wide system for vaccine certification.[245] Nonetheless, such rhetoric has yet to materialise tangible solutions. This is partially attributable to the lack of trust between governments of one another's standards for certificate-issuing authorities. Doubts regarding the authenticity of vaccination certificates arise owing to the disparaging standards and capabilities of health system in the region, as well as the credibility of their authorities. By contrast, the EU, a supranational organisation with coercive powers and the mandate to develop harmonised common rules, successfully rolled out the EU Digital COVID Certificate, which facilitates the free movement of EU citizens and recognises vaccine certificates from 33 non-EU countries.[246]

Second, despite already being in existence since August 2021, the ASEAN Travel Corridor Arrangement Framework never operationalised during the timeframe of our research.[247] Whereas progress to create a safe travel framework for intra-ASEAN travel remains slow, the EU has had a much more coordinated and efficient response. In May 2020, the European Union Aviation Safety Agency and the European Centre for Disease Prevention and Control issued joint guidelines to assure the health safety of air travellers and aviation personnel.[248] By October 2020,

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[244] Kentaro Iwamoto, 'ASEAN eyes digital vaccine certificate for post-COVID travel' (Nikkei Asia, 3 March 2021) <https://asia.nikkei.com/Economy/ASEAN-eyes-digital-vaccine-certificate-for-post-COVID-travel> accessed 10 April 2022.

[245] Melinda Martinus, 'A Regional Digital Vaccine Certificate in ASEAN' (Fulcrum, 31 January 2022) <https://fulcrum.sg/a-regional-digital-vaccine-certificate-in-asean-posthaste> accessed on 1 April 2022.

[246] European Commission, *EU Digital COVID Certificate* (EU Commission) <https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en> accessed 14 March 2022

[247] Jayant Menon, 'Time to Revisit an ASEAN Travel Bubble' *ASEAN Focus 38/2022* (ASEAN Studies Centre, March 2022) <https://www.iseas.edu.sg/wp-content/uploads/2022/03/ASEANFocus-Mar-2022-Final-LR-V2.pdf> accessed 1 April 2022, 25.

[248] EASA, 'Working to make European air travel safe during COVID-19' (International Airport Review, 22 June 2020) <www.internationalairportreview.com/article/119449/european-air-travel-safe-covid-19/> accessed on 1 April 2022.

a coordinated approach was established for EU member states to manage the restrictions on free movement in response to the COVID-19 pandemic.[249] The uncoordinated measures in ASEAN are primarily responsible for the slow recovery rates of air traffic in the region. Indeed, a 2022 study has indicated that the rates of recovery could improve much faster with coordinated measures than with uncoordinated measures.[250]

Third, while there exists a region-wide recovery framework, the ASEAN Comprehensive Recovery Framework contains hortatory guidelines. It is left up to the national governments to decide their own country-level measures taking into consideration their domestic interest.[251]

Evidently, the shortfalls of the ASEAN institution have allowed states to prioritise national interests over regional efforts to facilitate the recovery of international civil aviation. As critics have noted, ASEAN member states are "preoccupied with domestic challenges caused by the pandemic, thus putting aside efforts to strengthen regional co-operation".[252]

[249] European Commission, *Travel during the coronavirus pandemic* (EU Commission) <https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/travel-during-coronavirus-pandemic_en> accessed on 1 April 2022.

[250] Colin C H Law and Rungkaew Katekaew, 'COVID-19: ASEAN Aviation Policy and the Significance of Intra-regional Connectivity' (2022) 4(1) Journal of Asian Economic Integration 1.

[251] Melinda Martinus and Sharon Seah, 'ASEAN's COVID-19 Recovery Measures: Missing Opportunities for a Green Future' (2021) 92 ISEAS Perspective <www.iseas.edu.sg/articles-commentaries/iseas-perspective/2021-92-aseans-covid-19-recovery-measures-missing-opportunities-for-a-green-future-by-melinda-martinus-and-sharon-seah/> accessed April 1 2022.

[252] Melinda Martinus, 'ASEAN Enjoys Leadership Gains Amid the Coronavirus' (Fulcrum, 25 February 2021) <https://fulcrum.sg/asean-enjoys-leadership-gains-amid-the-coronavirus/> accessed on 1 April 2022.

11. Role of private actors in IRC

Although IRC traditionally focuses on states, the reality is that private actors significantly influence IRC, be it as full members in public-private partnerships, or "behind the scenes", as the providers of information, best practices or other guidance on which governments rely in their international rule-making processes. This section addresses the ways by which private actors have influenced IRC on civil aviation in the context of the pandemic.

The literature has long recognized the important role of private actors in IRC. As Abbott and Snidal point out, private actors play a "central role" and "regulatory responsibilities [are] shared among private actors as well as state agencies".[253] This broadly aligns with existing OECD literature. Indeed, the OECD has suggested that in "gather[ing] evidence and expertise that may go beyond their own jurisdiction", policy makers and regulators should:

> "engag[e] with relevant experts and public and *private* sector representatives and practitioners from around the world, complementing traditional stakeholder engagement" [emphasis added].[254]

The importance of private actors in IRC is also reflected in the inclusion of transnational private regulation (which relies on firms, non-governmental organisations, and epistemic communities) as an IRC category.[255]

In the specific context of the pandemic, the special role of private actors has also been recognized. For instance, the CART Phase I Report opined that:

> "a closer and continuous collaboration between ICAO and civil aviation industry … will be beneficial for information sharing and a harmonised global response suitable for all States, regions and stakeholders."[256]

Thus, it is well-established that private actors have an important role to play in IRC. The rest of this section explains how private actors have been vital in facilitating civil aviation IRC during the pandemic.

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[253] Kenneth W Abbott and Duncan Snidal, 'Strengthening International Regulation through Transnational New Governance: Overcoming the Orchestration Deficit' (2009) 42 Vanderbilt Journal of Transnational Law 501.

[254] See OECD, *Best Practice Principles*, accessed 28 February 2022, 46.

[255] Ibid, 62.

[256] ICAO, *Council Aviation Recovery Task Force (CART) - Report* (CART, 27 May 2020) <www.icao.int/covid/cart/Documents/CART%20Report%20Final.pdf> accessed 16 February 2022.

First, private actors have been heavily involved in IRC in a *consultative* capacity. For instance, IATA is not an official member of ICAO but rather an observer who offers "technical support" in ICAO committees.[257] Further, IATA sits as the representative organisation for airlines in ICAO and can table papers and make interventions on technical points.[258] The volume of publicly available data regarding civil aviation during the pandemic published on the IATA website suggests that IATA's role in collecting information through its network of member airlines is also noteworthy. This has also been confirmed through our interviews with IATA representatives.

Many other private actors have played a similarly important role. In fact, the ICAO CART Take-off guidance was developed in collaboration with experts from the following private sectors: Arab Civil Aviation Organization (ACAO), Airports Council International (ACI), Civil Air Navigation Services Organisation (CANSO), International Air Transport Association (IATA) and International Coordinating Council of Aerospace Industries Associations (ICCAIA).[259] The importance of private actors lies in their technical capabilities and specialised industry-specific knowledge that can enhance rule-making efforts by states.

Second, private actors are also involved in encouraging the *implementation* of international standards, regulations, and guidance. When addressing the implementation of PHCs, CAPSCA's Doc 10152 suggests that:

> "[a]irlines are encouraged to become accredited through the Airport Health Accreditation programme run by [ACI] and … to make use of the [IATA] Health Safety Checklist for Airline Operators".[260]

The former ensures that health and hygiene standards in accordance with the CART Take-off guidance are followed, while the latter ensures that airline operators are aligned with ICAO guidance and industry best practices.[261] Similarly, ACI's global Airport Safety Professional qualification programme was developed in conjunction with ICAO to ensure "a safe, secure, and

[257] IATA, *The 40th ICAO Assembly* (IATA) <www.iata.org/en/policy/smarter-regulation/ICAO-assembly/> accessed 24 February 2022.

[258] Ibid.

[259] ICAO, *Council Aviation Recovery Task Force (CART) - Report* (CART, 27 May 2020) <www.icao.int/covid/cart/Documents/CART%20Report%20Final.pdf> accessed 16 February 2022.

[260] ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022.

[261] Ibid.

efficient aviation system supporting … pandemic air transport recovery".[262] IATA has also consistently put out press releases in support of ICAO guidance and measures, urging states to adopt them.[263] At the regional level, the ACCRPG's list of partners includes various private actors such as Airbus, Affinidi, Boeing, CANSO, IATA, ICCAIA, and IFALPA.[264]

Third, private actors are directly involved *as members with decision-making powers* in the international regulatory process. As reiterated in **Section 4**, various private actors including the AAPA, ACI, CANSO, IATA, IFALPA, and IFTCA are members of CAPSCA. This suggests that private actors have been involved in forming guidance which includes the PHC Implementation. In other words, they not only acted in their consultative capacity but also participated in the votes and decisions related to CAPSCA's guidance, as active members in the decision-making process.[265]

Fourth, private actors have developed their *own tools and guidance* which have been *adopted* by states. This includes the various guidance and web applications produced by IATA including its Safe Travel Pass. The adoption of these tools indicates that there is value in industry-led initiatives, as recognised by ASEAN in its Comprehensive Recovery Framework: Implementation Plan.[266]

To conclude, it is evident that private actors, most notably IATA and ACI, have a profound impact on IRC in civil aviation, by providing information, best practices, guidance etc. which influence or are adopted by regulators.

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[262] ICAO, 'New ACI-ICAO qualification programme to enhance aviation safety, COVID-19 response worldwide ' (ICAO Newsroom, 4 November 2020) <www.icao.int/Newsroom/Pages/New-ACI-ICAO-qualification-programme-to-enhance-aviation-safety-COVID19-response-worldwide.aspx> accessed 10 March 2022.

[263] IATA, *Pressroom* (IATA) <www.iata.org/en/pressroom/> accessed 18 April 2022.

[264] ACCRPG, *First Annual Report,* accessed 14 March 2022.

[265] As reiterated above, PHCs Implementation is one of the main initiatives of CAPSCA.

[266] ASEAN, *Implementation Plan: ASEAN Comprehensive Recovery Framework* (Jakarta, ASEAN Secretariat 2020) <https://asean.org/book/asean-comprehensive-recovery-framework-implementation-plan/> accessed on 10 April 2022, 27: "[o]ptimis[ing] the use of ASEAN Tourism Social Media Channels to share [Asean Member States] private sector initiatives aiming to give reassurance to travelers and business partners alike in their future travel planning".

12. Low levels of engagement and implementation of multilateral and regional IRC

The gathered evidence suggests that the implementation by Asian countries of guidance by multilateral and regional organisations has been low. It appears that Asian countries have largely focused on bilateral co-operation or unilateral measures. Indeed, there are constant calls by international organisations, such as IATA and ICAO, for Asian countries to adopt published standards and guidelines.[267] As a result, rather than a harmonised system (as is the case in the EU), Asia suffers from a patchwork of agreements and regulations which ultimately continue hampering international travel.

For example, with regards to information sharing, the ACCRPG has also pointed out issues with state engagement, such as the low utilisation of a dedicated PHC information sharing application.[268] Further, only 14 of the 39 APAC states have complied by reporting the challenges and issues faced in relation to the implementation of the public health risk mitigation measures contained in the CART Take-off guidance document. Likewise, only 36% of APAC states have completed the Gap Analysis for all CART Phase I, II and III Recommendations. The low responsiveness rates of states in reporting information in the CRRIC[269] is an issue that emerges in the region when asked to provide data or information to ICAO.[270]

[267] IATA, 'ICAO, IATA, ACI Urge Governments in the Middle East to Implement Global Guidance for the Safe Restart of Aviation' (Press Releases, 16 June 2020) <www.iata.org/en/pressroom/pr/2020-06-17-01/> accessed 14 March 2022; Corinne Wan, 'IATA welcomes Malaysia's reopening of borders, calls for end to pre-departure testing' (WIT, 9 March 2022) <www.webintravel.com/iata-welcomes-malaysias-reopening-of-borders-calls-for-end-to-pre-departure-testing/> accessed 14 March 2022; International Airport Review, 'IATA calls for the reopening of borders with simplified risk management' (International Airport Review, 6 October 2021) <www.internationalairportreview.com/news/164742/iata-covid-19-restrictions-travel-regimes-simplified-for-borders-reopening/> accessed 16 February 2022; IATA, 'Accelerate Easing of Travel Restrictions' (Press Releases, 25 January 2022) <www.iata.org/en/pressroom/2022-releases/2022-01-25-03/> accessed 14 March 2022.

[268] ACCRPG, *First Annual Report,* accessed 15 March 2022, 5, paras 4.4-4.6; See above, section 6 (Information Sharing).

[269] COVID-19 Response and Recovery Implementation Centre.

[270] ACCRPG, *First Annual Report,* accessed 13 March 2022, 5.

ICAO's iPacks have also not been widely adopted in Asia, with only two countries using the PHC iPack, and a mere eight countries using other related iPacks.[271] Further, travel corridors have largely been bilateral and unilateral.[272]

ASEAN has also suffered from low implementation of multilateral guidelines. Commentators have noted that:

> "[s]everal ASEAN countries have still not adopted the new air travel guidelines recommended by the International Civil Aviation Organisation (ICAO) initially published in June 2020 and updated in December 2020 and again in March 2021";[273]

further adding that:

> "ASEAN countries and in some cases local government units within countries have adopted their own regulations, resulting in a complex patchwork of rules that can be difficult to adhere to, leading to confused passengers and unusually long airport check-in times."[274]

At the regional level, the adoption of pandemic-related standards and guidelines has also been slow and varied. Notably, the ASEAN Travel Corridor has not come into effect despite initial discussions since 2020, and travel corridors have been bilateral or unilateral. Also, mutual recognition of vaccine certification on a bilateral basis appears to be the primary mode of IRC in this area of co-operation.

A more multilateral and standardised effort could improve civil aviation in Asia. Travel corridors, vaccination certificates and more could bring clarity and streamline international travel.

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[271] See above, section 7.1.1 (ICAO, CART Recommendation 14).

[272] See above, sections 7.3 and 7.4 (Travel corridors; States, Bilateral travel corridor agreements).

[273] Brendan Sobie, 'Commentary: Southeast Asia risks falling behind other regions in recovering aviation and tourism' (Channel News Asia, 18 June 2021) <www.channelnewsasia.com/commentary/travel-passport-vaccination-certs-southeast-asia-asean-singapore-1959011> accessed 14 March 2022.

[274] Ibid.

12.1. General factors

12.1.1. Lack of coordination

The lack of coordination between government authorities presents a hurdle to the resumption of air travel. The lack of coordination is evinced in the diversity of VDS which presents a challenge for travellers, airlines, and immigration authorities. The many technologies and software available are not necessarily compatible or interoperable with one another. While some countries, such as Singapore, have been open to the various kinds of VDS,[275] other countries, perhaps due to limitations in technology, can recognise limited types of VDS. Therefore, the multiplicity of available standards poses yet another global coordination challenge because of it giving rise to complexity and unsustainability.[276]

12.1.2. Domestic fragmentation

The pandemic has also highlighted disagreements amongst local units at the domestic level which inadvertently hinders IRC efforts. As confirmed off-the-record by representatives of the industry, this occurs in two ways.

First, municipal or state-level governments may disagree on policy issues with federal governments. As the OECD notes, "significant regulatory powers may lie at lower levels of governance".[277] Consequently, "[t]he federal-only nature of the regulatory initiatives may generate difficulty to address regulations at different levels of jurisdiction."[278] From interviews with IATA representatives, this issue arose in Indonesia. The pandemic hit Bali, Indonesia's main tourist destination, hard. The island's economy reportedly contracted 9.3% in 2020 and 2.47% in 2021.[279]

[275] Singapore Airlines, *Samples of acceptable proofs of vaccination for the VTL flights* (Singapore Airlines, 16 December 2021) <www.singaporeair.com/saar5/pdf/travel-info/vaccinated-travel-lane/Sample_VacCert_16122021_sm.pdf> accessed 14 March 2022.

[276] WTTC, 'WTTC identifies digital solutions for governments worldwide to significantly restore international mobility' (WTTC, 2 December 2021) <https://wttc.org/News-Article/WTTC-identifies-digital-solutions-for-governments-worldwide-to-significantly-restore-international-mobility> accessed 14 March 2022.

[277] OECD, *Best Practice Principles*, accessed 16 March 2022, 20.

[278] Ibid., 56 discussing "Regulatory partnerships between countries".

[279] Kiki Siregar, 'Foreign travellers can enter Indonesia's Bali without quarantine from Mar 7' (Channel News Asia, 7 March 2022) <www.channelnewsasia.com/asia/indonesia-bali-foreign-traveller-no-quarantine-march-7-2544751> accessed on 10 March 2022.

It would thus be natural for the Bali authorities to prioritise revitalising the economy, whereas other regions in the same country, where tourism is not the main source of revenue, might adopt a more conservative approach.

Second, administrative bodies responsible for different areas of governance may also disagree among themselves given each body's different mandate. Indeed, the ACCRPG has recognised the importance of enhanced collaboration between civil aviation and public health authorities towards removing impediments to the recovery of the aviation industry and towards strengthening public confidence in air travel.[280] Take the example of travel corridors: setting up a travel corridor requires the concerted co-operation of a variety of bodies and authorities, including foreign affairs ministries, health ministries, civil aviation, border control and tourism authorities, airport management entities, and the airlines themselves.[281]

Although all may share the same ultimate goal of revitalising air travel, their immediate priorities and goals may still vary. For instance, civil aviation and tourism authorities would likely prioritise revitalising international civil aviation; by comparison, health authorities may have associated international civil aviation with higher infection rates and as a threat to public health. Moreover, these differences may have been further exacerbated during the pandemic by public perception. That is, politically it may be difficult for governments to be seen removing safe distancing requirements on planes (following, for instance, IATA's recommendations),[282] while at the same time maintaining safe distancing requirements in day-to-day life in their territory.

12.1.3. Lack and/or poor allocation of resources

The lack and/or poor allocation of resources has also been identified as a major challenge of IRC mechanisms. As ICAO notes,

> "[t]he major risk that CAPSCA faces is *the lack of human and financial resources*. If the resources for the complete implementation of the CAPSCA strategy are not

[280] ACCRPG, *First Annual Report,* accessed 15 March 2022, 6, para 4.9.

[281] Colin C H Law and Rungkaew Katekaew, 'COVID-19: ASEAN Aviation Policy and the Significance of Intra-regional Connectivity' (2022) 4(1) Journal of Asian Economic Integration 1.

[282] IATA, 'IATA Calls for Passenger Face Covering and Crew Masks' (IATA, 5 May 2020) <www.iata.org/en/pressroom/pr/2020-05-05-01/> accessed 1 April 2022: "IATA does not support mandating social distancing measures that would leave 'middle seats' empty … Evidence, although limited, suggests that the risk of virus transmission on board aircraft is low even without special measures".

> obtained, the efforts for the mitigation of global health impact and the socio-economic disruptions caused by the COVID-19 outbreak, may not be sufficient nor effective. Subsequent consequences will have a significantly detrimental impact in various sectors and industries, including severe economical loss" [emphasis added].[283]

Generally, the occasionally limited capacity of states has been observed in information sharing IRC mechanisms.[284] Some states lack the technological and computational infrastructure to collect and process accurate data. This issue is particularly evident in larger countries due to their sheer size and presence of vast rural areas. For instance, the cost of data collection is also a challenge especially for the less economically developed countries. During the Ebola outbreak, the sheer scale and nature of the outbreak posed a great challenge for Guinea to collect accurate information, then passing the information through formal channels of government, and eventually sharing it with the WHO.[285]

During the pandemic, the chief data governance and analytics officer of the British Columbia Provincial Health Services remarked that one of the biggest challenges they encountered was "the lack of readily available information" and the "fragmented nature of information sourced from disparate and different places."[286]

A case in point in the Asia region is Indonesia. A nationwide study conducted by Reuters revealed that 15% of Indonesians had already contracted the disease – when official figures by the Indonesian government at the time recorded infections among only around 0.4% of the

[283] ICAO, 'ICAO CAPSCA Strategy for COVID-19' (ICAO, 3 September 2020) <www.icao.int/safety/CAPSCA/PublishingImages/Pages/Donate/ICAO%20CAPSCA%20Strategy%20for%20COVID-19.pdf> accessed 27 March, 2022.

[284] Jean-Paul Chretien, Caitlin M Rivers and Michael A Johansson, 'Make Data Sharing Routine to Prepare for Public Health Emergencies' (2016) 13(8) PLOS Medicine <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002109> accessed 12 March 2022.

[285] Raphael Lencucha and Sashika Bandara, 'Trust, risk, and the challenge of information sharing during a health emergency' (2021) 17 Global Health 21; Adam Kamradt-Scott, 'WHO's to blame? The World Health Organization and the 2014 Ebola outbreak in West Africa' (2016) 37(3) Third World Quarterly 401.

[286] Kat Jercich, '3 countries, 1 pandemic: International perspectives on COVID-19 data sharing' (Healthcare IT News, 19 August 2021) <www.healthcareitnews.com/news/3-countries-1-pandemic-international-perspectives-covid-19-data-sharing> accessed 14 March 2022.

population.[287] A reason for the discrepancy may be the limited capacity of the Indonesian government to do contact tracing and of laboratories to process tests. Indeed, the principal investigator in a study by the University of Indonesia, Tri Yunis Miko Wahyono, acknowledged that "[o]ur official surveillance system cannot detect COVID-19 cases. It is weak."[288] Moreover, this is in line with studies conducted by the WHO suggesting that the pandemic is in reality much more prevalent than shown in official figures.[289] This problem is also evinced in India. On 24 May 2021, the Indian government created the Empowered Health and S&T Data Portal Group with the aim "to collate feedback from the community of researchers, identify data available with different ministries, and set up a web portal to store and disseminate it". However, difficulties have arisen in making use of the data collected as data was scattered across different government departments and ministries.[126] The lack of consolidated and processed data makes drawing inferences and conclusions problematic. As a result, the data will have limited effectiveness in providing useful information on the domestic situation, which is crucial for governments to make decisions on reopening the country to international travel.

Relatedly, the increasing incidence of COVID-19 infections could have further overwhelmed countries' data reporting mechanisms thus leading to a vicious circle. Comprehensive data on infections requires individual patient follow-ups which require symptom onset dates to be accurately logged,[290] meaning that governments tend to incur extra costs from requiring extra manpower to monitor and log data. This may not be feasible for less economically developed countries. As a corollary, countries cannot share accurate and updated data if they cannot collect such data.

[287] Tom Allard, 'EXCLUSIVE COVID-19 far more widespread in Indonesia than official data show: studies' (Reuters, 3 June 2021) <www.reuters.com/world/asia-pacific/exclusive-covid-19-far-more-widespread-indonesia-than-official-data-show-studies-2021-06-03/> accessed 14 March 2022.

[288] Tom Allard, 'EXCLUSIVE COVID-19 far more widespread in Indonesia than official data show: studies' (Reuters, 3 June 2021) <www.reuters.com/world/asia-pacific/exclusive-covid-19-far-more-widespread-indonesia-than-official-data-show-studies-2021-06-03/> accessed 12 March 2022.

[289] WHO, *Situation reports - Coronavirus disease 2019* (WHO) <www.who.int/indonesia/news/novel-coronavirus/situation-reports> accessed 14 March 2022.

[290] Arianna Maever L Amit, Veincent Christian F Pepito, Bernardo Gutierrez and Thomas Rawson, 'Data Sharing in Southeast Asia During the First Wave of the COVID-19 Pandemic' (2021) Front Public Health <https://www.frontiersin.org/articles/10.3389/fpubh.2021.662842/full> accessed 12 March 2022.

Finally, substantial amounts of funding are needed for to transform the aviation sector to operate in line with the demands imposed by the pandemic.[291] By way of example, of the S$500 million that Singapore is committing to the aviation industry (through its OneAviation Resilience Package), S$390 million will be utilised to support implementation of public health and safe management measures at the airport, and S$60 million to replenish the manpower lost during the pandemic.[292] Evidently, domestic implementation of the various IRC mechanisms will require significant amounts of public monies. This may not be feasible for all countries in Asia, given the varying levels of wealth.

12.2. Pandemic specific challenges

12.2.1. Differing pandemic containment strategies

Approaches to the management of the pandemic in Asia have varied greatly since the beginning. It is clear that while some countries have taken swift and encompassing measures, others are laxer in their standard operating procedures and in the discipline required to overcome the pandemic.[293] As reported by Kraybill, Ang, Ong and Yoong:

> "national policy responses have varied from rigorously enforced full lockdowns in Singapore to relative "laissez-faire" in Myanmar, while resources expended range from $US30 million in Laos to over $US115 billion in populous Indonesia."[294]

These disparate approaches and priorities to the management of the pandemic can serve as an obstacle to adoption of IRC mechanisms for the reasons stated below.

[291] Charlene Goh, 'S$500m boost for aviation sector as S'pore aims to open borders to all vaccinated travellers: Iswaran' (Today Online, 9 March 2020) <www.todayonline.com/singapore/s500m-boost-aviation-sector-spore-aims-open-borders-all-vaccinated-travellers-iswaran-1840991> accessed 2 April 2022.

[292] Ibid.

[293] Mely Caballero-Anthony et al., 'ASEAN in 2021: Breakthrough or Muddling Through?' in Choi Shing Kwok (eds), *ASEAN Focus* (Sep 2021 edn, ASEAN Studies Institute 2021) <https://www.iseas.edu.sg/wp-content/uploads/2021/09/ASEANFocus_Sept_2021_FA_Digital_Compressed.pdf> accessed 1 April 2022.

[294] Diya Kraybill, Michael Ang, Suan Ee Ong and Joanne Yoong, 'Responses to COVID-19 in Southeast Asia: Diverse Paths and Ongoing Challenges' (2022) 17 Asian Economic Policy Review 90, citing Asian Development Bank, *ADB COVID-19 Policy Database: Southeast Asia* (Asian Development Bank) <https://covid19policy.adb.org/policy-measures/> accessed 1 March 2021.

For one, efforts with regards to data collection and the quantity and quality of the data collected has varied from state to state.[295] Lao PDR, Thailand and Vietnam have generally reported more precise demographic and geographic data as the pandemic progressed. This is in line with these governments' aim to quickly identify and isolate cases and their contacts, which requires detailed contact tracing data. By contrast, Indonesia started reporting less precise aggregate data less than two weeks after their first case was reported as they instead focused efforts on scaling up capacity, treating patients and supporting economic recovery,[296] rather than implementing lockdowns.

Moreover, different states in the region have begun adopting different strategies in their future management of COVID-19. Most APAC states have decided that society must live alongside COVID-19 while other states and regions, notably China and Hong Kong, maintain a zero-COVID stance to date.[297] This is significant considering that, in 2016, IATA forecasted that, in terms of air traffic, China would displace the United States as the world's largest aviation market by 2024.[298] Interviews with IATA representatives suggest that the conservative stance towards international civil aviation by a country such China, with one of the largest civil aviation markets in the world, has had a noticeable influence on aviation recovery in the region.

12.2.2. Different access to vaccines

States and organisations have disagreed as to whether vaccination should be a prerequisite for international civil aviation.[299] While WHO, ICAO and IATA have separately stated that vaccines

[295] Arianna Maever L Amit, Veincent Christian F Pepito, Bernardo Gutierrez and Thomas Rawson, 'Data Sharing in Southeast Asia During the First Wave of the COVID-19 Pandemic' (2021) Front Public Health <www.frontiersin.org/articles/10.3389/fpubh.2021.662842/full> accessed 12 March 2022.

[296] Arianna Maever L. Amit, Veincent Christian F. Pepito, Bernardo Gutierrez and Thomas Rawson, 'Data Sharing in Southeast Asia During the First Wave of the COVID-19 Pandemic' (2021) Front Public Health <www.frontiersin.org/articles/10.3389/fpubh.2021.662842/full> accessed 12 March 2022.

[297] Elizabeth Law, 'China to stick with zero-Covid strategy, President Xi Jinping says' (The Straits Times, 18 March 2022) <www.straitstimes.com/asia/east-asia/china-to-stick-with-zero-covid-strategy-president-xi-jinping-says> accessed 1 April 2022.

[298] IATA, 'IATA Forecasts Passenger Demand to Double Over 20 Years' (IATA, 18 October 2016) <www.iata.org/en/pressroom/pr/2016-10-18-02/> accessed 25 February 2022.

[299] Allison Lampert and Jamie Freed, 'Airports reject vaccine requirement as travel debate intensifies' (Reuters, 4 December 2020) <www.reuters.com/article/health-coronavirus-airports-int-idUSKBN28D2UG> accessed 25 March 2022.

should not be a mandatory ground to allow international air travel,[300] many states have relaxed travel requirements only to vaccinated travellers. This is troubling due to the uneven distribution of vaccines, whereby not all countries have the same level of access to vaccines. State wealth to procure vaccines and domestic capacity to manufacture vaccines are other factors that have influenced the access of certain vaccines. The Republic of Korea is one country initially without the knowledge and resources to produce the mRNA vaccines on its territory.[301]

Another example is with regards to access to recognised vaccines. According to the WHO, Pfizer/BioNTech is the most widely recognised vaccine, being approved in 141 countries. On the other hand, Sinovac has been approved in only 54 countries[302]. As a result, those administered with Sinovac will face greater restrictions in travel. Not all countries have access to the more widely recognised vaccines such as Pfizer. There is an added layer of complexity where different states promote the use of domestically produced vaccines and refuse to acknowledge the validity of certain vaccines (in part due to political reasons).[303] Making vaccination, and more specifically, vaccination of a particular vaccines, as a prerequisite to international travel will thereby deprive many people of international travel. Consequently, it may be argued that international travellers from countries with low access to recognised vaccines are discriminated against.[304]

More broadly, the lack of consensus on core issues surrounding vaccinations could account for the slow adoption of vaccination certification mechanisms and the lack of a unified approach to vaccinations in international civil aviation in Asia.[305]

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[300] CAPSCA, 'Update to testing and vaccinations' (ICAO, 20 April 2021) <www.icao.int/NACC/Documents/Meetings/2021/RLACAPSCA/P02-ICAO-CAPSCAmericas.pdf> accessed 18 April 2022; IATA, 'Remarks of Alexandre de Juniac at IATA Media Briefing' (IATA, 2 Mars 2021) <www.iata.org/en/pressroom/speeches/2021-03-02-01/> accessed 18 April 2022; ICAO, *Doc 10152 - Manual on COVID-19 Cross-border Risk Management* (ICAO, 3rd ed, 2021) <www.icao.int/covid/cart/Documents/10152_manual_3rd_edition.en.pdf> accessed 16 February 2022.

[301] Bloomberg, 'MRNA vaccine access carves up world into haves and have-nots' (The Straits Times, 16 July 2021) <www.straitstimes.com/world/united-states/mrna-vaccine-access-carves-up-world-into-haves-and-have-nots> accessed 18 April 2022.

[302] WHO, *Covid 19 Vaccine Tracker* (WHO) <https://covid19.trackvaccines.org/agency/who/> accessed 18 April 2022.

[303] Yves Tiberghien and Jackie Jiaqi Zhao, 'Taiwan's COVID-19 vaccine struggles' (East Asia Forum, 24 September 2021) <https://www.eastasiaforum.org/2021/09/24/taiwans-covid-19-vaccine-struggles/> accessed 14 March 2022; Daina Beth Solomon, 'Restricting travel over vaccine type could be discrimination, PAHO warns' (Reuters, 21 October 2021) <https://www.reuters.com/world/americas/41-latam-caribbean-residents-have-been-vaccinated-against-covid-19-paho-2021-10-20/> accessed 10 April 2022.

[304] Ryan Tanner and Colleen M Food, 'Vaccine Passports Done Equitably' (JAMA Health Forum 2021, 21 April 2021) <https://jamanetwork.com/journals/jama-health-forum/fullarticle/2779298> accessed 10 April 2022, 2 (4).

[305] See Azusa Sato and Anit Mukherjee, 'A Matter of Trust and Coordination: A COVID-19 Vaccination Certificate for Southeast Asia?' (Centre for Global Development, 13 May 2021) <www.cgdev.org/blog/matter-trust-and-coordination-covid-19-vaccination-certificate-southeast-asia> accessed on 1 April 2022.

12.2.3. Different approaches to data privacy

Information sharing IRC mechanisms have also faced resistance. States could be reluctant to share information that could be regarded as politically sensitive and jeopardise their reputation. For instance, during the early days of the pandemic, the Chinese government prevented the publication or the sharing of information on COVID-19. Not only were doctors in the country threatened with arrest for warning others about the virus,[306] the government also issued a notice ordering labs to either destroy their samples of the virus or send them to designated institutes for safekeeping.[307] More generally, China has enacted data protection laws and policies, such as the 2021 Data Security Law, the 2021 Data Privacy Law and the 2017 Cyber Security Law, which combined may prevent the country from participating in global health collaborations, disease surveillance, and international medical research in the future.[308]

Similar phenomena is seen in India where Indian authorities were reluctant to share data or engage in analytical exercises with internal groups and agencies. In March 2020, the Ministry of Home Affairs of India passed an order under the Disaster Management Act, directing all questions relating to the pandemic to an Empowered Group on Technology and Data Management. The most important agency in the response to the pandemic, the government's own National Covid-19 Task Force, was notably not granted access to any data. Other pertinent bodies involved in the response effort include scientists,[124] have repeatedly sounded calls for open access to data.

At the same time, obstacles may also arise from people's opposition against the collection of personal data, owing to concerns surrounding data privacy, security, lack of trust and the fear of widespread government monitoring of citizens.[309] This issue of data privacy surfaced in

[306] AP, 'China exonerates doctor reprimanded for warning of virus' (Associated Press News, 20 March 2020) <https://apnews.com/article/virus-outbreak-accidents-ap-top-news-international-news-arrests-6f2e666485e9abae4bb112251eca77be> accessed 14 March 2022.

[307] Mao Jianjun, 'China delayed releasing coronavirus info, frustrating WHO' (CNBC, 2 June 2020) <www.cnbc.com/2020/06/02/china-delayed-releasing-coronavirus-info-frustrating-who.html> accessed 12 March 2022.

[308] Jennifer Bouey, 'Global Health Data Sharing: The Case of China and the Two Coronavirus Pandemics' (The Rand Blog, 22 November 2021) <www.rand.org/blog/2021/11/global-health-data-sharing-the-case-of-china-and-the.html> accessed 12 March 2022.

[309] Philip Chong and Maurya Velpula, 'Data Protection and Privacy in COVID-19 Times' (ISCA Journal, 2020) <https://journal.isca.org.sg/2020/09/17/data-protection-and-privacy-in-covid-19-times/pugpig_index.html> accessed 14 March 2022.

Singapore. Whilst there is a traditionally strong system of social control and discouragement of opposition voices in Singapore, there is in recent years an increasingly sceptical populace.[310]

Singapore was at the forefront of developing applications for contact tracing purposes such as the TraceTogether app devised by the Singapore government to collect proximity data of users via Bluetooth technology.[311] Studies from the Institute of Policy Studies revealed that a petition against the development of the device attracted about 30,000 signatories,[312] and less than 50% of the respondents were comfortable with having their mobile phone data tracked for contact tracing without their consent.[313] Policymakers may be hesitant to share information for fear of political repercussions. With increasing concern on data privacy, public authorities could face greater challenges in obtaining data from the public available for sharing at the international platforms.

To address public concerns, some authorities must take extra steps to create confidence that collected data will be legally and ethically shared,[314] for instance, by ensuring that individuals' prior informed consent has been obtained for data-gathering and data-sharing and that all forms of personally identifiable information are removed. Nonetheless, it remains to be seen if such efforts have been sufficient.

The hesitation to share information and lack of available data has wider repercussions. According to recordings of internal meetings held by the WHO, the significant delays by China in providing the genetic map of the virus is thought to have hampered the fight against the spread of the virus. Specifically, it has been suggested that "the outbreak arguably might have been dramatically

[310] Michael D Barr, 'Ordinary Singapore: The Decline of Singapore Exceptionalism' (2016) 46 Journal of Contemporary Asia 1.

[311] Gerard Goggin, 'COVID-19 apps in Singapore and Australia: reimagining healthy nations with digital technology' (2020) 177 Media International Australia 61.

[312] Carole Soon, 'Getting buy-in for TraceTogether device and future Smart Nation initiatives' (The Straits Times, 13 June 2020) <www.straitstimes.com/opinion/getting-buy-in-for-tracetogether-device-and-future-smart-nation-initiatives?close=true> accessed 14 March 2022.

[313] Tiffany Fumiko Tay, 'Singaporeans accept some privacy loss in COVID-19 battle but surveillance method methods: IPS study' (The Straits Times, 25 May 2020) <www.straitstimes.com/singapore/singaporeans-accept-some-privacy-loss-in-covid-19-battle-but-surveillance-method-matters> accessed 14 March 2022.

[314] See Sara Mannheimer, Amy Pienta, Dessislava Kirilova, Colin Elman and Amber Wutich, 'Qualitative Data Sharing: Data Repositories and Academic Libraries as Key Partners in Addressing Challenges' (2019) 65(3) American Behavioral Scientist 643.

slowed".[315] Such delay caused by withholding of information hinder effects to recovery the aviation industry at the international level. Furthermore, without sufficient reliable data on the pandemic situation domestically, states may not be in a good position to make decisions on whether to resume international travel.

12.2.4. Ever-changing nature of pandemic

A persistent challenge faced by the IRC mechanisms examined in this report is the unpredictable and constantly changing nature of the pandemic, which requires a substantial degree of flexibility in policy making. States have thus been hesitant to commit towards fixed and standardised mechanisms that might not allow for room for changes depending on the situation prevalent at any given moment. Practically, loose and in-principle agreements in light of domestic pressures or when infection rates spike.[316]

For instance, the Singapore-Hong Kong Air Travel Bubble was supposed to commence on 22 November 2020 but was deferred thrice and has yet to be enacted. Another example can be seen in the many Singapore Reciprocal Green Lanes that were launched in 2020 but subsequently suspended in 2021 due to spikes in infection rates,[317] as well as the suspension of VTL ticket sales during at the height of the omicron variant.[318]

[315] Mao Jianjun, 'China delayed releasing coronavirus info, frustrating WHO' (CNBC, 2 June 2020) <www.cnbc.com/2020/06/02/china-delayed-releasing-coronavirus-info-frustrating-who.html> accessed 12 March 2022.

[316] Tomoya Onishi, 'Vietnam travel bubble with Japan loses fizz as execs shun tight rules' (Nikkei Asia, 28 March 2021) <https://asia.nikkei.com/Spotlight/Coronavirus/Vietnam-travel-bubble-with-Japan-loses-fizz-as-execs-shun-tight-rules> accessed 16 March 2022.

[317] Immigration & Checkpoints Authority (ICA), *RGL Overview* (Government of Singapore) <https://safetravel.ica.gov.sg/rgl/overview> accessed 15 February 2022; Amir Yusof, 'Singapore to suspend reciprocal green lane arrangements with Malaysia, Germany and South Korea for 3 months' (Channel News Asia, 30 January 2021) <www.channelnewsasia.com/singapore/singapore-green-lane-covid-19-malaysia-germany-korea-443366> accessed 16 March 2022.

[318] Ian Cheng, 'Singapore freezes new ticket sales for VTL flights and buses from Dec 23 to Jan 20 amid Omicron concerns' (Channel News Asia, 22 December 2021) <www.channelnewsasia.com/singapore/covid-19-moh-freeze-vtl-ticket-sales-limit-exposure-omicron-2395081> accessed 24 March 2022.

13. Assessing IRC effectiveness: More accountability

This report suggests that more accountability should be introduced into IRC mechanisms to better assess the effectiveness of current IRC mechanisms. In particular, the following text highlights monitoring and ex post review, and transparency to be lacking or falling short.

13.1. Monitoring and *ex post* review

As the pandemic is ongoing and countries constantly evaluate and re-evaluate their COVID-19 policy responses, there is a lack of data to assess the full impact that IRC mechanisms have had in the field of international civil aviation. As a result, there is, at present, little to no *ex post* review of the efficacy of the IRC mechanisms examined. Optimistically, more evidence would become available in the coming months and years with increased monitoring and ex post review of the mechanisms proposed and adopted.

While Asian states may have adopted international standards, guidelines and regulations in practice, there is a general lack of reporting on such adoption in government materials that are publicly available. The CART Take-off guidance has itself stated that "[a] successful path from this crisis will rely on a diligent and consistent follow-up to these recommendations and measures at all levels, including ICAO."[319] In other words, for international efforts such as the CART Take-off guidance to be effective, information and feedback collected from states will be essential.[320] In a similar vein, while the ASEAN COVID-19 Guidelines were published to give recommendations to the airlines operating in the region,[321] implementation and monitoring of the Guidelines are lacking across the region.[322]

[319] ICAO, *Council Aviation Recovery Task Force (CART) - Report* (CART, 27 May 2020) <www.icao.int/covid/cart/Documents/CART%20Report%20Final.pdf> accessed 16 February 2022.

[320] ICAO, *Global Implementation Roadmap* (ICAO, 24 July 2020) <www.icao.int/safety/CAPSCA/PublishingImages/Pages/CART-Guidance/080e.pdf> accessed 2 March 2022, p. 19.

[321] ASEAN, *COVID-19 Recovery Guidelines for Resilient and Sustainable International Road Freight Transport Connectivity in ASEAN* (ASEAN Secretariat 2021) <https://asean.org/wp-content/uploads/2021/02/asean-covid-19-guidelines.pdf> accessed 5 March 2022.

[322] F Kliem, 'ASEAN and the EU amidst COVID-19: overcoming the self-fulfilling prophecy of realism' (2021) 19 Asia Europe Journal 371.

This state of affairs, including the presence of limited publicly available data, has made it difficult for this report to present ascertainable links of correlation and causation between the implementation of the identified IRC mechanisms and an increase in air travel demand and revenues earned or a decrease in the transmission of the virus.

Accordingly, we argue that a comprehensive and detailed *ex post* review of the IRC mechanisms proposed and adopted during the pandemic to facilitate air travel is required. An *ex post* review could provide regulators with key insights to draw upon in further developing both their ongoing recovery efforts and their plans to increase governments' resilience to future crises. In particular, governments and international organisations should put in more effort to monitor the implementation and effectiveness of any IRC mechanisms adopted. For instance, international organisations should track the adoption of guidelines, standards or proposals suggested at international forums by governments.

13.2. Transparency

Another reason for the lack of information globally is due to the lack of publicly available official publications. Most of the data we have relied upon have been obtained from social media and news outlets. We were unable to access details about negotiations that occur, or considerations taken into account before governments decide whether to adopt IRC mechanisms in the field of civil aviation. Information regarding the success and failure of those mechanisms likewise tend to be confidential and unpublished. For instance, there is little publicly available information on the process followed by Singapore in choosing its VTL countries, including on who the responsible authorities are for negotiating and making the ultimate decision. Likewise for recognition of vaccine certifications, there is limited available information on whether that is a mutual recognition agreement or a unilateral declaration of recognition.

Conclusion

The civil aviation industry has suffered a sharp decline in passenger air traffic since the outbreak of the pandemic. This decline has had severe downstream effects for states. Beyond enabling international travel, aviation plays a crucial role in generating economic growth, creating jobs, and facilitating international trade and tourism. To respond to the pandemic and revitalise the civil aviation industry, countries have deployed significant efforts and a wide range of strategies. This report provided an overview of the manner in which Asian countries have engaged in unilateral, bilateral, regional, and multilateral IRC to resume international civil aviation during the pandemic.

Main areas of co-operation observed in the field of civil aviation

Our research has identified international regulatory co-operation efforts (see **Sections 4 – 8**) in five main areas as follows:

1. **Co-operation forums.** States, international organisations, private actors and other stakeholders have met regularly at various co-operation forums to discuss and find a harmonised response to allow for a more efficient and swift recovery of the civil aviation industry from the pandemic. CART, CAPSCA and the ACCRPG have been key forums at the multilateral level.

2. **Safe travel standards, regulations and guidelines.** Different standards, regulations and guidelines have been adopted at the international, regional level and bilateral levels as Asian states recognise the importance of coherent standards in ensuring an efficient and safe resumption of air travel. Regional and international organisations in the public and private sphere have been proactive in promulgating uniform rules such as the CART Reports and CART Take-off guidance. Singapore has been active in adopting some of these international guidelines, as evinced by the CAAS's Health Safety Measures to Mitigate Risk of Covid-19 in Aviation Guidance which includes recommendations by ICAO and specifically cites the ICAO Take-off guidance. Singapore and the United Kingdom have also agreed to test the crew module of the CART Take-off guidelines.

3. **Information sharing**. Regulators and other stakeholders have exchanged information and experiences on regulatory issues pertaining to civil aviation during the pandemic and to develop policies of domestic implementation. Information sharing also aids states in gaining access to the most updated data and facilitates the development of effective regulation. ICAO and IATA have played a crucial role to bolster and complement national institutions by promoting platforms such as the CRRIC and various web applications to share and develop solutions at the international level. At the regional level, ASEAN has provided multiple information sharing platforms to coordinate and enhance the region's approach. Bilateral approaches are important as well, with the prominent example of a joint working group between Singapore and Malaysia. However, domestic challenges could diminish the effectiveness of information sharing, due to the fragmentation and lack of coordination between government authorities as seen in India.

4. **Travel corridors.** Travel corridors serve to facilitate international travel between specific states while maintaining otherwise applicable travel restrictions. ICAO, IATA and ASEAN have sought to develop the necessary frameworks to restore air travel through travel corridors. However, their uptake has been limited. Multilateral and regional travel corridors would arguably be most facilitative of travel; in practice however, this report observed that the predominant form of travel corridors has been bilateral in nature as seen from the case study of Singapore's numerous VTL. The fragmented patchwork of bilateral travel corridor arrangements has made it difficult for international travellers to navigate travel requirements and has had limited effectiveness in resuming intra-region travel.

5. **Vaccination Certification.** Vaccination certification is often a prerequisite for international travel or streamlined entry into states. Attempts at achieving universal or regional harmonisation in this respect have not been successful. Recommendations by ICAO provide the minimum data set for proof of vaccination which states can consider because of recognising vaccination certificates by other countries. The IATA Travel Pass, although facilitative of travel, has been accepted by only one country in Asia (Singapore) as a valid form of vaccination certification. Pertinently, recognition of vaccination certification has mainly proceeded via mutual recognition of vaccination certification. Our case study of Singapore's Notarise has illustrated how the EU and Singapore have worked together to enhance the compatibility of their respective vaccination certificates.

Key substantive observations

In assessing the above-mentioned IRC mechanisms, this report has made a number of key observations (see **Sections 9 – 13**) as follows:

1. **Working off existing measures or building from the ground up.** As a whole, this report has observed that there is an extensive patchwork of pre-pandemic international regulation and frameworks applied or adapted to meet the challenges posed by the current pandemic. Concurrently, the truly global scale of the issues faced, including the length of the outbreak and the novelty of the virus itself, have also necessitated the development of novel solutions. In this respect, this report observes that the creation of novel solutions has also been undergirded by existing networks and political ties. For instance, at the international level, participation in ICAO and IATA in pre-pandemic times has also facilitated co-operation during the pandemic. And, at the regional level, discussions surrounding international civil aviation during the pandemic were facilitated by ASEAN member states utilising several response mechanisms that had already been in place. Similarly, at the bilateral level, development of IRC mechanisms has been highly contingent on existing political ties.

2. **The soft law or private regulatory nature of IRC.** A majority of the IRC mechanisms we observed have been voluntary, soft law commitments. Whilst soft law tends to be more flexible, can be developed quickly and can be more easily adaptable, its principal shortcoming is its non-binding nature. To be effective, soft law relies on consensus, goodwill and mutual trust of the participating countries. In the particular field of civil aviation, states have not been compelled to participate, share information, implement or adopt any of the guidance, frameworks and standards developed. States have essentially been given the discretion to consider to what extent, if at all, to commit to IRC mechanisms. At the regional level, the consultation, consensus and non-interference principles undergirding ASEAN have hindered ASEAN's effectiveness to adopt a region-wide approach to the recovery of civil aviation. As achieving consensus amongst all 10 member states of ASEAN is a herculean task, most ASEAN countries have preferred a bilateral approach instead. Indeed, when discussions on a regional travel corridor came into stagnation, ASEAN countries proceeded to negotiate their respective bilateral travel arrangements. Furthermore, the lack of trust between ASEAN member states due to

disparity in levels of development and the prioritisation of national over regional interests have contributed to a more disjointed response.

3. **The important role of private actors.** Private actors have played a vital role in IRC in the field of international civil aviation by way of playing a consultative role, being directly involved in the rule-making process through public-private partnerships, and developing tools to facilitate international travel. This role has been acknowledged both by the OECD and other international organisations. In particular, private actors have specialised industry knowledge and technical capacities that enhance IRC.

4. **Low levels of engagement in and implementation of IRC.** While there has been significant participation and dialogue through international multi-stakeholder forums, any more tangible forms of co-operation in the form of adopting the proposed harmonised guidelines and standards have been less successful. Broadly, bilateral forms of IRC are the predominant approach taken by the Asian countries in the field of civil aviation. We have framed the reasons for the low uptake of more regional or multilateral initiatives as challenges faced by the latter and have further categorised them into non-pandemic and pandemic specific challenges.

    a. **General factors**

    First, states may lack coordination and duplicate efforts. Overlapping efforts such as the multiplicity of VDS providers wastes resources.

    Second, there has been fragmentation at the domestic level which has inadvertently affected IRC efforts. Municipal or state-level governments may disagree on policy issues with federal governments, perhaps due to differing predominant concerns shared by each. States which are heavily reliant on tourism are likely to advocate more strongly for more relaxed regulations on air travel compared to states which are not. Administrative bodies responsible for different areas of governance may also disagree on the policies to be adopted. This is problematic as the removal of impediments to ensure the recovery of civil aviation requires the collaborative effort of different government authorities.

Third, the lack or the poor allocation of resources at the domestic level is also a major challenge of effective IRC. For instance, in relation to information sharing, some countries have limited data available for sharing as they lack the technological and computational infrastructure to collect accurate data. This issue is particularly evident in large countries with a large rural population.

b. Pandemic specific challenges

First, the pandemic containment strategies adopted by the Asian countries have been disjointed since the early stages of the outbreak. While some states have taken swift and encompassing measures, others have been laxer in their standard operating procedures. These disparate approaches and priorities serve as an additional obstacle to the adoption and effective implementation of IRC mechanisms. For instance, vaccine hesitancy has been a core challenge across the world and vaccination has become a highly politicised issue. To date, different states recognise different vaccines even though the WHO has issued the list of WHO recognised vaccines. The lack of consensus on core issues surrounding vaccinations could account, for example, for the slow adoption of vaccination certification mechanisms.

Second, information sharing mechanisms have also faced resistance by states who view pandemic-related information as politically sensitive and a risk to their international reputation. In particular, China's hesitance to information has been noteworthy.

Third, the constantly evolving nature of the pandemic poses a persistent challenge for the IRC mechanisms adopted. Managing the pandemic calls for flexibility and quick reactions to unpredictable events. This likely causes a vicious circle since states have been hesitant to commit towards fixed and standardised mechanisms that might allow less room for future changes, even if they may agree in principle that a firmer commitment would be optimal.

5. Assessing IRC effectiveness: More accountability

An overall observation that can be made from the analysis in this report is that, while Asian states may have adopted international standards, guidelines and regulations in practice, there is a general lack of reporting on such adoption in the government materials that are publicly available. Much of the data relied upon in this report includes information from social media and news outlets. Pertinent information regarding the considerations and processes involved were not made available to the public. Further, governments and international organisations should put in more efforts to monitor the implementation and effectiveness of the mechanisms at the international, regional and domestic level. Finally, this report concludes by suggesting the importance of a comprehensive *ex post* review of the IRC mechanisms during the pandemic in international civil.

As this report highlights and as aptly put by OECD, "[n]o single country can beat COVID-19 on its own".[323] The devastating social and economic consequences of the pandemic on international civil aviation has highlighted the critical importance of effective IRC and some of the challenges that ensuring effective IRC faces. This is a conclusion with broad implications going beyond COVID-19 or international civil aviation. It also touches upon other global problems requiring global solutions at the regulatory level.

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