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Report on the Evaluation

of

ICAO's Response to COVID-19

Office of Internal Oversight

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ACRONYMS

ACCRPG	APAC COVID-19 Contingency and Recovery Planning Group
ACI	Airport Council International
ADB	Bureau of Administration and Services
ANB	Air Navigation Bureau
ATB	Air Transport Bureau
ACAO	Arab Civil Aviation Organization
CAA	Civil Aviation Authority
CAD	Canadian Dollars
CANSO	Civil Air Navigation Services Organisation
C-DEC	Council Decision
CART	Council Aviation Recovery Task Force
CAPSCA	Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation
CCRD	COVID-19 Contingency Related Differences
CRRIC	COVID-19 Response and Recovery Implementation Centre
COVID-19	Coronavirus Disease
CMRT	Corporate Management and Reporting Tool
C-WP	Council Work Paper
DAC	OECD Development Assistance Committee
ERG	Evaluation Reference Group
FAL	Facilitation Section
GIR	Global Implementation Roadmap
HLCC	High-level Conference on COVID-19
HLCD	High-Level Cover Document
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICCAIA	International Coordinating Council of Aerospace Industries Associations
ILO	International Labor Organization
IOM	International Organization for Migration
iPack	Implementation Package
LEB	Legal Affairs and External Relations Bureau
MOU	Memoranda of Understanding
NATFC	National Air Transport Facilitation Committees
OECD	Organisation for Economic Co-operation and Development

OIO	Office of Internal Oversight
PAHO	Pan American Health Organization
PHC	Public Health Corridor
RO	ICAO Regional Office
SAGE	WHO Strategic Advisory Group of Experts on Immunization
SARPs	Standards and Recommended Practices
SCEPG	Secretariat COVID-19 Emergency Program Group
SPCP	Strategic Planning, Coordination and Partnerships
TCB	Technical Cooperation Bureau
TIACA	The International Air Cargo Association
TOGD	Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis Guidance Document
TOR	Terms of Reference
UN	United Nations
UNEG	United Nations Evaluation Group
UNOCC	United Nations Operations and Crisis Centre
UNSCR	United Nations Security Council Resolution
UNWTO	World Tourism Organization
USAP-CMA	Universal Security Audit Programme – Continuous Monitoring Approach
WFP	World Food Program
WHO	World Health Organization

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EXECUTIVE SUMMARY

1. The Office of Internal Oversight (OIO) evaluated the International Civil Aviation Organization's (ICAO) response to COVID-19 between November 2021 and May 2022. The purpose of the evaluation was twofold: accountability and organizational learning. In terms of accountability, it assessed the extent to which ICAO supported Member States to restart the international air transport sector and recover from the impacts of COVID-19. In terms of organizational learning, it evaluated the extent to which ICAO adopted practices to increase operational effectiveness and efficiency during the response.

2. The evaluation had a high-level focus on the implementation of the recommendations from the ICAO Council's Aviation Recovery Task Force (CART), covering key strategic activities carried out between January 2020 and December 2021. The primary audience of the evaluation is the ICAO Council, the Secretariat and Member States. Using quantitative and qualitative methods, the evaluation assessed the relevance, effectiveness, coherence, efficiency and sustainability of ICAO's response to COVID-19. The evaluation also identified lessons learned to improve organizational resilience in future emergencies.

Key Findings and Conclusions

3. ICAO responded to an unprecedented global crisis in record time by engaging adequate high-level stakeholders, by establishing relevant coordination mechanisms and by delivering pertinent guidance material and tools. The CART recommendations were found to be relevant to Member States and other ICAO stakeholders. However, the alignment of work across key organizational partners proved challenging. The pandemic uncovered the need for stronger relationships with key actors within and outside of the aviation sector during non-emergency times.

4. The Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) was highly effective and crucial in ICAO's response to COVID-19. There was agreement among stakeholders that CAPSCA needs to be further strengthened. However, there were opposing views on how ICAO should do so. Some stakeholders believed CAPSCA needs greater governance and more resources from ICAO. Others thought CAPSCA was agile in delivering critical work during the pandemic precisely because it is an informal technical group, suggesting the use of alternative funding mechanisms to strengthen the arrangement.

5. The CART recommendations were effective in providing timely guidance to Member States and other aviation stakeholders on how to adjust operations. The quality of guidelines, trainings, webinars, workshops and tools provided by ICAO to Member States were assessed positively. However, limited in-country capacity and resources, inadequate coordination across key national authorities and insufficient harmonization across countries were major challenges to the implementation of the recommendations. Stakeholders proposed strengthening the ICAO Facilitation Section and establishing an oversight mechanism (e.g., auditing some elements of Annex 9) to improve the implementation of Annex 9-related Standards and Recommended Practices (SARPs).

6. Recognizing that not all States have the technical and financial capacity to implement the CART recommendations, ICAO undertook extensive resource mobilization, reaching a record USD$2.7 million in voluntary contributions and repurposed internal resources. However, some inefficiencies were identified regarding lengthy approval processes to repurpose donor funds for technical assistance.

7. ICAO was found to timely and efficiently adapt its internal resources to respond to the demands of the pandemic. The work of the Regional Offices and the high level of collaboration across ICAO Bureaus was consistently recognized by stakeholders. However, the COVID-19 response adversely impacted the well-being of ICAO staff, with some employees working weekends and long hours for

an extended period. The pandemic shed light on the need to improve contingency plans for faster and smoother business continuity, while protecting the well-being of employees.

8. While some of the guidance material, tools and activities prepared for COVID-19 can be repurposed for future emergencies, most stakeholders believed ICAO is not yet prepared to face another crisis of this scale. The lack of a comprehensive crisis management framework to prepare for any type of crisis, establishing clear roles and responsibilities for relevant staff and partners, was identified as a major limitation to ICAO's capacity to anticipate, prepare and build resilience in the aviation sector for future emergencies.

9. Another concern raised by stakeholders was the economic impact of COVID-19 on the aviation industry. While several governments provided financial assistance, many airlines and other industry stakeholders across the globe were severely impacted. Recognizing that ICAO is a regulatory body and cannot provide direct financial support to the industry, stakeholders proposed providing States with guidelines on setting aside resources for extraordinary emergencies and connecting them to audits to foster the institutionalization of this type of support by States ahead of another emergency.

10. The attenuation of the pandemic provides momentum for ICAO to document the methodology and mechanisms devised to respond to COVID-19 (e.g., CART, SCEPG, iPacks) and develop a phase-out strategy to ensure the continuity of the achievements of the response.

Recommendations

11. Based on the findings and conclusions, the evaluation outlined the following six recommendations:

- Prepare a comprehensive crisis management framework in close coordination with key ICAO partners. This framework should include multiple types of crises, varying duration and different geographic scope (global versus regional).

- Establish high-level mechanisms to strengthen the relationship among aviation, health and other authorities critical for emergency response. At the organizational level, this mechanism could be a committee involving high-level representatives of ICAO, UN partners, States and the industry.

- Strengthen the capacity of Facilitation, Aviation Medicine and other ICAO sections/functions involved in emergency response. This should include assessing the need to expand the auditing of Annex 9-related SARPs not currently audited, as well as the overall organizational capacity for increased SARP implementation during non-emergency times.

- Review the CAPSCA framework and governance to determine the most optimal structure and corresponding funding mechanism for future emergency preparedness and response. This process should preserve the scientific and political independence of the arrangement.

- Establish an emergency response fund ahead of future emergencies to support Member States with less resources.

- Develop a phase-out strategy to ensure the continuity of the objectives and achievements of the COVID-19 response. This strategy should describe the process and timeline to scale back, transition and/or eliminate the temporary mechanisms and tools established to face COVID-19, such as the CART, SCEPG, CRRIC and other ad-hoc committees/tools. It could also elaborate on whether some guidelines developed by the CART could be mainstreamed into regular work (e.g., SARPs).

INTRODUCTION AND CONTEXT

Introduction

12. The evaluation of ICAO's response to COVID-19 is included in the 2021 Work Programme of OIO. The evaluation was conducted in accordance with the OIO Charter (C-WP/15115), the ICAO Evaluation Policy (C-DEC 203/3), and the Norms and Standards of the United Nations Evaluation Group (UNEG). The evaluation was carried out between November 2021 and May 2022.

13. The evaluation aimed to provide evidence of institutional performance and make forward-looking recommendations for improvement in the planning, implementation and reporting of ICAO's assistance to Member States during the COVID-19 pandemic. As such, the evaluation assessed ICAO's programmatic and institutional response and assistance to Member States for the restart, recovery and resilience of the civil aviation following the pandemic.

14. This report describes the methodology, data collection methods and data analysis approach of the evaluation. The report also presents main findings, lessons learned and recommendations for improvement. The draft evaluation report was reviewed by the Evaluation Reference Group (ERG).

Context

15. The COVID-19 pandemic has had an unprecedented impact on health, societies, economies, politics and the environment worldwide since its start in early 2020. As of May 2022, 513 million cases of COVID-19 have been confirmed, including more than 6.2 million deaths.[1] The pandemic has severely impacted all aspects of human life, affected all industries and economic sectors, and resulted in devastating economic and financial losses.

16. The civil aviation has been one of the most affected sectors due to travel restrictions, border closures and other public health measures imposed by governments across the world. This has significantly impeded global mobility, causing disruptions in businesses and supply chains. International passenger traffic decreased by 60%, bringing down air travel figures to 2003 levels. The rebound of the aviation industry from COVID-19 is underway, but widespread recovery could take several years.

17. In the context of these challenges, ICAO started providing global guidance to Member States and other stakeholders at an early stage to start the recovery of the aviation sector. ICAO's efforts aimed to safeguard the aviation sector against major risks, restore its growth and enable a more sustainable and resilient global aviation system.

18. The ICAO Council established the Aviation Recovery Task Force (CART) to provide practical, aligned guidance to governments and industry operators to respond to COVID-19 in a globally coordinated manner. ICAO also established the Secretariat COVID-19 Emergency Program Group (SCEPG) to provide all needed services to the CART, as well as to enhance coordination across Bureaus and Regional Offices.

19. In June 2020, the CART produced an initial set of 11 recommendations for the international aviation to ensure the health, safety and security of the travelling public. These recommendations were documented in the CART Report and the accompanying Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis Guidance Document (TOGD). The ICAO Council also adopted a High-Level Cover Document (HLCD) of the Phase II of the CART, including a second edition of the TOGD with additional recommendations based on the latest developments of the COVID-19 crisis.

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[1] World Health Organization. (2022). *COVID-19 Dashboard*. Accessed on 20 April 2022.

20. The Testing and Cross-Border Risk Management Measures Manual (Doc 10152) was also published during the second phase of the CART, representing strong collaboration across many stakeholders such as CAPSCA, the Secretariat and the CART. A second edition of this manual was published during Phase III of the CART.

21. ICAO issued a third edition of the TOGD reflecting the latest operational and public health guidance related to air travel based on technological and medical advancements. It included new considerations on testing protocols and proof-of-results interoperability certification, as well as evidence of vaccination for crew and passengers. The guidance on Public Health Corridors (PHCs) and appropriate masks for air travel was also updated. In total, ICAO has published 20 recommendations to facilitate the restart and recovery of the civil aviation sector.

22. ICAO also developed a Global Implementation Roadmap (GIR), which identifies a series of priority activities and initiatives to support, coordinate and monitor the implementation of the CART recommendations. The GIR includes:

   • Implementation support activities focusing on guidance, training tools and expert assistance to States, bundled in the form of the Implementation Packages (iPacks).

   • Coordination activities to enhance cooperation between ICAO, States, regional organizations and commissions, industry stakeholders and the World Health Organization (WHO).

   • Monitoring and reporting activities facilitated through multi-functional interactive tools available in the COVID-19 Response and Recovery Implementation Centre (CRRIC).

23. The ICAO Secretariat also reprioritized activities in its operating plans and resources considering the emerging requirements of the response to the pandemic. The Secretariat updated and advised States on various topics, including the establishment of National Air Transport Facilitation Committees (NATFCs), facilitation of cargo operations, humanitarian flights, relief and repatriation flights, the COVID-19 Contingency Related Differences (CCRDs), the PHCs and the mobilization of voluntary resources to support the implementation of COVID-19 response plans.

24. ICAO also worked closely with other entities in the United Nations (UN) System through the coordination of the UN Operations and Crisis Centre (UNOCC) and directly with the WHO, the World Tourism Organization (UNWTO), the International Maritime Organization (IMO), the International Organization for Migration (IOM), the International Labour Organization (ILO) and the World Food Programme (WFP). It also engaged critical industry stakeholders, such as the Airports Council International (ACI), Civil Air Navigation Services Organization (CANSO), the International Air Transport Association (IATA), the International Coordinating Council of Aerospace Industries Associations (ICCAIA) and The International Air Cargo Association (TIACA), among others.

25. ICAO prepared a Guidance on Economic and Financial Measures summarizing potential strategies to cope with the economic fallout of the pandemic, alleviate the imminent liquidity and financial strain on the industry, and strengthen the industry's resilience to future crisis. In addition, ICAO provided weekly updates and forecasts on the impact of COVID-19 on air transport to make authoritative information available to Member States and the international community.

26. This evaluation serves as an opportunity to collate and document the wealth of experiences and learnings cumulated across ICAO, partners and the overall sector to better and more readily prepare for and recover from future crises.

EVALUATION PURPOSE AND METHODOLOGY

Evaluation Purpose

27. The evaluation had two purposes: accountability and organizational learning.

   - Accountability refers to assessing the extent to which ICAO has supported Member States to restart the international air transport sector and recover from the impacts of COVID-19. In this regard, the evaluation analyzed ICAO's response in terms of i) its program delivery and operations and ii) its institutional systems, structures and staffing. It also analyzed the progress of Member States in implementing the CART recommendations.

   - Organizational learning refers to evaluating the extent to which ICAO adopted good practices to increase operational effectiveness and efficiency in assisting Member States during the COVID-19 response, as well as to identify lessons learned that can improve decision-making and organizational resilience during similar emergencies in the future.

Evaluation Scope

28. The evaluation had a high-level focus on the implementation of the CART recommendations, including the implementation of the GIR. The assessment covers key strategic activities implemented by ICAO between January 2020 and December 2021 to support Member States throughout the COVID-19 pandemic.

Evaluation Stakeholders

29. The primary audiences of the evaluation are the ICAO Council, the Secretariat and Member States. Other relevant stakeholders involved in the planning and implementation of the COVID-19 response—such as other UN agencies and the aviation industry—can also use the evaluation's findings, recommendations and lessons learned, as relevant and appropriate.

Evaluation Methodology

30. The evaluation used a mixed-methods approach combining quantitative and qualitative research elements to triangulate findings and provide a comprehensive understanding of the relevance, coherence, effectiveness, efficiency and sustainability of ICAO's COVID-19 response. Annex 1 provides a detailed description of the methodology.

31. The evaluation was guided by nine evaluation questions based on the Organization of Economic Development (OECD) Development Assistance Committee (DAC) evaluation criteria. The evaluation team identified indicators, data sources and methods for data collection for each of the evaluation questions, as presented in the Evaluation Matrix in Annex 2.

32. The evaluation adopted a participatory approach, involving key stakeholders—such as the ICAO Council, the Secretariat, Member States and other relevant stakeholders—during the inception, data collection and report review phases of the evaluation.

Data Collection

33. The evaluation employed the following data sources:

   - Desk review: Evaluators reviewed a wide range of reports documenting ICAO's support to Member States and coordination work with other key stakeholders during the COVID-19 pandemic. These documents include:

- CART recommendations
- Secretariat's progress reports
- Council working papers (C-WP) and decisions (C-DEC)
- High-level Conference on COVID-19 (HLCC) documents
- Manuals and guidelines
- Workshop and meeting reports
- Relevant regional and national reports
- Technical assistance/cooperation reports

- In-depth interviews: The evaluation team conducted 66 semi-structured individual and group interviews with key stakeholders, totaling 115 individuals engaged in the evaluation. Stakeholders included Council/CART Members, ICAO Secretary General, Member States, Directors, Deputy Directors and key staff of ICAO Bureaus and Regional Offices, UN partners and industry partners. Table 1 shows the number of interviews by type of stakeholder. Annex 3 includes the list of stakeholders interviewed and Annex 6 includes the questionnaires that guided these interviews.

- Online survey: The evaluation administered an online survey targeting all Member States and relevant ICAO staff to gather their views on ICAO's COVID-19 response and support. The response rate was 54% among Member States and 47% among ICAO staff. Annex 6 includes the surveys.

- Secondary data: The evaluation team extracted relevant data from the CRRIC platform and regional portals on the implementation status of the CART recommendations across Member States.

Table 1. Stakeholder Consultations

Stakeholders	Consultation Method	
	In-depth Interviews	Online Survey
Member States	10	104
Council (including CART members)	8	-
ICAO Staff (HQ and ROs)	40	105
Industry	3	-
UN partners	2	-
Regional groups/organizations	3	-
Total	66	209

Data Analysis and Quality Assurance

34. The evaluation team conducted descriptive and content analysis to identify and validate findings. Descriptive analysis was specifically used for online survey responses and data extracted from ICAO's COVID-19 portal. Content analysis was employed on the information collected through the desk review and in-depth interviews to identify major themes, such as main challenges and achievements.

35. The information collected through primary and secondary sources were systematically analyzed and cross-referenced to arrive at findings. Similar questions on ICAO's COVID-19 response activities, benefits and limitations were asked across stakeholders to compare responses, verify information and identify lessons learned.

Ethical Considerations

36. The evaluation abided by the UNEG Ethical Guidelines for Evaluation. Special care was given to the storage of documents, interview notes and the confidentiality of the data collected for this evaluation. The identity of evaluation participants has been preserved in the presentation of results, as only aggregate-level results are reported.

37. This evaluation was independently carried out by OIO, with the assistance of an independent evaluation consultant and an intern. All evaluation team members declared no conflict of interest.

Limitations

38. The COVID-19 pandemic has not ended. As such, the results of some mechanisms and tools put in place by ICAO to support the aviation sector may have not materialized yet or may be too incipient for the evaluation to fully gauge their level of contribution. While the health crisis has subsided, the risk of new challenges arising (e.g., new virus variants) cannot be fully discarded and may require the use of different response approaches or tools not captured in this report.

FINDINGS

39. This section presents the main evaluation findings, focusing on relevance, coherence, effectiveness, efficiency and sustainability of ICAO's response to COVID-19. Annex 7 presents additional findings.

Relevance

40. Relevance was assessed by examining the usefulness of the CART recommendations in meeting the needs of Member States and other key stakeholders in reducing the impact of COVID-19 on the aviation sector, as well as in keeping the recent gains of the sector.

Finding 1:   The CART recommendations were found to be highly relevant to support Member States and other aviation stakeholders in responding to COVID-19. Member States found the first 11 recommendations particularly useful at a time when there was little information on COVID-19. There is also evidence of sustained relevance across time, as the CART updated the recommendations based on the latest science and the progress of the pandemic across countries.

41. Stakeholders generally found ICAO's response to COVID-19 fast and pertinent to support the aviation sector.[2] Member States rated the CART recommendations as highly/moderately relevant to reduce the impact of COVID-19 on the sector (94%), to keep the recent gains of the sector (91%), to support States (94%) and other aviation stakeholders (92%) and to face similar crises in the future (94%). ICAO staff also found the CART recommendations to be highly/moderately useful to mitigate the impact of the pandemic on the sector (82%) and to assist Member States (82%), but slightly less relevant to keep the recent gains of the sector (78%), to support other aviation stakeholders (76%) and to respond to future crises (72%) (Figure 1).

Figure 1. Perception of Member States and ICAO Staff of the Relevance and Usefulness of the CART Recommendations
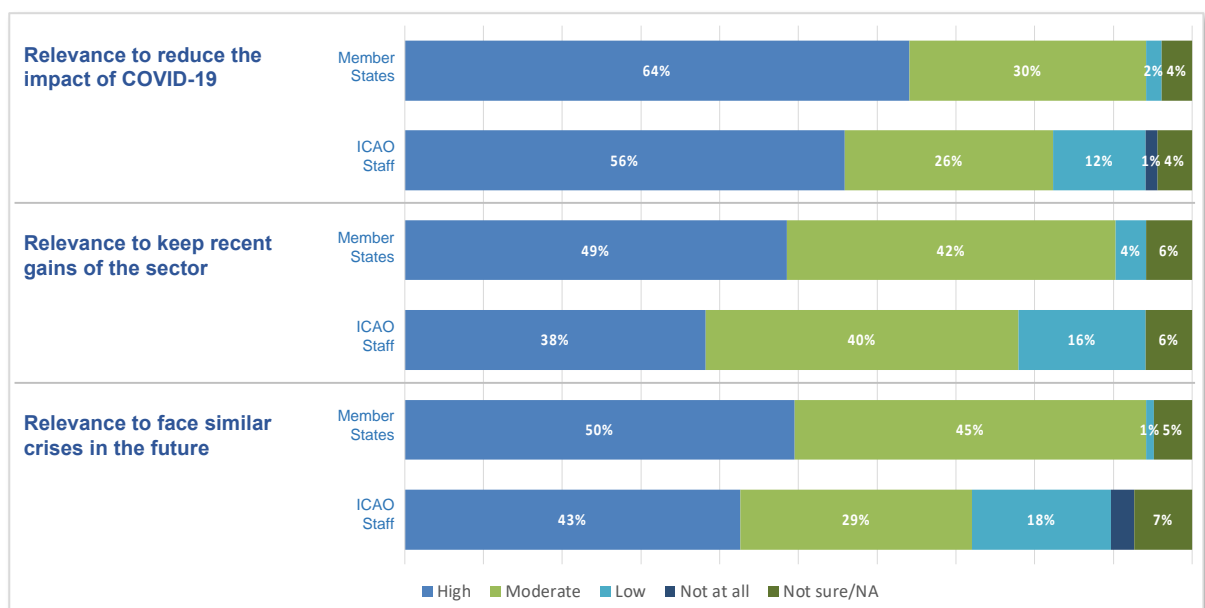
Source: Evaluation Survey for Member States and ICAO Staff

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[2] HLCC 2021 Final Report (Doc 10160)

42. Member States found the first set of 11 recommendations especially useful, as they provided direction at a time when no one knew what to do. These initial recommendations also provided guidance to coordinate and align work with other stakeholders. The most useful CART recommendations for Member States were Recommendation 1 on updating CCRDs in the Electronic Filing of Differences system (18%), Recommendation 3 on expediting the development of guidance for safety management of new/changed operations (28%) and Recommendation 4 on establishing aviation public health procedures aligned with the Take-off Guidance Document (18%).

> *"We had no idea what to do at the beginning because an emergency of this scale was unprecedented. The CART recommendations and the Take-off document were very helpful to mitigate the challenges of the pandemic."*
>
> *Member State, APAC Region*

43. Member States, ICAO staff and other stakeholders highlighted the agility of the CART in reviewing and adapting recommendations to the fast-changing nature of the pandemic and the science. Stakeholders believed this gave countries flexibility to adopt and lift measures depending on their specific health context. For example, some Member States underscored the importance of moving away from CCRDs once the effects of the pandemic had started to subside while allowing the use of temporary Targeted Exemptions (TE) for countries that needed more time to return to compliance with the SARPs.[3] [4]

44. In terms of areas for improvement, some stakeholders commented it would have been more useful for ICAO to issue less recommendations focusing on major priorities. Some Member States and other stakeholders felt it was hard for countries to prioritize all 20 recommendations when facing a large-scale emergency and when health authorities—and not aviation authorities—were on the driver seat of the response to the pandemic.

45. Other stakeholders pointed that some CART recommendations would have not been needed if the implementation of the SARPs had been stronger before the pandemic, particularly Annex 9-related SARPs. Stakeholders mentioned the establishment of the NATFCs as an example. As of December 2020, almost 58% of audited States had not established a NATFC or similar coordination body.[5] Stakeholders highlighted the need for ICAO to strengthen the implementation of the SARPs to better prepare for future crises.[6]

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[3] HLCC 2021 Final Report (Doc 10160); C-WP/15073.
[4] ICAO. (2021). *Transitioning from CCRD System to TE System*. Webinar delivered on 29 April 2021. Accessed on 1 May 2022.
[5] HLCC 2021-WP/25.
[6] HLCC 2021-WP/17.

Coherence

46. Coherence was evaluated by examining whether ICAO's COVID-19 response and support was aligned and complementary to the needs of Member States and the response plans/programmes of other relevant stakeholders.

> **Finding 2:** The CART adequately engaged critical stakeholders at the appropriate decision-making level to coordinate the COVID-19 response, including Member States, UN partners and the industry. This helped the CART recommendations to be aligned with the response plans and programmes of key stakeholders. While achieved, the process of ensuring work coherence faced challenges, as each organizational stakeholder had different mandates and processes to validate recommendations. Stakeholders agreed that ICAO should establish mechanisms to facilitate crisis management alignment across key stakeholders ahead of future emergencies.

47. ICAO's response to COVID-19 was found to be largely aligned with the plans and programmes of Member States and other important stakeholders. The organization engaged high-level representatives of Member States, WHO and other UN partners, and the industry to ensure the CART recommendations were relevant and actionable.[7] In online surveys, Member States reported high/moderate levels of coherence and complementarity of ICAO's response with their national plans (91%) and with those of the industry and other aviation partners (e.g., services providers) (87%). While most ICAO staff shared the same feedback as Member States, 18% believed the alignment between ICAO's work and that of other aviation stakeholders was low (Figure 2). In survey comments and interviews, staff explained that some industry stakeholders issued their own recommendations, creating confusion for the States.

Figure 2. Coherence and Complementary of ICAO's COVID-19 Response to the
Plans/Programmes of Member States and Other Stakeholders
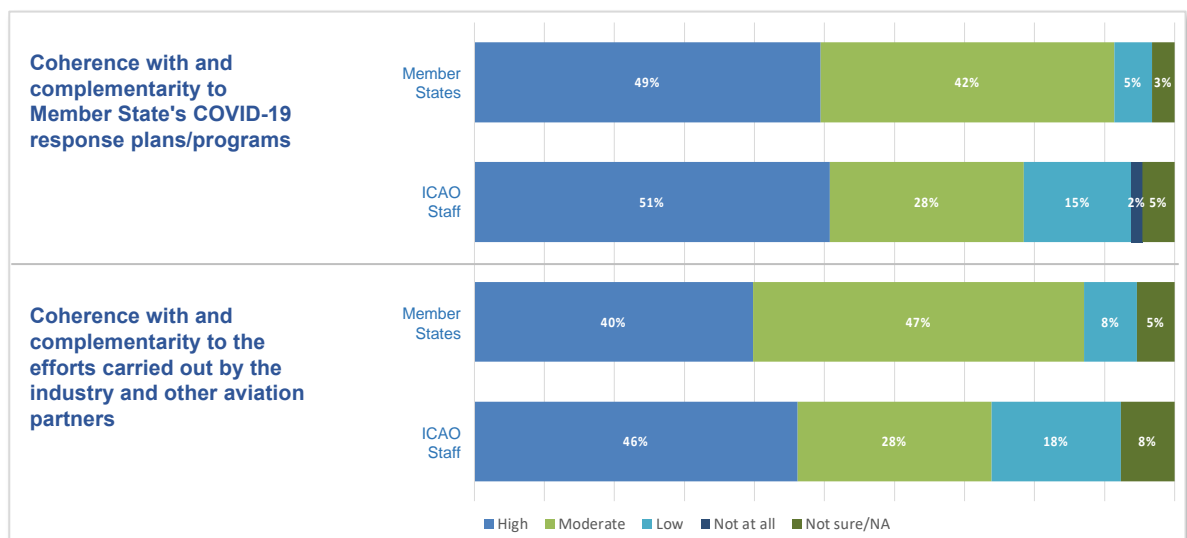
Source: Evaluation Survey for Member States and ICAO Staff

48. Stakeholders believed the alignment between ICAO and WHO was successful but challenging. This was partly due to differences in organizational missions and internal procedures. For instance, WHO and ICAO have different processes to assess potential conflict of interests when working with the

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[7] HLCC 2021-WP/19; HLCC 2021 Final Report (Doc 10160).

industry. Due to the nature of its work, WHO also has a rigorous process to validate guidelines and recommendations based on science. Understanding how each other worked internally took time. At the regional level, some stakeholders mentioned inconsistencies in guidelines issued by WHO and the Pan American Health Organization (PAHO), which created additional challenges to the alignment of the response in the Americas.

49. While stakeholders believed the work across key actors was generally coherent and complementary, they also thought the alignment of work could have been faster and smoother if the relationship and coordination mechanisms between WHO and ICAO, along with the industry, had been stronger and more formalized before the pandemic. Many stakeholders recommended establishing a high-level mechanism to keep regular communication and work articulation among key stakeholders ahead of future emergencies. They also recommended setting and formalizing clear roles and responsibilities for members of such mechanism through Memoranda of Understanding (MOU).

Finding 3:	At the national level, the alignment of the COVID-19 response across key stakeholders proved challenging. This was partly due to health and aviation authorities having different legal mandates and the ministries of health being seen as the default leaders of the response, despite the pandemic impacted all sectors. Even in countries with NATFCs established before the pandemic, health and aviation authorities faced difficulties to align work. Stakeholders thought ICAO could facilitate the establishment of more effective mechanisms for national response alignment in future emergencies.

50. Member States, ICAO staff, UN partners and the industry alike found the lack of alignment between health and aviation authorities to be one of the biggest challenges to the COVID-19 response at the national level. As the pandemic was a health emergency, the ministries of health became the primary decision-makers in the coordination of the national response across countries. Because ministries in general have well-delimited legal mandates, health and aviation authorities in most countries worked in silos before the pandemic. This made the alignment of work more difficult.

51. Stakeholders explained that some ministries of health would only follow recommendations from the WHO, disregarding the health-related CART recommendations. While Civil Aviation Authorities (CAAs) and other aviation stakeholders knew the CART recommendations had been aligned with WHO guidance, national health authorities seemed less aware of this. As such, many stakeholders thought that ICAO and WHO should work on faster alignment and vetting of recommendations to enable greater coordination at the national level in future emergencies.

52. Alignment across health, aviation and other authorities was challenging even in countries with NATFCs established before the pandemic.[8] Stakeholders believed NATFCs were not effective in responding to the pandemic largely because members tend to be subject matter experts and/or government officials with little decision-making power. Stakeholders identified the involvement of high-level officials across a wide range of authorities—not just health and aviation authorities—as a contributing factor to aligned response. For example, interviewees from an east African country reported that they had an existing NATFC prior to the pandemic, but the

> *"We had a NATFC in place before the pandemic, but there was no deep integration among the entities. It was only until high-level decision-makers became involved that there was effective coordination. The learning here is establishing the NATFC at the highest level possible so that implementation at the bottom does not conflict."*
>
> *Member State, ESAF Region*

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[8] HLCC 2021-WP/110; HLCC 2021-WP/19; HLCC 2021-WP/21; HLCC 2021-WP/62.

coordination of the response only became effective when the president took over the committee and brought in the ministers of health, transport, ICT and tourism, along with customs, CAA and CEOs of major airlines.

53. Another factor identified by stakeholders as enabling effective national coordination was having medical doctors in high-level positions within the CAA. Stakeholders believed these CAA officials were able to speak the same language as health authorities, but they also understood aviation operations.

> Finding 4: CART recommendations that required coordination with stakeholders beyond the aviation sector also proved challenging to harmonize across countries. For example, countries set different timeframes for travelers to take a COVID-19 test prior to departure. Stakeholders believed ICAO could have played a stronger role in sharing best practices and creating a repository of country-level travel requirements to facilitate alignment across countries and to create trust among passengers.

54. Member States and other stakeholders named the lack of harmonization of border restrictions and health measures across countries as a major barrier to restarting international air transport faster.[9] For instance, some countries required passengers to secure a negative COVID-19 test within 48 hours before departure, whereas other countries required more (or less) time. Similar discrepancies were mentioned around quarantine measures and type of COVID-19 test. Stakeholders believed ICAO could have issued best practices in this regard to help better align these measures across countries.

55. The lack of harmonization of travel requirements impacted passenger trust, as the variation of requirements across countries affects passengers' travel risk perception.[10] In this regard, several stakeholders believed ICAO is far too removed from the concerns of passengers. They believed ICAO has always been a natural leader when it comes to pilots, airports and planes, but not when it comes to passengers. Stakeholders thought ICAO lost momentum in becoming a trusted repository of requirements across countries that passengers could use to search what they needed to fly in/out of specific States/regions.

56. Stakeholders also recommended for ICAO to continue supporting Member States in enhancing digital data sharing to facilitate seamless and contactless travel processes. Specifically, stakeholders suggested focusing on increased digitization of documents (e.g., Passenger Locator Form, eVisas) and global interoperability as a more conducive approach to agile exchange and validation of information for a faster restart of the air transport after an emergency. Acknowledging that these efforts are costly and that some countries may lack technical or financial capacity, stakeholders suggested leveraging the COVID-19 momentum to mobilize resources from larger Member States and other funding sources to ensure most States move toward digitization and interoperability. In their view, these efforts can help increase response speed and harmonization in future emergencies.[11]

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[9] HLCC 2021-WP/42; HLCC 2021-WP/17; HLCC 2021-WP/68.
[10] Lu et al. (2022). *The Effects of Passenger Risk Perception During the COVID-19 Pandemic on Airline Industry: Evidence from the United States Stock Market*. Front Psychol. 2021; 12: 795940. Accessed on 25 April 2022.
[11] HLCC 2021-WP/22; HLCC 2021-WP/38; HLCC 2021 Final Report (Doc 10160).

Effectiveness

57. This section examines the effectiveness of ICAO's support to Member States to develop fit-for-purpose responses to recover from COVID-19 and to restart the international air transport sector.

Finding 5:   The CART recommendations were generally effective to support Member States in responding to COVID-19, with the first 11 recommendations being considered the most effective. Subsequent recommendations were found to be less effective, primarily due to the availability of more information on COVID-19 and limited in-country financial resources and/or technical capacity to implement the recommendations.

58. Stakeholders found the CART recommendations to be highly effective in supporting States and other aviation stakeholders to respond to COVID-19.[12] To enable the adequate implementation of the recommendations, ICAO deployed a wide range of guidance materials and events, including the Take-off Guidance Document, manuals, webinars and workshops. In interviews, stakeholders mentioned the Take-off Guidance Document as one of the most effective materials to support the implementation of the CART recommendations on the ground.[13] [14] [15]

59. Stakeholders also highlighted the webinars organized by ICAO to provide guidance and strengthen national response. In 2020 alone, ICAO carried over 50 webinars to provide support on COVID-19-specific activities and challenges, including aviation safety, air traffic management, licensing, digital transformation, monitoring and reporting, international and regional cooperation, inter-agency collaboration, technical cooperation and assistance, and measures to alleviate sector financial distress, among others. Other webinars also focused on returning to normal operations, revised or new CART recommendations and exchange of information around regional safety plans.[16]

60. Stakeholders also commended the organization of the High-level Conference on COVID-19, held in October 2021. The conference gathered nearly 1,800 attendees, including representatives of Member States, international organizations, aviation industry and other key stakeholders. Among other topics, the conference focused on actions needed to re-stablish international connectivity while ensuring safety, as well as on building resilience and sustainability in the aviation sector.[17]

61. To ensure uninterrupted access to critical training, ICAO rapidly converted its existing classroom courses into virtual training and developed online trainings on aviation recovery and resilience. Through the Global Aviation Training (GAT), ICAO delivered 319 in-person courses in 2020—which is comparable to those delivered in 2019 (333)—and 452 in 2021. While the number of trainees reached through in-person classrooms in 2020-2021 remained similar to 2018-2019 levels, the number of trainees reached through virtual courses and online trainings significantly increased during the pandemic (Figure 3).[18]

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[12] HLCC 2021 Final Report (Doc 10160).
[13] ICAO. (2020). *ICAO Global Implementation Roadmap (GIR): Supporting the CART Implementation*. Accessed 29 April 2022.
[14] ICAO. (2020). *Guidelines for Aviation Security Contingency Measures during the COVID-19 Pandemic (May 2020)*. Accessed 29 April 2022.
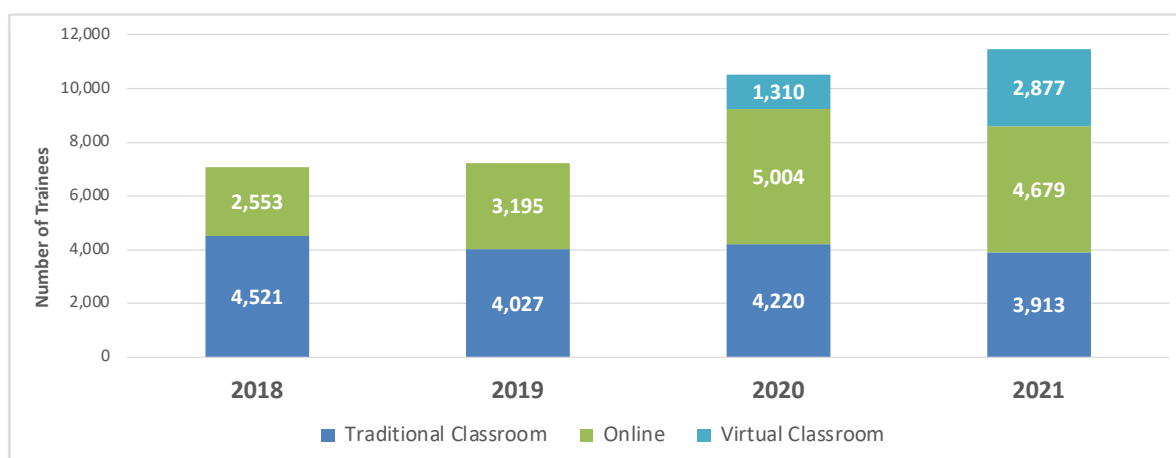[15] C-WP/15081; C-WP/15131.
[16] *ICAO Archived Webinars*. Accessed on 29 April 2022.
[17] C-WP/15171; HLCC 2021 Final Report (Doc 10160).
[18] ICAO. (2022). *ICAO Training in Figures 2019-2021*. Accessed on 29 April 2022.

Figure 3. Number of ICAO Trainees by Year and Delivery Modality

Source: GAT Statistical Abstract *"ICAO Training in Figures 2019-2021"*

62. In online surveys, Member States and ICAO staff assessed ICAO's overall support to implement the CART recommendations as highly/moderately effective (91% and 83%, respectively). As shown in Figure 4, they reported the guidance materials, manuals and tools developed by ICAO as particularly effective (94% and 93%, respectively). Member States and ICAO staff also rated the usefulness of the trainings and workshops organized by ICAO to support in-country implementation positively (87% and 80%, respectively).

Figure 4. Perception of Member States and ICAO Staff on the
Effectiveness of the CART Recommendations
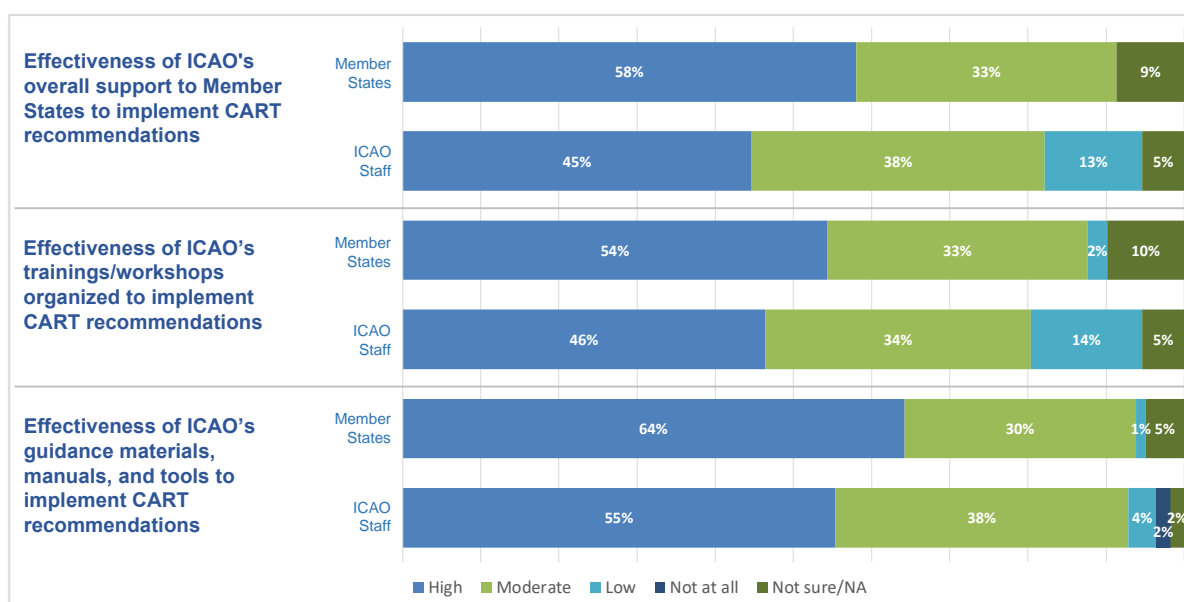
Source: Evaluation Survey for Member States and ICAO staff

63. Stakeholders reported the first 11 CART recommendations as the most effective to respond to COVID-19. The information reported by Member States through the CRRIC concurs with this perspective. On average, 76% of Member States fully implemented the first set of recommendations (CART 1), whereas only an average of 44% and 43% implemented the second and third rounds of recommendations (CART 2 and 3, respectively).

64. Stakeholders believed this is because most of the first 11 recommendations were related to safety and security, which are more straightforward measures to address and where the aviation sector has more experience to implement. CRRIC data also validates this perspective. As of 12 April 2022, an average of 71% of countries had fully implemented safety, security and facilitation-related CART recommendations. In contrast, public health-related recommendations were the least implemented, with an average of 50% of countries reporting full implementation (Figure 5).

65. Among other reasons for lower implementation of the CART 2 and CART 3 recommendations, stakeholders mentioned the availability of more information on COVID-19 spread and protective measures. Others mentioned the lack of technical and/or financial capacity to effectively implement some CART recommendations. For example, the CART recommendation with lowest implementation was Recommendation 14 on the establishment of PHCs. As of April 2022, only one PHC had been fully implemented between two ESAF countries, two were in process of implementation in WACAF and APAC and two States were in process of implementation but had yet to find a partner State to make the PHC operational (APAC and MID). In interviews and online surveys, some States indicated they were interested in implementing PHCs but lacked technical capacity and could not afford the cost of the related iPack.[19]

Figure 5. Proportion of Member States with Full Implementation of the
CART Recommendations (as of 12 April 2022)
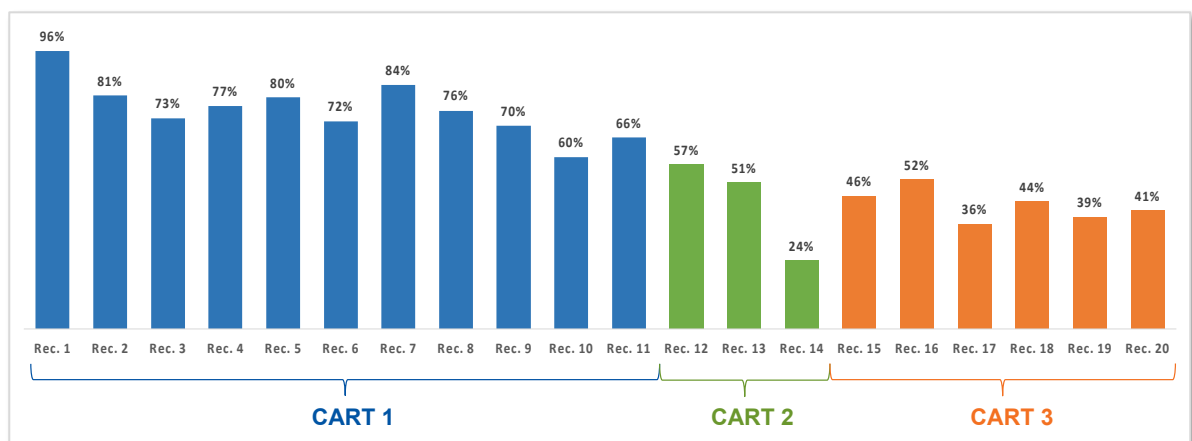
Source: Data extracted from the CRRIC portal

Finding 6:   iPacks were found valuable to increase Member States' capacity to implement the CART recommendations. However, the delivery timing of some iPacks, resource limitations of some Member States to pay for the iPacks and the lack of translation of the packages into other ICAO official languages prevented States from maximizing their benefits.

66. In addition to courses, webinars and workshops, ICAO developed iPacks as bundles of standardized guidance material, training, tools and expert support to facilitate and guide the implementation of the CART recommendations. The iPacks provide guidance on topics such as aviation safety management, establishment of NATFCs, aerodromes restart, establishment of PHCs and development of National Aviation Safety Plans (NASPs), among others. To date, ICAO has released nine iPacks and is in the process of developing three new packages.[20]

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[19] CAPSCA Global Virtual Symposium (March 2022); HLCC 2021-WP-20.
[20] *ICAO Implementation Package (iPack)*. Accessed on 29 April 2022.

67. As of May 2022, ICAO has deployed a total of 108 iPacks across all seven ICAO regions (Figure 6), primarily in the NACC and APAC regions (23 packages each). Of these, 40 packages have been fully implemented, 20 have been initiated, 12 are ongoing and 14 are planned with funds already allocated. Most deployed iPacks focused on aviation security (18%), aerodrome restart (15%) and NASP establishment (14%) (Figure 7).[21]

68. The iPacks were designed to be deployed on a cost-recovery basis, whereby Member States would cover the cost of the packages. Recognizing that not all States could afford the iPacks, ICAO undertook an extensive resource mobilization approach. As of May 2022, ICAO Technical Cooperation Bureau (TCB) received $2.7 million in contributions for iPack implementation, which is a record relative to resources mobilized in the past. Of this total, $2.4 million (88%) have already been allocated.[22]

69. About 27% of mobilized resources came from donors and 73% came from ICAO's own resources.[23] Specifically, resources came from ICAO Bureaus' existing funds for technical assistance (e.g., ANB carryovers and ATB/AVSEC Fund), the Multi-Regional Civil Aviation Assistance Programme (MCAAP) and voluntary contributions by Member States, such as the United States, Korea, Canada and Qatar. Other contributions were secured through tripartite mechanisms with regional development banks, such as the Inter-American Development Bank.[24] [25]

Figure 6. iPacks Deployed by Regional Office
(as of 1 May 2022)
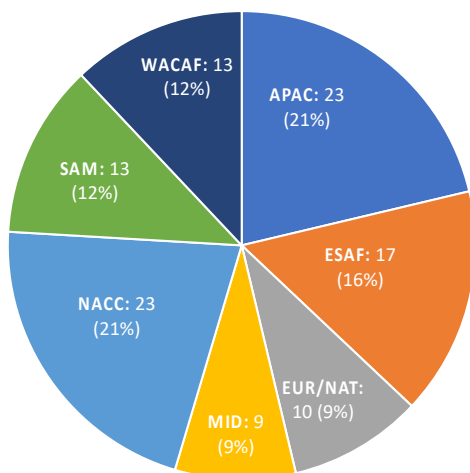
APAC: Asia and Pacific. ESAF: Eastern and Southern Africa. EUR/NAT: European and North Atlantic. MID: Middle East. NACC: North American, Central American and the Caribbean. SAM: South America. WACAF: Western and Central Africa.

Source: TCB Portal on iPacks for Regional Offices

Figure 7. iPacks Deployed by Topic
(as of 1 May 2022)
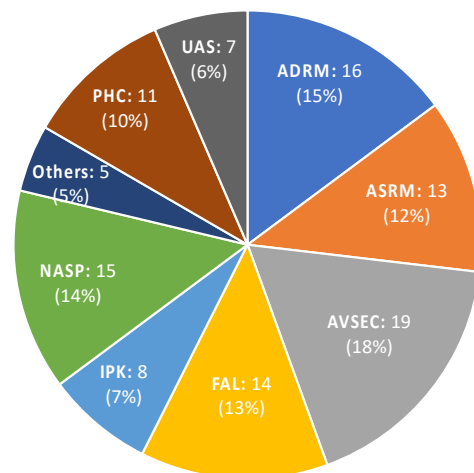
ADRM: Aerodrome Restart. ASRM: Aviation Safety Risk Management. AVSEC: Aviation Security Quality Control. FAL: NATFCs. NASP: National Aviation Safety Plan. PHC: Public Health Corridor. UAS: Unmanned Aircraft Systems. IPK: Deployments pending to identify type of iPack or beneficiary State.

Source: TCB Portal on iPacks for Regional Offices

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[21] Implementation Packages (iPacks) (icao.lan) Accessed on 1 May 2022.

[22] Implementation Packages (iPacks) (icao.lan). Accessed on 1 May 2022; Interviews with the SCPC team (29 April 2022).

[23] *SPCP Resource Mobilization Overview*. Accessed 29 April 2022; Interviews with the SCPC team (29 April 2022).

[24] Implementation Packages (iPacks) (icao.lan) Accessed on 1 May 2022; Interviews with SCPC (29 April 2022).

[25] ICAO. (2021). *ICAO's Technical Cooperation Activities in MID*. 5th Virtual DGCA MID Meeting. Accessed 1 May 2022.

70. In online surveys, 44% of Member States reported using the iPacks and 48% found the packages to be highly/moderately useful. Among States that did not use iPacks, reasons for not doing so included that States felt the CART recommendations and the Take-off Guidance Document were sufficient guidance to implement the necessary measures. Others indicated that they had enough in-country technical capacity and resources to implement the recommendations without assistance from ICAO. Other States pointed to the cost of the iPacks and lack of resources as the main reason for not using the packages.

> *"The iPacks are useful as a capacity building concept. But ICAO could fine-tune the financial model of the iPacks to support countries that lack technical capacity and do not have the resources to get the assistance. This will maximize the benefits of the iPacks."*
>
> *Member State, NACC Region*

71. In interviews, Member States and other stakeholders highlighted the cost of the iPacks as a barrier to increased capacity building and implementation of the CART recommendations. While ICAO was able to mobilize sizable voluntary funding to support States with less resources, most stakeholders believed the organization needs to device a more sustainable resource mobilization strategy to ensure the delivery of iPacks to States that need them the most, particularly in times of emergency. Some stakeholders suggested undertaking more high-level resource mobilization, such as having top Secretariat staff to make direct connections with high-level representatives of potential donors (e.g., ministers, corporate CEOs and presidents of banks).

72. Stakeholders thought that some iPacks were released too late to timely meet the needs of Member States. For instance, States liked the concept of the PHCs as a feasible solution to restarting air transport but said the related iPack was delivered when most States were already lifting travel restrictions. Nonetheless, most stakeholders acknowledged that it takes time to develop a new product during a fast-changing context and based on the available science.[26]

73. Another challenge pointed by stakeholders was the availability of iPacks only in English. For example, some iPacks were sent in English to countries in South America (SAM) and the Middle East (MID), where most professionals operationalizing these efforts do not feel comfortable using a document and working with an expert in English. While stakeholders understood the need to quickly release implementation guidance and the cost implications of translations, they also believed the unavailability of iPacks in local languages delayed direct implementation. Stakeholders recommended factoring the cost and timing of the translation in the development of similar packages for future emergencies.

74. In addition to improving the financial model of iPacks and increasing their language availability, some stakeholders recommended conducting case studies to better understand the impact of the packages in improving capacity during an emergency. Stakeholders believed these case studies can help enhance the iPacks as solutions for future emergency preparedness.[27]

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[26] ICAO. (2020). *Progress Report on the Secretariat's COVID-19-related Activities to Support the Implementation of the CART Recommendations and Guidance (CART/10)*. Accessed 29 April 2022.
[27] HLCC 2021-WP/107.

Finding 7:	Stakeholders recognized the timely development of the CRRIC portal as a critical tool for information exchange, monitoring and reporting. Most Member States used the portal primarily for reporting purposes, with few States using it to inform decision-making. Although not mandatory, some stakeholders found the reporting through the portal somewhat overwhelming at a time when States were handling multiple priorities.

75. To effectively respond to COVID-19, ICAO deployed the CRRIC as a dedicated website to bundle resources and tools to support the implementation and coordination of activities related to the CART recommendations. The CRRIC also served as a monitoring and reporting mechanism to understand global progress in the implementation of the CART recommendations. The website provided easy access to CART reports, the Take-off Guidance Document, links to the iPacks and CAPSCA assistance activities, a list of focal points in Member States and regions, dashboards and an email support line to answer CART-related questions, among others.[28]

76. In online surveys, Member States found the monitoring and reporting tools deployed by ICAO, including the CRRIC, as highly/moderately (85%) useful to monitor the implementation of the CART recommendations and the timely exchange of information. While the majority of ICAO staff also assessed ICAO's monitoring and reporting tools as highly/moderately useful (70%), a quarter of them (25%) thought the utility of these tools was low.

77. In interviews, stakeholders generally appreciated the availability of the CRRIC, especially at the beginning of the pandemic when there was little information available on how to adapt the sector to the challenges of COVID-19. Many stakeholders commended the speed of ICAO in establishing the CRRIC, which was developed within two weeks. Most Member States indicated using the CRRIC for reporting purposes only. A few States used the CRRIC to inform their decision-making, for example, to connect with States that were more advanced in implementing CART recommendations to request information and exchange learnings.

78. In terms of challenges, many stakeholders felt there was significant pressure on Member States to report on the implementation of the CART recommendations, even though the recommendations and reporting were not mandatory. While stakeholders understood the importance of gathering information during an emergency, this emphasis on reporting eventually became overwhelming for States—particularly smaller States. Stakeholders recommended ICAO to keep this challenge in mind when developing monitoring and reporting tools for future emergencies.

79. Some stakeholders mentioned the self-reporting nature of the CRRIC as another challenge, as it was not possible to verify all the information provided by the States through the site. ICAO staff largely acknowledged the limitations of self-reported information and pointed that it is not realistic to have the capacity to validate information during an emergency of this scale. Other stakeholders also believed States generally reported information in good faith and that it is better to have imperfect information than no information at all.

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[28] *ICAO COVID-19 Response and Recovery Implementation Centre (CRRIC)*. Accessed on 1 May 2022.

Finding 8: CAPSCA was considered highly effective and crucial in ICAO's overall response to COVID-19, particularly in facilitating communication among health, aviation and other relevant authorities. Stakeholders largely believed CAPSCA needs to be strengthened to better respond to future emergencies.

80. CAPSCA was established in 2006 as a voluntary cross-sectoral, multi-organizational collaboration programme managed by ICAO with support from WHO. The programme brings together international, regional, national and local organizations to improve preparedness planning and response to public health events that affect the aviation sector. Such events include communicable diseases, chemical events, bioterrorism, natural and man-made disasters, among others. It operates in all ICAO regions through seven regional coordination groups.[29]

81. The programme organizes an annual multi-sector, multi-stakeholder meeting in each region to develop and harmonize the approach to public health crisis management. In addition, CAPSCA conducts joint ICAO/WHO assistance visits to States to assess current capacity and gaps. It also facilitates training for aviation and health professionals involved in public health event planning in the aviation sector. Upon completion of the visit, CAPSCA delivers a confidential report to the State with recommendations to improve its preparedness plan. The visit is arranged on a cost-recovery basis. To date, CAPSCA has conducted 80 visits globally.[30] CAPSCA is funded through donations from UNDP, the States and other donors, as well as through in-kind contributions of technical advisors to provide trainings to the States.[31]

82. Most stakeholders assessed the work of CAPSCA as a highly effective mechanism for multi-sectoral collaboration. Stakeholders specifically highlighted the importance of CAPSCA in facilitating communication across health, aviation and other relevant stakeholders at the global and national levels.[32] Throughout the pandemic, the programme produced a wide range of science-based reports to facilitate guidance around contact tracing, testing, quarantines, face coverings, vaccination, aircraft disinfection and PHCs, among others.[33]

83. Stakeholders explained that CAPSCA usually followed a cyclical pattern, whereby membership was strong when there was a specific health event affecting aviation (e.g., Ebola) but becomes dormant when the threat is under control. Some stakeholders viewed this pattern as a limitation to sustain capacity building and to faster reaction to COVID-19. For example, some stakeholders indicated that CAPSCA in the Americas have not held meetings since 2017 and because of that, it took time to regroup when the COVID-19 pandemic started.

84. In addition to facilitating communication and collaboration at the international level, many stakeholders agreed that CAPSCA trainings and assistance visits are also critical to enable more effective coordination at the national level. However, not all States have the resources to participate in CAPSCA regional meetings or to cover an assistance visit.

85. While most stakeholders agreed that CAPSCA should be strengthened with greater resources to

"Many States would benefit from CAPSCA training and assistance visits. It could really make a difference in terms of emergency preparedness for future crises. But many States do not have the resources to cover the costs of CAPSCA technical assistance and visit. If ICAO wants to act on the principle of No Country Left Behind, the organization needs to carefully think how to address this resource issue."

ICAO Staff

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[29] *ICAO Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation*. Accessed on 26 April 2022.
[30] *CAPSCA Technical Assistance Visit*. Accessed on 26 April 2022.
[31] HLCC 2021-WP/130.
[32] HLCC 2021 Final Report (Doc 10160).
[33] *ICAO Coronavirus (COVID-19) References & Scientific Evidence Documents*. Accessed on 26 April 2022.

assist more States, there were diverging opinions on how ICAO should do so. On one hand, some stakeholders thought CAPSCA should be better institutionalized within ICAO—i.e., have a more formal governance structure and funds from ICAO's regular budget. Others also suggested for the CAPSCA membership to be mandatory for States.[34]

86. On the other hand, some stakeholders believed the informality of CAPSCA is what gave the programme sufficient flexibility and scientific independence to act fast during COVID-19 without political interference. To these stakeholders, a way to strengthen CAPSCA is to find alternative voluntary resource mobilization mechanisms to expand its assistance, such as the tripartite mechanism established with regional development backs for the implementation of some iPacks.[35] Other stakeholders mentioned there is appetite among donors to support bundled assistance (e.g., environment and facilitation assistance combined).

87. Regardless of their position on this matter, most stakeholders agreed that CAPSCA should preserve its political and scientific independence for most optimal preparedness and response to future emergencies.

> Finding 9:   The COVID-19 pandemic underscored the importance and complexity of facilitation activities. Stakeholders highlighted the need to strengthen the ICAO Facilitation Section with more human and financial resources to deliver its work. Stakeholders also proposed an oversight mechanism (e.g., audits) to better enforce the implementation of some Annex 9-related SARPs.

88. The ICAO Facilitation Programme supports Member States in making border clearance formalities more efficient while maintaining high-quality security and law compliance. Specifically, the programme provides Member States with technical assistance, trainings and policy development and implementation support related to Annex 9 SARPs. As such, the Facilitation Programme manages activities across a wide range of topics and stakeholders beyond aviation, such as immigration, customs and health, among others.[36]

89. Stakeholders commended the work of all ICAO staff, but particularly that of the Facilitation and Aviation Medicine teams, in providing support to States and standardizing national response across countries as much as possible, as well as the work of the Secretariat response leadership team in coordinating the response.

90. While ICAO implemented facilitation activities before the pandemic, many stakeholders believed COVID-19 made more evident the crucial role of these activities in emergency response. Stakeholders said the pandemic shed light on how complex it is to coordinate, implement and harmonize facilitation activities.[37]

91. Stakeholders generally thought the ICAO Facilitation and Aviation Medicine teams went above and beyond to support Member States during the pandemic, despite having limited human and financial resources. Several stakeholders indicated that the Facilitation Section did not have sufficient resources to adequately deliver its work before the pandemic and even after becoming a separate Strategic Objective in 2012. In their view, this limited ICAO's ability to support States in effectively implementing Annex 9-related SARPs. For example, some stakeholders mentioned the lack of pre-pandemic training to support States with the establishment of NATFCs, which is now being provided.

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[34] CAPSCA Virtual Symposium 2022; HLCC 2021 Final Report (Doc 10160); HLCC 2021-WP/21.
[35] HLCC 2021-WP/25.
[36] *ICAO Facilitation Programmes*. Accessed on 29 April 2022.
[37] HLCC 2021 Final Report (Doc 10160).

92. In tandem to internal resource constraints, stakeholders also believed the lack of auditing of some Annex 9-related SARPs contributed to States not prioritizing the implementation of standards that are critical to emergency preparedness and response prior to the pandemic. Many stakeholders believed ICAO should implement some form of oversight mechanism of all Annex 9-related SARPs for better response to future emergencies. Stakeholders acknowledged that auditing all Annex 9-related SARPs will be challenging given the wide range of expertise needed and pointed again to the need of strengthening the Facilitation Section with greater human and financial resources.[38]

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[38] HLCC 2021-WP/24.

Efficiency

93. Efficiency was assessed by examining ICAO's capacity to adapt its organizational assets and capacities to respond to COVID-19. It specifically looked at how efficient ICAO has been in managing its plans/programmes and delivering results.

Finding 10:	ICAO was found to timely adapt its human and financial resources to respond to the demands of the pandemic. The work of the Regional Offices and the high level of collaboration across ICAO Bureaus was consistently recognized by stakeholders. However, the COVID-19 response adversely impacted the health and well-being of ICAO staff. Some inefficiencies were also identified regarding cumbersome processes to repurpose donor funds for technical assistance.

94. All stakeholders thought ICAO acted fast to respond to COVID-19. The organization quickly established the CART and the SCEPG to enhance coordination of Secretariat's activities across ICAO Bureaus and Regional Offices.[39] ICAO issued a formal response to the pandemic—in the form of the CART Report and the Take-off Guidance Document—on 27 May 2020, which is less than 45 days after the WHO declared COVID-19 a global pandemic (11 March 2020).[40] A formal response in less than 45 days from the onset of a pandemic is considered as timely response.[41]

95. Many stakeholders highlighted the level of collaboration and coordination across ICAO Bureaus as an effective mechanism to enable adequate organizational response. For instance, several ICAO staff said the Bureaus tended to work in silos before the pandemic. Others specifically emphasized the role of SCEPG in bringing all ICAO sections together on a weekly basis to create the necessary connections and synergies to respond efficiently. Stakeholders believed this collaboration and coordination across ICAO Bureaus and Offices made the overall response to COVID-19 more relevant and actionable. Some stakeholders recommended preserving this working style through the establishment of a taskforce or a similar mechanism to maintain effective collaboration ahead of future emergencies.

96. Member States and other stakeholders also commended the work of the Regional Offices in actively supporting States and the local industry in mitigating the impact of COVID-19. In online surveys, 88% of States and 84% of ICAO staff rated the work of the Regional Offices as highly/moderately effective in enabling the implementation of the CART recommendations.

> *"Cross-bureau collaboration was strong. I started working at ICAO in 2019 and I was shocked at how little contact the bureaus had. The COVID-19 response forced them to collaborate. It enriched the quality of our work and should be maintained for the future. Putting in place a cross-bureau taskforce would be useful to have effective collaboration before a crisis."*
>
> *ICAO Staff*

97. In interviews, States highlighted additional efforts made by the Regional Offices to facilitate communication and support activities beyond the general guidance material, tools and events organized by ICAO. For example, some Member States mentioned that the Asia Pacific (APAC) Regional Office organized specific meetings for small Pacific Island countries for better coordination and implementation of the CART

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[39] ICAO. (2020). *ICAO's Support to Aviation Recovery Efforts Following the Outbreak of the COVID-19 Pandemic*. Accessed 1 March 2022; ICAO. (2021). *3rd Informal Multidisciplinary Advisory Group Meeting on Transport Responses to COVID-19 Crisis*. Accessed 29 April 20222; C-WP/15079.

[40] ICAO. (2020). *CART Report*. Accessed 21 February 2022.

[41] OIOS. *COVID-19 Response Evaluation Protocol*. October 2020.

recommendations. Other stakeholders said the SAM Regional Office organized meetings to facilitate the implementation of iPacks, as some of the packages were received only in English.

98. The evaluation also found evidence that ICAO timely adapted its resources to respond to the pandemic. Internally, the organization repurposed funding to deliver its core business remotely (e.g., organizing panels/committees, delivering trainings) and to enable staff to work from home. This required purchasing new software licenses (Zoom, Teams, MS Office) and laptops for over 60% of ICAO employees.[42] This adaptation process was achieved in less than a month from the onset of the pandemic.

99. In terms of supporting Member States and other aviation stakeholders, ICAO also adjusted resources and plans accordingly. For instance, the ICAO Facilitation team focused on identifying existing resources, such as the Passenger Locator Form, which could be quickly adapted to prevent the spread of COVID-19 through air transport while avoiding a full halt of aviation operations. As mentioned earlier, ICAO quickly switched its trainings to be delivered remotely to maintain continuous support around security, safety and facilitation activities.

100. ICAO also leveraged an existing mechanism to accelerate changes in technical instructions so that COVID-19 vaccines could be transported by air. Stakeholders explained that the normal process for changing the technical instructions for the transportation of dangerous goods is cumbersome and lengthy. By using the accelerated process, ICAO was able to change technical instructions in less than four months, which stakeholders assessed as record time.

101. Another example of repurposing existing resources to respond to COVID-19 was the SAM Region's Regional Safety Oversight Cooperation System (SRVSOP). The system involves CAA directors of SAM Member States, technical experts nominated by States and focal points. This regional group began working on safety measures as soon as SAM States started to impose lockdowns and before the CART recommendations were available. Stakeholders highlighted the fast and comprehensive worked produced by the SRVSOP.[43]

102. Similarly, the APAC, ESAF and WACAF Regional Offices coordinated temporary measures to mitigate the impact of COVID-19 on aviation based on prior experiences with the Severe Acute Respiratory Syndrome (SARS) and Ebola. For example, stakeholders mentioned the establishment of crisis management groups and the organization of several workshops and meetings to provide guidance to Member States and coordinate temporary actions before the CART recommendations were available.[44] [45]

> *"We switched from an organization that does policy to a crisis management organization. This is what the emergency called for, but we stayed in crisis management mode for too long. We were scheduling meetings at whatever time and had people working weekends and long hours. This happened because we don't have enough staff to be on long-term crisis management mode without burnout."*
>
> *ICAO Staff*

103. Although ICAO quickly adapted its organizational resources to respond to COVID-19, stakeholders highlighted important challenges and lessons for future emergency preparedness. For instance, while internal adaptation was achieved, stakeholders believed the process was very chaotic at first because the organization was not prepared for remote operations. Stakeholders suggested accounting for remote work in future business continuity plans. They also recommended ICAO to

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[42] ICAO. (2020). *Council 220th Session Oral Report: Status of Implementation of the ICAO Business Continuity Plan due to COVID-19.*
[43] HLCC 2021-WP/39; *SRVSOP COVID-19 Resources*; *Actions of the SAM Region Against COVID-19.*
[44] CAPSCA-SCM/1-WP/02; C-WP/15136; HLCC 2021-WP/64; HLCC 2021-WP/130; Stakeholder interviews during inception phase.
[45] ICAO. (2021). *Asia/Pacific COVID-19 Contingency and Recovery Planning Group (ACCRGP) – First Annual Report.* Accessed 1 May 2022.

invest in digitizing core and non-core business processes (e.g., human resources processes) ahead of a future emergency for smoother transition to remote operations.

104. Other stakeholders mentioned that the ergonomics of working from home were not considered at the beginning of the COVID-19 response, resulting in some staff working long hours beyond regular office hours for an extended period and without compensation. In online surveys, 55% of ICAO staff assessed the level of human resources available for the COVID-19 response as inadequate. While responding to COVID-19 was set as the organizational priority,[46] many ICAO staff said there was an expectation that the regular programming also had to be delivered. This was very taxing on staff. Virtual tools introduced efficiencies (e.g., faster communication with larger audiences), but they also removed boundaries between the workplace and personal spaces. Some staff commented that even when the brunt of the pandemic had passed, they were pulled into meetings after office hours simply because they showed up as 'available' in Teams, disrupting their family life. Stakeholders recommended future business continuity and crisis management plans to better account for these challenges to work more efficiently and protect the well-being of employees.[47] There was agreement that ICAO should formally recognize key staff involved in the COVID-19 response for their efforts.

105. Another challenge mentioned by stakeholders was related to the repurposing of existing resources for technical assistance. For example, the U.S. authorized the use of voluntary funds to implement iPacks on aviation security in other States. Despite the donor had approved the repurposing of these resources, the operation had to go through the Project Review Committee – ICAO Voluntary Fund (PRC-IVF) for final approval on using the funds. This approval process took four months, importantly delaying critical assistance during an emergency. It is worth noting that these difficulties of repurposing funds through the PRC-IVF were raised in the OIO Evaluation of Technical Assistance to Member States (Finding 9).[48] Stakeholders recommended streamlining processes for repurposing funds to more efficient support to Member States during a crisis, as well as devising more sustainable mechanisms to finance technical assistance for States in need. Several stakeholders also recommended creating an emergency response fund to have extraordinary resources that can be deployed to assist the most vulnerable States.

Figure 8. Perception of ICAO Staff on the Adequacy of Financial and Human Resources for Effective COVID-19 Response
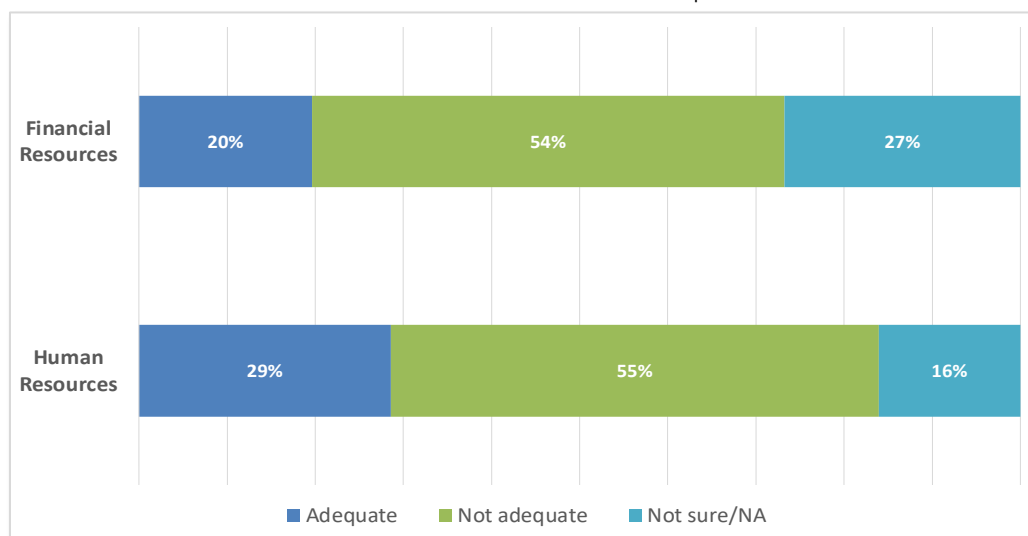
Source: Evaluation Survey for ICAO staff

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[46] C-WP/15184.
[47] C-WP/15136.
[48] ICAO OIO. (2021). *Report on the Evaluation of Technical Assistance to Member States.* Accessed 29 April 2022.

Sustainability

106. This section discusses the sustainability of the support mechanisms, guidance material and tools provided by ICAO to respond to the COVID-19 pandemic. It also looks at the likelihood of support measures to withstand future shocks.

> **Finding 11:** *While some of the guidance material, tools and activities prepared for COVID-19 can be repurposed for future emergencies, most stakeholders believed ICAO is not prepared to face another crisis of this scale. The lack of a comprehensive crisis management framework to prepare for any type of crisis, establishing clear roles and responsibilities for relevant staff and partners, was identified as a major limitation to ICAO's capacity to anticipate, prepare and build resilience in the aviation sector for future emergencies.*

107. Stakeholders found ICAO's overall response to COVID-19 to influence the activities and response plans of other important aviation stakeholders. In online surveys, nearly 90% of Member States rated the level of influence of the CART recommendations in preparing for future crises and developing a resilient civil aviation sector as high/moderate. Stakeholders also agreed that ICAO developed valuable mechanisms and resources that can be leveraged for future emergencies. For instance, stakeholders thought ICAO's response methodology (i.e., high-level coordination), the communication strategy (i.e., dedicated websites, remote workshops) and key documents and tools (i.e., Take-off Guidance Document and iPacks) could be adapted for deployment in future emergencies.

108. In this regard, stakeholders recommended documenting the methodologies and strategies employed by the CART and SCEPG for future use during an emergency. There is also need for ICAO to develop a phase-out strategy to clearly communicate with relevant stakeholders the process and timeline to scale back, transition and/or eliminate the temporary mechanisms and tools developed to respond to COVID-19, such as the CART, SCEPG, CRRIC and other ad-hoc groups and tools. This strategy could also elaborate on whether some guidelines developed by the CART could be mainstreamed into regular work (e.g., recommendations that could be included in the SARPs).

109. Despite ICAO's response to COVID-19 was assessed positively, stakeholders generally believed ICAO is not currently prepared to manage another crisis of global scale. Specifically, stakeholders thought ICAO needs to establish more permanent mechanisms to face future emergencies more proactively. For instance, while stakeholders commended Council Members for stepping up to lead the COVID-19 response, they did not think Council Members working long and odd hours is an ideal set-up to respond to a large-scale emergency going forward. Similarly, having most of the organization working on crisis management mode for over two years was not considered sustainable.

110. Instead, ICAO should carefully develop a comprehensive framework in consultation with key partners (i.e., UN agencies, States, industry), as well as a dedicated committee/team (e.g., pre-identified staff and partners) for crisis management. In their view, this committee/team should meet regularly and the framework should consider all types of emergencies, not just communicable diseases. Stakeholders also thought the framework should contemplate multiple scenarios, including short-, medium- and long-term crises, along with de-scalation and exit strategies to smoothly return to normal operations when it is safe to do so.[49]

111. In terms of engaging critical actors, the crisis management framework should identify core functions within ICAO and at partner organizations to lead the response. Internally, this framework should

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[49] HLCC 2021 Final Report (Doc 10160); HLCC 2021-WP/16; HLCC 2021-WP/18; HLCC 2021-WP/67; HLCC 2021-WP/33.

clearly determine which functions/job levels within ICAO must lead the emergency response, based on the type of crisis and relevant expertise. The framework should also identify which functions/job levels provide support on the backend and which ones continue to deliver the regular programming of ICAO, as permitted by the specific crisis. Stakeholders recommended the Business Continuity Plan[50] to be aligned with this framework to enable fast and seamless adaptation of work operations and structures during an emergency (e.g., remote versus hybrid work).

112. Externally, this framework should also identify key functions/job levels at partner organizations to be involved in the response, depending on the type of emergency and organizational expertise. This should include deciding ahead of time who takes the lead and who communicates with specific audiences. Stakeholders also recommended formalizing these relationships and setting clear roles and responsibilities with these organizations via MOUs ahead of a future emergency.

113. Understanding that full international harmonization may not be achieved due to political dynamics and the specificities of the emergency in each country, the framework should have multiple risk levels and a menu of standardized measures under each risk level. This would provide States some flexibility to respond according to their context but still implement measures that have been previously vetted in terms of safety, security and other considerations (e.g., health science), depending on the type of emergency.

114. While the ICAO Council approved the HLCC recommendation on the development of a comprehensive crisis management framework,[51] several stakeholders wondered whether ICAO has sufficient resources to produce such framework. For instance, some stakeholders pointed that the development of this framework cannot be rushed in six months. They mentioned it requires extensive consultations with a wide range of experts, as well as with key partners to vet and validate all pre-identified measures and mechanisms to be included in the framework. Stakeholders recommended dedicating proper time and resources to developing this framework in order to be better prepared for future events.

115. In addition to emergency preparedness, another concern raised by stakeholders around sustainability was the long-lasting economic impact of COVID-19 on the aviation industry. In online surveys, 73% of Member States indicated that their government had provided financial support to the aviation industry to cope with the impact of the pandemic. In interviews, stakeholders explained that despite this support, many airlines and other industry stakeholders were severely impacted. For example, LATAM and Avianca—two of the largest airlines in the SAM region—filed for bankruptcy protection whereas Air Namibia went into voluntary liquidation, cases that mirror the experience of many other aviation stakeholders across the globe.[52] Recognizing that ICAO is a regulatory body and has limited resources, some stakeholders proposed tackling this challenge as ICAO approaches security. This means providing countries with guidelines on setting aside resources for extraordinary emergencies, following the principles of transparency and fair competition. They further recommended ICAO to include this measure under a specific risk level and tie it to audits so as to foster the institutionalization of this type of support by States ahead of another emergency. ICAO and the Council could also conduct high-level advocacy to promote greater government support to the industry.

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[50] ICAO. (2022). *Business Continuity Plan.* Montreal, Canada.
[51] HLCC 2021 Final Report (Doc 10160).
[52] Forbes. (2020). *You Won't Believe How Many Airlines Haven't Survived Coronavirus. How Does It Affect You?* Accessed on 1 May 2022.

CONCLUSIONS, LESSONS LEARNED AND RECOMMENDATIONS

Conclusions

116. Conclusion 1: ICAO responded to an unprecedented global crisis in record time by engaging the adequate stakeholders, by establishing relevant coordination mechanisms and by delivering pertinent guidance material and tools. The CART recommendations and other support provided by ICAO were found to be relevant. However, as the crisis was primarily a health emergency, the alignment of work across key organizational partners, as well as at the national and cross-country levels, proved challenging. The pandemic uncovered the need for stronger relationships with key actors beyond the aviation sector during non-emergency times. (Linked to Findings 1, 2, 3 and 4).

117. Conclusion 2: The CART recommendations were effective in providing timely guidance to Member States and other aviation stakeholders on how to adjust operations to the new realities posed by COVID-19. However, limited in-country capacity and resources, lack of coordination among health, aviation and other key authorities, limited accessibility to capacity building support (e.g., cost and language availability of the iPacks) and lack of harmonization across countries were the main challenges to the implementation of the CART recommendations. (Linked to Findings 5, 6, 7 and 9).

118. Conclusion 3: While ICAO's internal resource mobilization during the pandemic was timely, the organizational response to COVID-19 was taxing on staff and some mechanisms for repurposing funds proved lengthy. The health emergency shed light on opportunities for ICAO to establish better mechanisms for more optimal use of human and financial resources during future emergencies. (Linked to Finding 10).

119. Conclusion 4: The COVID-19 pandemic exposed the need for ICAO to improve existing emergency response mechanisms and develop a more comprehensive framework with clear roles and responsibilities for relevant stakeholders. This also provides an opportunity for ICAO to carefully assess the structure and resources of key organizational functions, such as the Facilitation Section and CAPSCA, vis-à-vis future emergency preparedness. The attenuation of the pandemic also provides momentum for ICAO to document the methodology and mechanisms devised to respond to COVID-19 and develop a phase-out strategy to ensure the continuity of the achievements of the response (Linked to Findings 7, 8, 10 and 11).

Lessons Learned

120. The evaluation identified the following lessons learned:

- The combination of high-level stakeholders with decision-making power and experts with technical knowledge in aviation proved successful to develop relevant recommendations to adapt aviation operations to the challenges posed by COVID-19.

- Working closely with key stakeholders in other sectors, such as health, tourism and the aviation industry, helped increase work alignment and harmonization during the emergency response.

- Having a medical doctor in a high-level position within the CAA facilitated work coordination between health and aviation authorities at the national level, as the CAA official speaks the same language as health officials but also understands how the aviation sector operates.

- Leveraging technology—such as the digitization of key documents (e.g., passenger locator forms) and global system interoperability (e.g., to verify COVID-tests or vaccination certificates)—can enable a faster restart of international air transport.

- Virtual tools proved useful to carry out some organizational activities more efficiently. For instance, they proved particularly beneficial for one-way communication events (e.g., workshops), as they increase participation and reduce costs.

Recommendations

Recommendation 1: In collaboration with the Council, the Secretariat should prepare a comprehensive crisis management framework for multiple types of crises, varying duration (short-, medium-, and long-term emergencies) and different geographic scope (e.g., global versus regional emergencies) in close coordination and collaboration with key ICAO partners. The framework should establish clear responsibilities to trigger coordination actions across ICAO and key partners, as well as a menu of possible measures that could be flexibly used during a crisis. It should also include a basic communications plan (i.e., who communicates what and when) for the earliest stages of the crisis, which can be later tailored or improved according to the specificities of the emergency. This framework could be accompanied by pre-developed guidelines and tools (similar to those implemented by the CART) that can be deployed as soon as an emergency is declared and before a more targeted response is prepared.

(Linked to all findings and conclusions).

Priority	Time Implication	Resource Implication
High	June 2024	Medium

Closing Criteria

- Comprehensive crisis management framework adopted by the Council.

Recommendation 2: The Secretariat should establish high-level mechanisms to strengthen the relationship among aviation, health and other authorities critical for emergency response. At the organizational level, this mechanism could be a committee involving high-level representatives of ICAO, UN partners, States and the industry, with roles and responsibilities formalized through MOUs. ICAO could use this global committee to conduct Member State-level advocacy to encourage the involvement of high-level representatives of the executive power and key ministries/authorities (i.e., transport, health, immigration, civil registries, tourism, among others) in NATFCs or similar coordination mechanisms for stronger multi-stakeholder coordination at the national level. (Linked to Findings 2 and 3 and Conclusions 1 and 2).

Priority	Time Implication	Resource Implication
High	June 2024	Medium

Closing Criteria

- High-level emergency response committee established by ICAO.

Recommendation 3: The Secretariat should strengthen the resources and oversight capacity of Facilitation, Aviation Medicine and other ICAO sections/functions involved in emergency response. This should include assessing the need to expand the auditing of Annex 9-related SARPs not currently audited, as well as evaluating overall organizational capacity for increased SARPs implementation during non-emergency times. (Linked to Findings 7, 10 and 11 and Conclusions 3 and 4).

Priority	Time Implication	Resource Implication
High	December 2023	High

Closing Criteria

- Resource gap assessment conducted and additional resources allocated.

Recommendation 4: Review the CAPSCA framework and governance to determine the most optimal structure and corresponding funding mechanism for future emergency preparedness and response. The selected structure and funding mechanism should preserve the scientific independence of the arrangement. (Linked to Finding 8 and Conclusion 4).

Priority	Time Implication	Resource Implication
High	June 2024	Medium

Closing Criteria

- Revised CASPCA framework and governance adopted by the Council.

Recommendation 5: The Secretariat should establish an emergency response fund ahead of future emergencies to support Member States with less resources. This could be done through donor or Member States contributions or other funding sources. This may help maximize the effectiveness of the crisis management framework referenced in Recommendation 1, as well as any accompanying implementation support material (e.g., iPacks). (Linked to Findings 5 and 9 and Conclusion 2).

Priority	Time Implication	Resource Implication
Medium	December 2023	Medium

Closing Criteria

- High-level emergency response fund established.

Recommendation 6: The Secretariat should develop a phase-out strategy to ensure the continuity of the objectives and achievements of the COVID-19 response. This strategy should describe the process and timeline to scale back, transition and/or terminate the temporary mechanisms and tools established to face COVID-19. The strategy could also elaborate on whether some guidelines developed by the CART could be mainstreamed into regular work (e.g., recommendations that could be included in the SARPs). (Linked to Finding 11 and Conclusion 4).

Priority	Time Implication	Resource Implication
High	June 2024	Low

Closing Criteria

- COVID-19 response phase-out strategy developed and communicated to relevant stakeholders.

ANNEX 1. METHODOLOGY

1. The evaluation used a mixed-methods approach combining various quantitative and qualitative data sources. These included a desk document review, an online survey targeting all Member States and ICAO technical staff, and key informant interviews. This approach will help triangulate findings and provide a holistic understanding of the relevance, coherence, effectiveness, efficiency, and sustainability of ICAO's COVID-19 response.

2. The desk review included the revision of a wide range of reports documenting ICAO's support to Member States and coordination work with other stakeholders during the COVID-19 pandemic. These documents included: the CART recommendations, Secretariat progress reports, Council working papers and decisions, CRRIC-generated reports, manuals and guidelines, workshop and meeting reports, regional reports, relevant national reports, HLCC reports, technical assistance/cooperation reports, and relevant evaluation reports. Annex 4 includes the full list of documents reviewed.

3. The online survey for Member States had a response rate of 54%, whereas the online survey for ICAO staff had a response rate of 47%. Respondents of the Member State survey had a high (62%) or moderate (32%) involvement in the implementation of the CART recommendations and/or any COVID-19 response activities in their country, and 79% indicated to be the focal point for the COVID-19 response in their State. In the case of the ICAO staff survey, respondents had a high (39%) or moderate (26%) involvement in the implementation of the CART recommendations and/or any ICAO's COVID-19 response activity. This high level of survey participation and engagement in COVID-19 response efforts renders the findings of this evaluation as credible and representative of stakeholders closely involved in such efforts. Annex 6 includes the survey questionnaires.

4. The evaluation team conducted 66 semi-structured individual and group interviews between the inception and data collection phases to gain additional in-depth perspective into ICAO's response to COVID-19. In total, 115 interviewees were engaged in the evaluation. Similar questions on ICAO's COVID-19 response activities, benefits, and limitations were asked across stakeholders to compare responses, verify information, and identify lessons learned. Table 1 presents the number of interviews per type of stakeholder. Annex 3 includes the full list of stakeholders interviewed and Annex 6 includes the questionnaires that guided the interviews.

Table 1. Stakeholder Consultations

Evaluation stakeholders	Stakeholders consulted		
	Number of Interviews	Number of interviewees	Online Survey
Member States	10	22	104
ICAO Staff	40	68	105
HQ	22	28	---
Regional Offices	17	40	---
Industry	3	3	---
Regional Organizations/Groups	3	8	---
UN partners	2	5	
Council/CART Members	8	9	---
Total	66	115	209

5. The 10 countries interviewed between the inception and data collection phases were selected through purposive sampling, using the following characteristics: geographical spread, size of the country (big, small, and island state), implementation status of the CART recommendations, and income level according to the World Bank's 2021 classification. The evaluation team made several attempts to interview two countries per region, but some countries did not respond to the interview request or were unable to meet within the data collection period.

6. The evaluation employed the following qualitative and quantitative techniques to analyze and triangulate the data collected throughout surveys and interviews:

   a. Descriptive Analysis was used to analyze the online survey responses, data extracted from ICAO's COVID-19 portal, and other quantitative data derived from the desk reviews, as relevant.

   b. Content Analysis was used to analyze qualitative information collected through the desk review and in-depth interviews to identify major themes, such as recurrent challenges and achievements.

7. This exercise used followed the UNEG Ethical Guidelines for Evaluation of April 2016 and the ICAO Evaluation Policy of 2021. The evaluation was carried out by two experts—an evaluation specialist at ICAO and an external evaluation consultant—along with the support of an ICAO intern. There was no conflict of interest from any evaluation team member during this exercise.

ANNEX 2. EVALUATION MATRIX

EVALUATION QUESTIONS	INDICATORS/CRITERIA	SOURCES OF DATA/ INFORMATION	DATA COLLECTION METHODS
Evaluation Criteria: RELEVANCE			
1. To what extent has ICAO's COVID-19 response been relevant to the needs of Member States and other key stakeholders?			
1.1. What is the relevance and usefulness of CART's recommendations to keep the recent gains of the aviation sector in general and to reduce the impact of COVID-19 on the sector in particular?	▪ Level of relevance and usefulness of CART's recommendations to keep the recent gains of the aviation sector in general and to reduce the impact of COVID-19 on the aviation sector in particular	▪ Council members ▪ ICAO´s staff members ▪ Member States ▪ Partners	▪ Desk Review ▪ Interviews ▪ Survey
1.2. To what extent did CART's recommendations meet the needs of Member States?	▪ Level of relevance and usefulness of CART's recommendations to member states as assessed by relevant stakeholders	▪ Member states ▪ ICAO's HQ and RO staff	▪ Desk Review ▪ Survey ▪ Interviews
1.3. What is the relevance and usefulness of CART's recommendations to other aviation stakeholders such as the industry?	▪ Level of relevance and usefulness of CART's recommendations to other aviation stakeholders as assessed by relevant actors	▪ Partners ▪ ICAO's HQ and RO staff ▪ Member States	▪ Interviews ▪ Document review ▪ Survey
1.4. What are the revision mechanisms in place to ensure continuing relevance of CART's recommendations?	▪ Existence and adequacy of mechanisms to incorporate change in CART's recommendations as assessed by key stakeholders.	▪ ICAO´s secretariat ▪ Member states ▪ Other stakeholders	▪ Interviews ▪ Document review
1.5. How well were CART's recommendations able to adapt to the changing context of the pandemic?	▪ Concrete examples presented by relevant stakeholders on the adaptation of CART's recommendations to contextual challenges.	▪ ICAO´s Secretariat ▪ Member states and other stakeholders	▪ Interviews ▪ Survey ▪ Document review
Evaluation Criteria: COHERENCE			
2. How aligned has ICAO's support and response been with Member States' needs, the industry, and relevant stakeholders' plans, and the response of other UN agencies?			

EVALUATION QUESTIONS	INDICATORS/CRITERIA	SOURCES OF DATA/ INFORMATION	DATA COLLECTION METHODS
2.1. To what extent have CART's recommendations been coherent and complementary with other partners COVID-19 response plans/programs (e.g., WHO and other aviation stakeholders)?	▪ Level of coherence and complementarity of CART's recommendations with other partners COVID-19 response plans/programs	▪ Document ▪ ICAO´s Secretariat ▪ Member states ▪ Other stakeholders	▪ Interviews ▪ Survey ▪ Document review
2.2. How well is ICAO's support and response aligned with the industry and relevant stakeholders' plans, and the response of other UN agencies?	▪ Level of coherence and complementarity of ICAO's support to Member State with other partners COVID-19 response plans/programs	▪ Document review ▪ ICAO´s Secretariat ▪ Member states ▪ Other stakeholders	▪ Interviews ▪ Survey ▪ Document review
2.3. To what extent have other ICAO programs/projects aligned with CART's recommendations?	▪ Level of alignment of ICAO's existing programs/projects with CART recommendations	▪ Document ▪ ICAO´s Secretariat ▪ Member states	▪ Interviews ▪ Survey ▪ Document review
2.4. To what extent was ICAO's response internally coordinated	▪ ICAO's response actions were well coordinated amongst the various Bureaus and Offices to have coherent results ▪ Effectiveness and clarity of internal coordination, decision-making, communication, and information sharing processes of ICAO	▪ Document ▪ Council Members ▪ ICAO´s Secretariat	▪ Interviews ▪ Document review
Evaluation Criteria: EFFECTIVENESS			
3. How effective has ICAO been in supporting Member States to develop fit-for-purpose responses to restart the international air transport sector and recover from the impacts of COVID-19? What results has ICAO's COVID-19 response achieved so far?			
3.1. What progress has been achieved in implementing CART recommendations by Member States so far?	▪ Level of progress of Member States in implementing CART recommendations	▪ COVID 19 Platform ▪ Member States ▪ Secretariat	▪ Secondary data ▪ Survey ▪ Interviews
3.2. How effective were ICAO's implementation support activities (such as the Implementation Packages (iPacks)), and Regional Offices' supports to implement CART recommendations for Member States?	▪ Levels of effectiveness of iPacks in addressing the needs of States and the industry. ▪ Levels of effectiveness of Regional Offices in providing assistance to States by adopting and implementing regional initiatives while ensuring alignment with the GIR.	▪ ICAO Secretariat ▪ Industry ▪ Member States	▪ Document Review ▪ Survey ▪ Interviews

EVALUATION QUESTIONS	INDICATORS/CRITERIA	SOURCES OF DATA/ INFORMATION	DATA COLLECTION METHODS
3.3. How effective were ICAO's manuals, guidance materials, tools, trainings, workshops in supporting Member States to implement CART recommendations?	▪ Usefulness of tools and manuals prepared and shared by ICAO to implement CART recommendations ▪ Usefulness of trainings/workshops organized by ICAO to implement CART recommendations ▪ Usefulness and effectiveness of HLCC to implement CART recommendations and share experiences	▪ ICAO Secretariat ▪ Industry ▪ Member States	▪ Document Review ▪ Survey ▪ Interviews
3.4. How useful and effective are the monitoring and reporting mechanisms (e.g., tools available in CRRIC) to monitor the implementation status and for the timely exchange of information and experience?	▪ Effectiveness of CRRICS tools and other mechanisms available to monitor and assess the impact of COVID-19 on air transport and for timely exchange of experience and information according to key actors involved	▪ ICAO Secretariat ▪ Industry ▪ Member States	▪ Desk Review ▪ Survey ▪ Interviews
3.5. Was the quality of the support provided to Member States by ICAO so far adequate?	▪ Extent and quality of support provided by ICAO Headquarters/Regional Offices to member states as assessed by them	▪ Member States ▪ Documents	▪ Desk Review ▪ Survey ▪ Interviews
4. How effective has ICAO's partnership and coordination with stakeholders been in responding to the effects of the pandemic on the aviation sector?			
4.1. How effective has ICAO been in improving/developing cooperation and synergies between ICAO and its partners, including WHO and other UN entities, to avoid duplication of efforts in implementing the CART recommendations and guidance?	● Evidence of results achieved through increased cooperation and collaboration among different stakeholders as reported by stakeholders including ICAO ● Evidence related to avoidance of duplication of efforts as reported by stakeholders including ICAO	▪ Document review ▪ ICAO´s Secretariat ▪ Member states ▪ Industry	▪ Desk Review ▪ Survey ▪ Interviews
4.2. How effective is the CAPSCA in encouraging multi-sectoral collaboration between the United Nations (UN) entities and other stakeholders	▪ Level of effectiveness of CAPSCA as a platform bridging the public health and aviation sectors encouraging multi-sectoral collaboration between UN entities and other stakeholders	▪ ICAO Secretariat ▪ Regional Offices ▪ Member states ▪ Industry	▪ Desk Review ▪ Survey ▪ Interviews

EVALUATION QUESTIONS	INDICATORS/CRITERIA	SOURCES OF DATA/ INFORMATION	DATA COLLECTION METHODS
Evaluation Criteria: EFFICIENCY			
5. How well has ICAO adapted its organizational assets and capacities to respond to the demands of the health crisis?			
5.1. How well has ICAO modified/re-purposed its Business Plan and other programs/ projects/ to adjust to the new environment created by COVID-19?	▪ The extent to which ICAO was able to revise its business plan/programs/projects to delivers core results and assist MS to respond to COVID-19 as assessed by relevant stakeholders	▪ ICAO´s reports ▪ ICAO Secretariat ▪ Regional Offices	▪ Desk Review ▪ Interviews ▪ Survey
5.2. How did ICAO adapt its resources, systems, structures, and procedures to the demands posed by the COVID-19 pandemic?	▪ Level of efficiency of ICAO in organizing its human resource to respond to the demands of the crisis as assessed by relevant stakeholders ▪ The adequacy to which ICAO's budget was repurposed as needed to accommodate response actions as assessed by relevant stakeholders ▪ The sufficiency and use of resources (human, material and financial) available for effective response as assessed by relevant stakeholders ▪ Adequacy of resources mobilized to respond to the COVID-19 pandemic and its utilization rate	▪ ICAO´s reports ▪ Secretariat	▪ Desk Review ▪ Interviews ▪ Survey
6. How efficient has ICAO been (in terms of risk analysis and management, resource allocation and use, support timeliness, and dialogue with partners) in managing and implementing its plan and delivering results?			
6.1. The response actions were undertaken in a timely manner	▪ ICAO issued a formal response to COVID-19 in less than 45 days from the onset of the pandemic (March 11, 2020), as declared by the WHO.	▪ ICAO´s reports	▪ Desk Review ▪ Interviews

EVALUATION QUESTIONS	INDICATORS/CRITERIA	SOURCES OF DATA/ INFORMATION	DATA COLLECTION METHODS
6.2. To what extent was the response aligned with the ICAO's priorities outlined in the Enterprise Risk Management?	▪ The extent to which ICAO was able to maintain business continuity of work processes and systems to carry out its mandate and COVID-19 response actions ▪ The degree to which ICAO staff were able to continue working remotely, as needed	▪ ICAO´s reports ▪ Secretariat ▪ ICAO Council	▪ Desk Review ▪ Interviews ▪ Survey
6.3. To what extent has ICAO learned from this crisis? Are there specific examples of new ways of doing things that will make it more resilient and crisis ready?	▪ Evidence of lessons learned and used from the initial period of COVID-19 ▪ Evidence of lessons learned and used from past similar crisis (e.g., SARS, Ebola, etc.)	▪ ICAO´s reports ▪ Secretariat	▪ Desk Review ▪ Interviews ▪ Survey
6.4. Stakeholders were adequately informed of response	▪ The extent to which stakeholders (including Member States, partners, staff) were properly informed of ICAO's response actions	▪ ICAO´s reports ▪ Member States. ▪ Other stakeholders ▪ Secretariat	▪ Desk Review ▪ Interviews ▪ Survey
Evaluation Criteria: SUSTAINABILITY			
7. How sustainable are the support mechanisms and tools provided by ICAO to its Member States?			
7.1. To what extent the tools/guideless /manuals forward looking and helpful for other similar pandemic/challenge?	▪ The level of the tools/guideless/manuals prepared in response to COVID 19 are forward looking and helpful for other similar pandemic/challenge	▪ Member states ▪ Industry	▪ Desk Review ▪ Survey ▪ Interviews
7.2. ICAO's response was sustainable	▪ The extent to which ICAO's response can be sustained through the pandemic	▪ Member states ▪ Industry ▪ Secretariat	▪ Desk Review ▪ Survey ▪ Interviews
8. What is the likelihood of support measures to withstand further shocks?			

EVALUATION QUESTIONS	INDICATORS/CRITERIA	SOURCES OF DATA/ INFORMATION	DATA COLLECTION METHODS
8.1. Was the support provided by ICAO to member states effective in developing resilient civil aviation sector that can withstand similar situations?	▪ Reported influences/changes in plans, behavior and practices by member states aided by ICAO´ support or CART's recommendations.	▪ Stakeholders ▪ Council ▪ Member States, Secretariat	▪ Documents ▪ Interviews ▪ Survey
9. What evidence is present to suggest that ICAO support to Members States is institutionalizing resilience?			
9.1. Are the recommendations and/or ICAO support helpful to better anticipate, prepare, and build resilience civil aviation sector for future crises.	▪ The extent to which CART's recommendations and/or ICAO support are helpful to better anticipate, prepare, and build resilience civil aviation sector for future crises as assessed by relevant stakeholders.	▪ ICAO´s reports ▪ Secretariat ▪ Member States ▪ Other stakeholders	▪ Desk Review ▪ Interviews ▪ Survey

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ICAO. (2021). *High-level Conference on COVID-19: Development and Implementation of National Aviation Safety Plans.* HLCC 2021-WP/7. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Lessons Learned from Implementation of Operational Safety Measures in Response to the COVID-19 Pandemic.* HLCC 2021-WP/8. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Enhancing Safety by Advancing and Strengthening Regional Cooperation.* HLCC 2021-WP/9. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Increasing Participation in the Contributory Bodies of the Planning and Implementation Regional Groups (PIRGS) and Regional Aviation Safety Groups (RASGS).* HLCC 2021-WP/10. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Regulatory Capacity Enhancements.* HLCC 2021-WP/11. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Improving the Effectiveness of Aviation Safety Risk Management.* HLCC 2021-WP/12. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Enhancing GASP to Support Innovation and Increasing Consistency with other Global Plans.* HLCC 2021-WP/13. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Remote Oversight as a Supplement Means to Perform Oversight.* HLCC 2021-WP/14. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Strengthening the Resilience of Aviation through the Improvement of its Crisis Management Framework.* HLCC 2021-WP/15. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Airport Emergency Planning.* HLCC 2021-WP/26. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Remote Safety Oversight Audits.* HLCC 2021-WP/27. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: National Safety Plan and the Current Situation.* HLCC 2021-WP/28. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Competency Based Training and Assessment Expansion within the Aviation Safety Management System.* HLCC 2021-WP/29. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Safety Concerns Regarding Interference to Aircraft Radio Altimeters.* HLCC 2021-WP/30. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: IATA Operational Safety Audit (IOSA).* HLCC 2021-WP/31. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Building a More Resilient Aviation Sector through Crisis Response.* HLCC 2021-WP/33. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: COVID-19 Lessons Learned – SARPs Applicability Dates.* HLCC 2021-WP/34. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Practical Methods to Improve the Process for the Acceptance of Type of Certificates.* HLCC 2021-WP/35. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Digital Transformation of Processes within Civil Aviation Authorities and Change Management towards Modernization.* HLCC 2021-WP/38. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Achievements in the SAM Region with the Support of the Regional Safety Oversight Cooperative (SRVSOP).* HLCC 2021-WP/39. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Collaborative Work in the SAM Region to Address New Approaches and Evolving Regulatory Capacity in Aviation.* HLCC 2021-WP/41. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Collaboration and Cooperation among Regional Safety Oversight Organizations.* HLCC 2021-WP/45. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementing Collaborative Safety Risk Management Related to the COVID-19 Pandemic.* HLCC 2021-WP/46. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Management of Human Factors in Aviation Safety during the COVID-19 Pandemic.* HLCC 2021-WP/50. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Publication of Waivers during the COVID-19 Pandemic and Difficulties Encountered.* HLCC 2021-WP/53. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Challenges in the implementation of risk-based public health mitigation measures in the course of rapidly evolving public health emergencies.* HLCC 2021-WP/16. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Way forward for the management of new and revised health- related standards and recommended practices.* HLCC 2021-WP/17. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Aligning the national aviation plan concerning public health risk impacting aviation with other relevant emergency and disaster risk reduction plans.* HLCC 2021-WP/18. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Framework for the necessary coordination between civil aviation and health stakeholders.* HLCC 2021-WP/19. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of public health corridors (PHCs) during public health emergencies.* HLCC 2021-WP/20. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Lessons learnt from the COVID-19 pandemic to strengthen the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) framework.* HLCC 2021-WP/21. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of digital data sharing and contactless processes.* HLCC 2021-WP/22. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Mitigating in all times the barriers to accessibility to air transport services for all passengers, including those with disabilities.* HLCC 2021-WP/23. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Fostering resilience of air transport facilitation systems and processes in preparation of future health outbreaks.* HLCC 2021-WP/25. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: IATA views on response to pandemics and public health emergencies.* HLCC 2021-WP/42. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of ICAO CART recommendations and recovery planning experience in the Asia Pacific Region.* HLCC 2021-WP/60. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of facilitation operational measures related to COVID-19 pandemic by the African States.* HLCC 2021-WP/62. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Importance of cross-sectorial collaborative preparedness against outbreak of communicable diseases posing public health risks and emergencies of international concern.* HLCC 2021-WP/63. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Development, harmonization and implementation of regional health protocol related to COVID-19 pandemic.* HLCC 2021-WP/64. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Defining a facilitation framework for resilience and response.* HLCC 2021-WP/67. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Progressing developments towards accessible air transport.* HLCC 2021-WP/68. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Unruly & disruptive passenger incidents in the context of the COVID-19 pandemic.* HLCC 2021-WP/77. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Promoting and developing innovative solutions to facilitate and support COVID-19 mitigation measures in civil aviation.* HLCC 2021-WP/105. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Proposed amendment of the ICAO template air services agreements in relation to crises in international air transport.* HLCC 2021-WP/106. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Public health corridors for cargo operation.* HLCC 2021-WP/107. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Proposal on establishing the NATFC information sharing mechanism.* HLCC 2021-WP/108. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Recovery and sustainable development of the air transport sector (normalization of international air transport operations).* HLCC 2021-WP/110. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Enhancing collaborative efforts at a global and state level.* HLCC 2021-WP/130. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Improved security checking and boarding process using contactless palm vein authentication.* HLCC 2021-WP/131. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Future facilitation measures in response to COVID-19.* HLCC 2021-WP/132. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Innovative, practical, interoperable solutions for travel acceptance.* HLCC 2021-WP/133. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Strengthening the resilience of aviation through the improvement of its crisis management framework.* HLCC 2021-WP/134. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Health crisis response program to mitigate the spread of infectious disease associated with commercial airline travel.* HLCC 2021-WP/135. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Exchange of information on PCR-authorized laboratories.* HLCC 2021-WP/138. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Enhancing effective coordinated civil aviation response to a pandemic.* HLCC 2021-WP/156. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Challenges faced during implementing risk-based preventative measures for flight crew in the process of evolution of COVID-19.* HLCC 2021-WP/157. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of facilitation operational measures related to COVID-19.* HLCC 2021-WP/166. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Measures to be applied in the event of a public health emergency of international concern (PHEIC), in the presence or suspected presence of infectious diseases, or during force majeure situations of national concern giving rise to the declaration of a general alarm or the adoption of extraordinary control measures.* HLCC 2021-WP/171. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Innovative "contactless" technology for the detection of hazardous biological agents on board aircraft and at airports.* HLCC 2021-WP/172. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Ensuring interoperability of digital certificates for passenger health information.* HLCC 2021-WP/173. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Towards the international standardization of one id for improved passenger convenience and contactless travel.* HLCC 2021-WP/174. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementing biometric passenger processing during and beyond COVID-19.* HLCC 2021-WP/175. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Inclusion of a specific area relating to travel facilitation during pandemics under Annex-9 to the Chicago Convention and recommendation of common standards and practices to facilitate seamless international air travel during COVID-19 and similar pandemic situations in the future.* HLCC 2021-WP/179. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Lessons learned from the role played by regulation and coordination bodies in the COVID-19 crisis.* HLCC 2021-WP/186. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of public health measures for the resumption of international flight operations: lessons learnt, challenges and way forward.* HLCC 2021-WP/190. Montreal, Canada.

ICAO. (2021). *High-level Conference on COVID-19: Implementation of public health measures for the resumption of international flight operations: lessons learnt, challenges and way forward.* HLCC 2021-WP/186. Montreal, Canada.

ICAO. (2022). *Eighth Africa Regional Meeting of CAPSCA.* Sessions 1-6.

ICAO. (2022). *Business Continuity Plan.* Montreal, Canada.

ANNEX 4. DATA COLLECTION TOOLS

Background questions

1. Which State do you represent?

2. Could you please briefly describe your position and responsibilities?

3. How are you involved in the implementation of COVID-19 response measures in your country?

Relevance

4. How relevant and useful have the CART recommendations been to reduce the impact of COVID-19 on the aviation sector?

5. And how useful have they been to keep the recent gains of the aviation sector?

6. Are all the 20 recommendations still relevant? Which ones remain more relevant and which ones are less relevant? Why?

  Consider:

  ➢ To what extent did CART recommendations meet the needs of Member States?
  ➢ How relevant and useful have CART recommendations been to other aviation stakeholders, such as the industry?
  ➢ Existence and adequacy of mechanisms to incorporate change in the recommendations
  ➢ Concrete examples of adaptation of CART recommendations to contextual challenges.
  ➢ Changes proposed by member states and other stakeholders to modify the recommendations to the changing contexts

Coherence

7. To what extent have CART recommendations been coherent and complementary with other partners' COVID-19 response plans/programs (e.g., WHO, the industry, relevant stakeholders in your country (e.g., MOH), and other UN agencies)?

Effectiveness

8. What are the major activities your country has carried out to implement the CART recommendations? What are your most important achievements?

9. How effective were ICAO's implementation support activities and material (such as the manuals, tools, guidelines, and iPacks) and Regional Offices' assistance to implement CART recommendations in your country?

10. How useful were ICAO's manuals, guidance materials, tools, trainings, and workshops (including HLCC) in supporting your country to implement CART recommendations?

11. How useful are the monitoring and reporting mechanisms (e.g., tools in CRRIC) to monitor the implementation status of CART recommendations and for the timely exchange of information and experience?

12. How effective is the CAPSCA in encouraging multi-sectoral collaboration between UN entities and other stakeholders?

Efficiency

13. How well and timely has ICAO adapted its capacities and resources to respond to the health crisis? Are there specific examples of new ways of doing things that will make ICAO and partners more resilient?

Sustainability

14. Was the support provided by ICAO to Member States (i.e., CART recommendations, tools, trainings, etc.) effective in developing resilient civil aviation sector that can withstand similar situations in the future? How so? Any tangible example?

   Consider:

   ➢ Factors that facilitate or affect the sustainability of developing resilient civil aviation sector that can withstand similar situations in your country.

   ➢ Reported changes in plans, behavior, and practices by Member States due to ICAO´s COVID-19 support or CART's recommendations.

15. What were the lessons learned in the process of responding to COVID-19?

16. What were the major challenges and your recommendation to deal with them?

17. The pandemic is still with us. Going forward, how should ICAO continue supporting Member States to respond to COVID-19 and similar situations?

Interview Guide for ICAO Staff

Background questions

1. Could you please briefly describe your position and responsibilities?

2. How are you involved in the planning/implementation of COVID-19 response measures?

Relevance

3. How relevant and useful have the CART recommendations been to reduce the impact of COVID-19 on the aviation sector?

4. And how useful have they been to keep the recent gains of the aviation sector?

5. Are all the 20 recommendations still relevant? Which ones are currently less relevant? What means are being used to ensure continuing relevance vis-à-vis new developments and changing needs of the global aviation sector? Why?

   Consider:

   ➢ To what extent did CART recommendations meet the needs of Member States?
   ➢ What is the relevance and usefulness of CART recommendations to other aviation stakeholders, such as the industry?
   ➢ Existence and adequacy of mechanisms to incorporate change in the recommendations
   ➢ Concrete examples of adaptation of CART recommendations to contextual challenges.
   ➢ Changes proposed by Member States and other stakeholders to modify the recommendations to the changing contexts

Coherence

6. To what extent have CART recommendations been coherent and complementary with other partners' COVID-19 response plans/programs (e.g., WHO, the industry, relevant stakeholders' plans, and other UN agencies)?

   a. To what extent have other ICAO programs/projects aligned with CART recommendations?

   b. To what extent was ICAO's response internally well-coordinated? (Staff)

7. How effectively organized and clear were internal coordination, decision-making, communication, and information-sharing processes of ICAO

Effectiveness

8. What is your overall assessment of the progress of Member States/regions in implementing CART recommendations? What are the major achievements?

9. How useful were ICAO's manuals, guidance materials, tools, trainings, iPacks, and workshops (including HLCC) in supporting Member States to implement CART recommendations?

10. How useful are the monitoring and reporting mechanisms (e.g., tools in CRRIC) to monitor the implementation status and for the timely exchange of information and experience?

11. How effective is ICAO in improving/developing cooperation and synergies between ICAO and its partners, including WHO and other UN entities, to avoid duplication of efforts?

12. How effective is the CAPSCA in encouraging multi-sectoral collaboration between UN entities and other stakeholders?

Efficiency

13. How well and timely has ICAO modified/re-purposed its Business Plan and other programs/projects to adjust to the new environment created by COVID-19?

14. How well and timely did ICAO adapt its resources, systems, structures, and procedures to the demands posed by the COVID-19 pandemic?

15. How efficient was ICAO (in terms of mobilization of voluntary resources, risk analysis and management, resource allocation and use, timeliness of support, and dialogue with partners) in managing and implementing its plan and delivering results?

    a. To what extent was the response aligned with the ICAO's priorities outlined in the Enterprise Risk Management?

16. To what extent has ICAO learned from this crisis? Are there specific examples of new ways of doing things that will make ICAO more resilient and crisis-ready and to generate operational efficiencies (e.g., savings)?

Sustainability

17. Was the support provided by ICAO to Member States effective in developing resilient civil aviation sector that can withstand similar situations? How so? Any tangible example?

    Consider:

    ➢ Factors that facilitate or affect the sustainability of developing resilient civil aviation sector that can withstand similar situations in your country.

    ➢ Reported changes in plans, behavior, and practices by Member States due to ICAO´s COVID-19 support or CART recommendations.

18. Until what extent CART recommendations and ICAO support have been helpful to better anticipate and prepare for future crises?

19. What were the lessons learned in the process of responding to COVID-19? Any specific examples?

20. What were the major challenges and your recommendation to deal with them?

21. The pandemic is still with us. Going forward, how should ICAO continue supporting Member States to respond to COVID-19 and similar situations?

Interview Guide for Other Stakeholders

Background questions

1. Which agency/industry do you represent?

2. Could you please briefly describe your position and responsibilities?

3. How are you involved in the planning/ implementation of COVID-19 response measures?

Relevance

4. How relevant and useful have the CART recommendations been to reduce the impact of COVID-19 on the aviation sector?

5. And how useful have they been to keep the recent gains of the aviation sector?

6. Are all the 20 recommendations still relevant? Which ones are currently less relevant? What means are being used to ensure continuing relevance vis-à-vis new developments and changing needs of the global aviation sector?

    Consider:

    ➢ To what extent did CART recommendations meet the needs of Member States?
    ➢ How relevant and useful are the CART recommendations to other aviation stakeholders, such as the industry?
    ➢ Existence and adequacy of mechanisms to incorporate change in the recommendations
    ➢ Concrete examples of adaptation of CART recommendations to contextual challenges.
    ➢ Changes proposed by Member States and other stakeholders to modify the recommendations to the changing contexts

Coherence

7. To what extent have CART recommendations been coherent and complementary with other partners' COVID-19 response plans/programs (e.g., yours, WHO, the industry, relevant stakeholders' plans, and other UN agencies)?

Effectiveness

8. In your perception, how much progress have Member States and other stakeholders achieved in implementing CART recommendations? What do you think are the most important achievements?

9. How effective and useful were ICAO's manuals, guidance materials, iPacks, tools, trainings, and workshops (including HLCC) in supporting Member States to implement CART recommendations?

10. How useful are the monitoring and reporting mechanisms (e.g. tools in CRRIC) to monitor the implementation status and for the timely exchange of information and experience? Have you ever used them?

11. How effective is ICAO in improving/developing cooperation and synergies with its partners, including WHO and other UN entities, to avoid duplication of efforts?

12. How effective is the CAPSCA in encouraging multi-sectoral collaboration between UN entities and other stakeholders?

Efficiency

13. To what extent has ICAO and partners learned from this crisis? Are there specific examples of new ways of doing things that will make it more resilient and crisis-ready?

Sustainability

14. Was the support provided by ICAO to Member States effective in developing resilient civil aviation sector that can withstand similar situations? Any tangible example?

    Consider:

    ➢ Factors that facilitate or affect the sustainability of developing resilient civil aviation sector that can withstand similar situations in your country

    ➢ Reported changes in plans, behaviour, and practices by member states due to ICAO´s COVID-19 support or CART recommendations.

15. What were the lessons learned in the process of responding to COVID-19? Any specific examples?

16. The pandemic is still with us. Going forward, how should ICAO and partners continue supporting Member States to respond to COVID-19 and similar situations?

Member States Survey

Introduction

The ICAO Office of Internal Oversight (OIO) is conducting an evaluation of ICAO's response to COVID- 19. The evaluation aims to assess the extent to which ICAO has effectively and efficiently supported Member States to recover from the impacts of COVID-19 and restart the international air transport sector. The evaluation will also examine measures introduced to increase resilience and position Member States towards sustainability.

The evaluation will analyse ICAO's ongoing COVID-19 response in terms of i) its program delivery and operations, and ii) its institutional systems, governance structures and resources. Its results will serve to develop evidence-based recommendations and identify lessons learned to facilitate the delivery of the Global Implementation Roadmap (GIR) results, as well as preparedness for future emergencies.

In this regard, the evaluation team would like to seek your views and inputs regarding your experience in implementing the recommendations of ICAO Council's Aviation Recovery Task Force (CART) and responding to COVID-19 challenges in the aviation sector. The survey will also seek your perspective on the Implementation Packages (iPacks), a bundle of standardized guidance material, training, tools, and subject matter expertise to support Member States in implementing the CART recommendations.

All responses will be kept confidential and will only be used by the evaluation team to report aggregate results. The average completion time for the survey is about 20 minutes.

The evaluation team kindly requests that this survey is completed by April 10, 2022.

For further information about the evaluation, including the use of survey data, please contact Mr. Gugsa Farice, ICAO Evaluation Specialist, at gfarice@icao.int or Ms. Carlued Leon, International Evaluation Consultant, at cleon@icao.int.

ICAO's Office of Internal Oversight thanks you in advance for your time and co-operation. Please 'Next' to begin the survey.

Background Information

1) What is your country?
   _____

2) What is your current position (title and organization name)?
   _____

3) What is the level of your involvement in the implementation of CART recommendations and/or any COVID-19 response activity in your country?
   - Very high
   - High
   - Moderate
   - Low
   - No involvement at all

4) Are you the Focal Point/Person for COVID-19 for your country?
   - Yes
   - No

5) Has ICAO consulted you or members of your CAA during the formulation of CART recommendations and Global Implementation Roadmap (GIR)?

	Yes	No	Not sure/NA

CART Recommendations			
Global Implementation Roadmap (GIR)			

6) In your opinion, what is the level of involvement of your country in the formulation of the CART recommendations and the Global Implementation Roadmap (GIR)?

	High	Moderate	Low	No involvement at all	Not sure/NA
CART Recommendations					
Global Implementation Roadmap (GIR)					

Relevance

7) Please rate the CART recommendations for each of the following issues:

	High	Moderate	Low	Not at all	Not sure/ N/A
Relevance and usefulness of CART recommendations to reduce the impact of COVID-19 on the aviation sector					
Relevance and usefulness of CART recommendations to keep the recent gains of the aviation sector					
Relevance and usefulness of CART recommendations to Member States					
Relevance and usefulness of CART recommendation to other aviation stakeholders (e.g., industry, service providers, etc.)					
Existence and adequacy of mechanisms to incorporate the changes outlined in CART recommendation					
Flexibility of CART recommendations to adapt to new developments and challenges					
Availability of clear guidelines and tools to implement CART recommendations					
Relevance of CART recommendations to face similar future crises in the aviation sector					

8) In your opinion, what have been the 3 most relevant CART recommendations to help your country respond to and recover from the impacts of COVID-19?

      a. (dropdown menu with all 20 recommendations)
      b. (dropdown menu with all 20 recommendations)
      c. (dropdown menu with all 20 recommendations)

9)

10) What have been the 3 least relevant CART recommendations, if any, to help your country respond to and recover from the impacts of COVID-19?

      a. (dropdown menu with all 20 recommendations)
      b. (dropdown menu with all 20 recommendations)
      c. (dropdown menu with all 20 recommendations)

11) What changes would be relevant to make to the CART recommendations and ICAO's support to further reduce the impacts of COVID-19 on the aviation sector and to take back the aviation sector to where it was before the pandemic? Please list up to three.

1. _____
2. _____
3. _____

Coherence

12) Please rate how coherent and complementary the CART recommendations and ICAO's support have been to Member States' needs and other stakeholders' efforts to respond to COVID-19.

	High	Moderate	Low	Not at all	Not sure/ N/A
a) Coherence and complementarity of ICAO's support to Member State's COVID-19 response plans/programs					
b) Coherence and complementarity of CART recommendations to the efforts carried out by the industry and other aviation partners (service providers) in your country/region					

13) In your opinion, has the number of partnerships and collaboration among stakeholders increased due to the CART recommendations and/or ICAO's support?
   - Yes
   - No
   - Don't know/Not sure

14) If yes, please give examples of results achieved due to increased collaboration among different stakeholders:
   _____
   _____

Effectiveness

15) What are the major activities that your country has carried out to implement CART recommendations? Please list up to five.
   1. _____
   2. _____
   3. _____
   4. _____
   5. _____

16) What are your most important achievements in implementing the CART recommendations? Please list up to five.
   1. _____
   2. _____
   3. _____
   4. _____
   5. _____

17) Have you used ICAO's Implementation Packages (iPacks) in your country?
   - Yes
   - No
   - Don't know/Not sure

18) If iPacks were not used, please explain why:
   _____

19) How useful were ICAO's Implementation Packages (iPacks) for your country?

a. Extremely useful
b. Very useful
c. Moderately useful
d. Slightly useful
e. Not useful at all
f. Not sure/NA

20) Do you have any recommendations to improve the iPacks?
_____

21) Please rate ICAO's support to Member States been to implement the CART recommendations.

	High	Moderate	Low	Not at all	Not sure/ N/A
Effectiveness of ICAO's overall support to Member States to implement CART recommendations					
Adequacy of ICAO's support to Member States					
Quality of ICAO's support to Member States					
Effectiveness of Regional Offices' support to Member States to implement CART recommendations					
Usefulness of trainings/workshops organized by ICAO to implement CART recommendations					
Usefulness of ICAO's guidance materials, manuals, and tools to implement CART recommendations					
Timeliness of ICAO's support and guidance material for Member States to implement CART recommendations					
Usefulness of the monitoring and reporting mechanisms (e.g., tools in CRRIC) to monitor the implementation of CART recommendations and the timely exchange of information/experience					
Usefulness of ICAO's tools/guidelines/manuals to face similar crises in the future					
Organization and clarity of ICAO's coordination, communication, and information-sharing during the pandemic?					

Efficiency

22) How adequate were the following resources to implement the CART recommendations in your country?

	Adequate	Not adequate	Not sure/N/A
Financial Resources			
Human Resources			

23) If resources were not adequate, please explain why:
_____
_____

24) Please provide recommendations for improvement around resources to implement CART recommendations:
_____
_____

25) Has your government provided financial support to the aviation industry to cope with the challenges created by the COVID-19 pandemic?
- Yes

- No
- Don't know/Not sure

Sustainability

26) Please rate the level of influence of the CART recommendations and ICAO's support in the following areas:

	High	Moderate	Low	Not influential at all	Not sure/ N/A
Influence in developing a resilient civil aviation sector that can withstand similar situations					
Influence in better anticipating and preparing for future crises					

27) Please provide any tangible example of how the CART recommendations and/or ICAO's support have helped built resilience in the civil aviation sector for future crises?
_____
_____

28) What were the major challenges to implement CART recommendations?
_____
_____

29) Any recommendations to address the challenges?
_____
_____

30) What were the biggest lessons learned in the process of responding to COVID-19?
_____
_____

31) The pandemic is still with us. Going forward, how should ICAO continue supporting Member States to respond to COVID-19 and similar health crises?
_____
_____

32) Any other suggestion for improving ICAO's support to Member State to respond to COVID-19 and further develop a resilient aviation sector? If so, please list them below.
_____
_____

Thank you for your kind participation!

ICAO Staff Survey

Introduction

The ICAO Office of Internal Oversight (OIO) is conducting an evaluation of ICAO's response to COVID-19. The evaluation aims to assess the extent to which ICAO has effectively and efficiently supported Member States to recover from the impacts of COVID-19 and restart the international air transport sector. The evaluation will also examine measures introduced to increase resilience and position Member States towards sustainability.

The evaluation will analyse ICAO's ongoing COVID-19 response in terms of i) its program delivery and operations, and ii) its institutional systems, governance structures and resources. Its results will serve to develop evidence-based recommendations and identify lessons learned to facilitate the delivery of the GIR results, as well as preparedness for future emergencies.

In this regard, the evaluation team would like to seek your views and inputs regarding your experience in implementing the CART recommendations and responding to COVID-19 challenges in the aviation sector. All responses will be kept confidential and will only be used by the evaluation team to report aggregate results. The average completion time for the survey is about 20 minutes.

The evaluation team kindly requests that this survey is completed by April 10, 2022.

For further information about the evaluation, including the use of survey data, please contact Mr. Gugsa Farice, ICAO Evaluation Specialist, at gfarice@icao.int or Ms. Carlued Leon, International Evaluation Consultant, at cleon@icao.int.

ICAO's Office of Internal Oversight thanks you in advance for your time and co-operation. Please 'Next' to begin the survey.

Background questions

1) What is your current position?

   _____

2) Gender:
        a.   Male   b. Female   c. Prefer not to specify

3) What is the level of your involvement in the implementation of the CART recommendations and/or any ICAO's COVID-19 response activity?
   - Very high
   - High
   - Moderate
   - Low
   - No involvement at all

Relevance

4) Please rate the CART recommendations for each of the following issues:

	High	Moderate	Low	Not at all	Not sure/ N/A
Relevance and usefulness of CART recommendations to reduce the impact of COVID-19 on the aviation sector					
Relevance and usefulness of CART recommendations to keep the recent gains of the aviation sector					

Relevance and usefulness of CART recommendations to Member States					
Relevance and usefulness of CART recommendation to other aviation stakeholders (e.g., industry, service providers, etc.)					
Existence and adequacy of mechanisms to incorporate the changes outlined in CART recommendation					
Flexibility of CART recommendations to adapt to new developments and challenges					
Availability of clear guidelines and tools to implement CART recommendations					
Relevance of CART recommendations to face similar future crises in the aviation sector					

5) What changes would be relevant to make to the CART recommendations and ICAO's support to further reduce the impact of COVID-19 on the aviation sector and take back the aviation sector where it was before COVID-19? Please list up to three.

1. _____
2. _____
3. _____

Coherence

6) Please rate how coherent and complementary the CART recommendations and ICAO's support have been to Member States' needs and other stakeholders' efforts to respond to COVID-19.

	High	Moderate	Low	Not coherent/ complementary at all	Not sure/ N/A
Coherence and complementarity of ICAO's support to Member State's COVID-19 response plans/programs					
Coherence and complementarity of CART recommendations to the efforts carried out by the industry and other aviation partners (service providers)					

7) In your opinion, has the number of partnerships and collaboration among stakeholders increased due to the CART recommendations and/or ICAO's support?
- Yes
- No
- Don't know/Not sure

8) If yes, please give examples of results achieved due to increased collaboration among different stakeholders:
1. _____
2. _____
3. _____

Effectiveness

9) What are ICAO's major activities contributing to the implementation of the CART recommendations? Please list up to five.
  i.
  ii.
  iii.

iv.

v.

10) What are the most important achievements of ICAO's response to COVID-19? Please list up to five.

    i.

    ii.

    iii.

    iv.

    v.

11) How useful were ICAO's Implementation Packages (iPacks) for Member States?

    a. Extremely useful

    b. Very useful

    c. Moderately useful

    d. Slightly useful

    e. Not useful at all

    f. Don't know/Not sure

12) If useful, please explain what made the iPacks useful:

    _____

13) If not useful, please describe why the iPacks were not useful:

    _____

14) Do you have any recommendation to improve the iPacks?

    _____

15) Please rate ICAO's support to Member States to implement the CART recommendations:

	High	Moderate	Low	Not at all	Not sure/ N/A
Effectiveness of ICAO's overall support to Member States to implement CART recommendations					
Adequacy of ICAO's support to Member States					
Quality of ICAO's support to Member States					
Effectiveness of Regional Offices' support to Member States to implement CART recommendations					
Usefulness of trainings/workshops organized by ICAO to implement CART recommendations					
Usefulness of ICAO's guidance materials, manuals, and tools to implement CART recommendations					
Timeliness of ICAO's support and guidance material to implement CART recommendations					
Usefulness of the monitoring and reporting mechanisms (e.g., tools in CRRIC) to monitor the implementation of CART recommendations and the timely exchange of information/experience					
Usefulness of ICAO's tools/guidelines/manuals to face similar crises in the future					
Organization and clarity of ICAO's coordination, communication, and information-sharing during the pandemic?					

Efficiency

16) How adequate were the following resources for effective COVID-19 response and for supporting Member States to implement CART recommendations?

	Adequate	Not adequate	Not sure/ N/A
Financial Resources			
Human Resources			

Sustainability

17) Please rate the level of influence of the CART recommendations and ICAO's support in the following areas:

	High	Moderate	Low	Not influential at all	Not sure/ N/A
Influence in developing a resilient civil aviation sector that can withstand similar situations					
Influence in better anticipating and preparing for future crises					

18) Please provide any tangible examples of how the CART recommendations and/or ICAO's support have helped built resilience in the civil aviation sector for future crises.

_____

_____

19) In your view, what are the main strengths of the CART recommendations? Please list up to three.
1.
2.
3.

20) In your view, what are the main weaknesses or areas for improvement of the CART recommendations? Please list up to three.
1.
2.
3.

21) What were the major challenges for Member States to implement the CART recommendations?

_____

_____

22) Any recommendation to address these challenges?

_____

_____

23) What were the major challenges for ICAO to support Member States?

_____

_____

24) Any recommendations to address these challenges?

_____

_____

25) What were the lessons learned in the process of responding to COVID-19?

_____

_____

26) The pandemic is still with us. Going forward, how should ICAO continue supporting Member States to respond to COVID-19 and similar health crises?

_____
_____

27) Any other suggestion for improving ICAO's support to Member States to respond to COVID-19 and further develop a resilient aviation sector? If so, please list below.

_____
_____

Thank you for your kind participation!

ANNEX 5. SURVEY FINDINGS: FIGURES AND TABLES

A.   Selected Figures from Member State Survey

Figure 1. Involvement of Member States in the Implementation of the CART Recommendations and/or any COVID-19 Response Activity in their State

- ■ Very high
- ■ High
- ■ Moderate
- ■ Low
- ■ No involvement at all
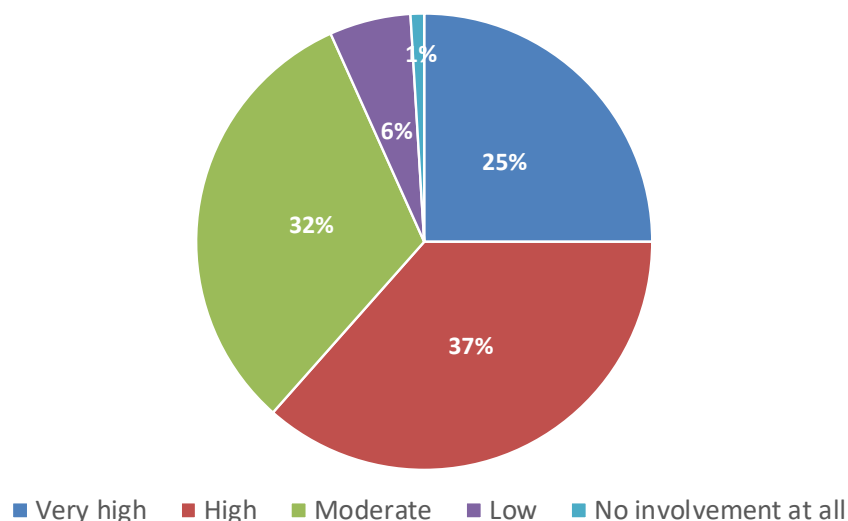
Figure 2. Perception of Member States on the following issues:

Issue	High	Moderate	Low	Not at all	Not sure/NA
Relevance and usefulness of CART recommendations to reduce the impact of COVID-19 on the aviation sector	64%	30%	2%		4%
Relevance and usefulness of CART recommendations to keep the recent gains of the aviation sector	49%	42%	4%		6%
Relevance and usefulness of CART recommendations to Member States	57%	37%	3%		3%
Relevance and usefulness of CART recommendation to other aviation stakeholders (e.g., industry, service providers, etc.)	52%	40%	4%		4%
Existence and adequacy of mechanisms to incorporate the changes outlined in CART recommendations	37%	49%	9%		6%
Flexibility of CART recommendations to adapt to new developments and challenges	44%	46%	6%		4%
Availability of clear guidelines and tools to implement CART recommendations	55%	37%	4%		4%
Relevance of CART recommendations/ICAO's support to face similar future crises in the aviation sector	50%	45%	1%		5%

- ■ High
- ■ Moderate
- ■ Low
- ■ Not at all
- ■ Not sure/NA

Figure 3. Perception of Member States on the Coherence and Complementarity of the CART Recommendations

	High	Moderate	Low	Not sure/NA
Coherence and complementarity of ICAO's support to Member State's COVID-19 response plans/programs	49%	42%	5%	3%
Coherence and complementarity of CART recommendations to the efforts carried out by the industry and other aviation partners (service providers) in your country/region	40%	47%	8%	5%

■ High ■ Moderate ■ Low ■ Not at all ■ Not sure/NA
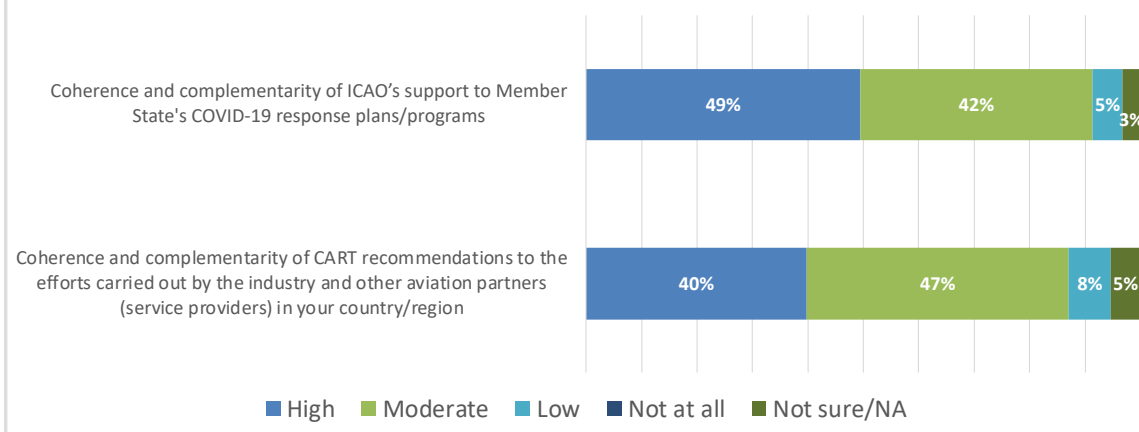
Figure 4. Perception of Member States on whether the Number of Partnerships and Collaboration among Stakeholders increased due to the CART Recommendations and/or ICAO's Support

- Yes: 56%
- No: 5%
- Don't know/Not sure: 39%

■ Yes ■ No ■ Don't know/Not sure
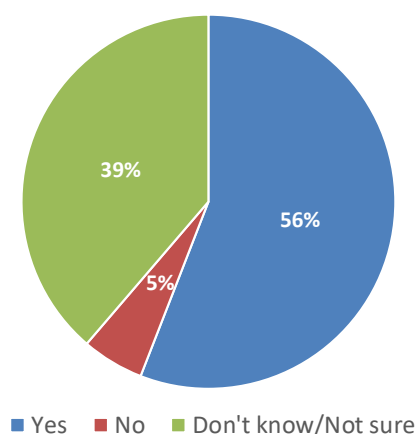
Figure 5. Proportion of Member States that Used iPacks during the COVID-19 Response

- States that used iPacks: 41.98%
- States that did not use iPacks: 41.98%
- Don't know/Not sure: 16.05%

■ States that used iPacks ■ States that did not use iPacks ■ Don't know/Not sure
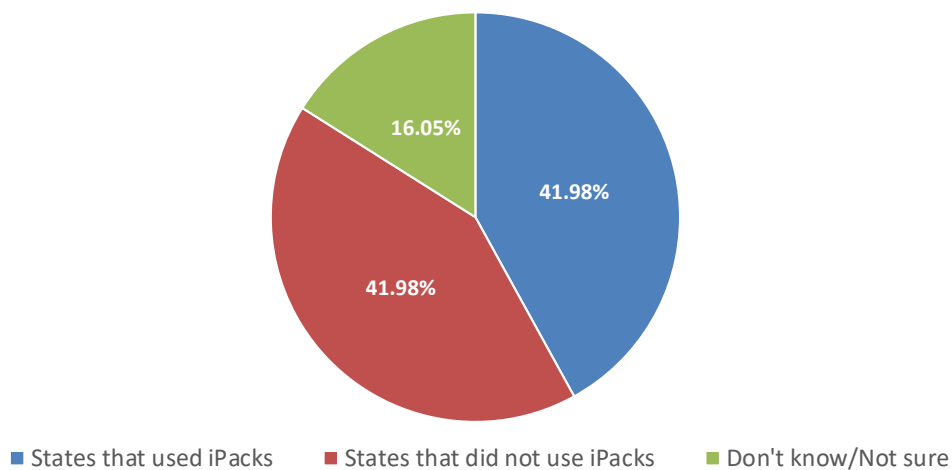
Figure 6. Perception of Member States on the Usefulness of iPacks

41%	Extremely or very useful
5%	Moderately useful
5%	Slightly or not useful at all
49%	Not sure/NA

- Extremely or very useful
- Moderately useful
- Slightly or not useful at all
- Not sure/NA
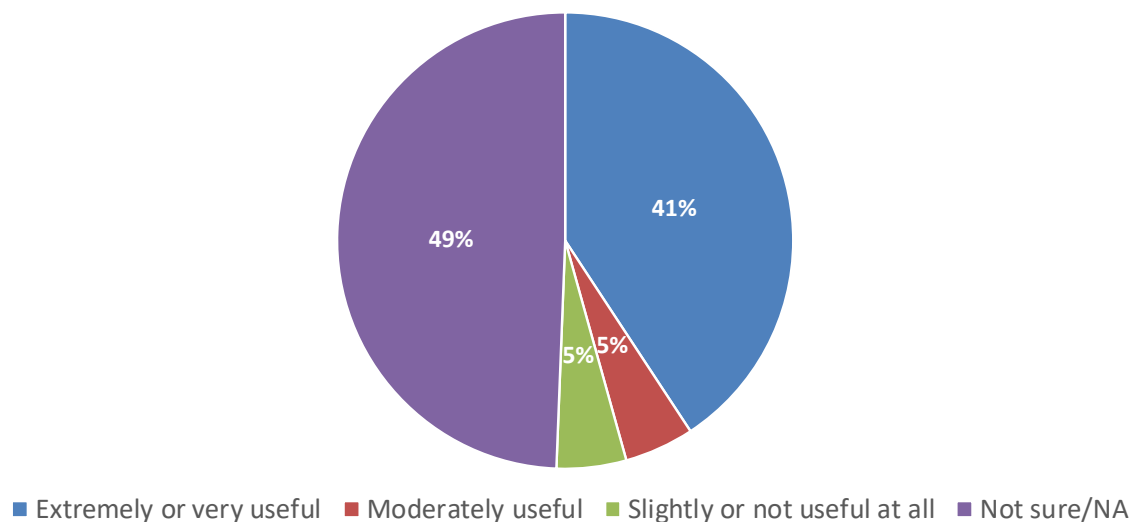
Figure 7. Perception of Member States on ICAO's Support to Implement the CART Recommendations

	High	Moderate	Low	Not at all	Not sure/NA
Effectiveness of ICAO's overall support to Member States to implement CART recommendations	58%	33%			9%
Adequacy of ICAO's support to Member States	48%	42%			10%
Quality of ICAO's support to Member States	48%	42%			10%
Effectiveness of Regional Offices' support to Member States to implement CART recommendations	48%	40%	2%		9%
Usefulness of trainings/workshops organized by ICAO to implement CART recommendations	54%	33%	2%		10%
Usefulness of ICAO's guidance materials, manuals, and tools to implement CART recommendations	64%	30%	1%		5%
Timeliness of ICAO's support and guidance material for Member States to implement CART recommendations	48%	36%	9%		7%
Usefulness of the monitoring and reporting mechanisms (e.g., tools in CRRIC) to monitor the implementation of CART recommendations and the timely exchange of information/experience	48%	38%	7%		6%
Usefulness of ICAO's tools/guidelines/manuals to face similar crises in the future	52%	32%	6%		10%
Organization and clarity of ICAO's coordination, communication, and information-sharing during the pandemic	52%	42%	2%		4%

- High
- Moderate
- Low
- Not at all
- Not sure/NA

Figure 8. Perception of Member States on Adequacy of Financial and Human Resources to Implement the CART Recommendations in their State

	Adequate	Not adequate	Not sure/NA
Financial Resources	55%	15%	30%
Human Resources	65%	13%	23%
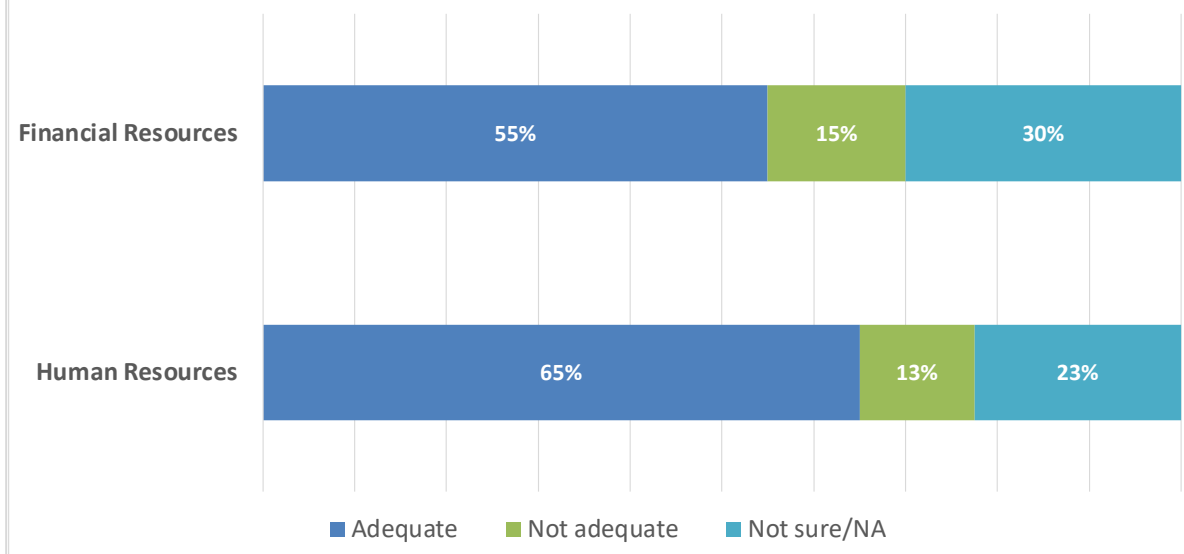
Figure 9. Government of Member States Provided Financial Support to the Aviation Industry to Cope with the Impact of COVID-19

Yes 73%
No 11%
Don't know/Not sure 16%
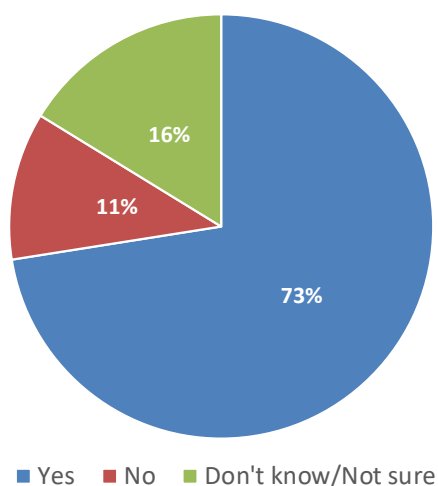
Figure 10. Perception of Member States on the Level of Influence of the CART Recommendations

	High	Moderate	Low	Not at all	Not sure/NA
Influence in developing a resilient civil aviation sector that can withstand similar situations	48%	41%	4%		8%
Influence in better anticipating and preparing for future crises	49%	41%	3%		8%
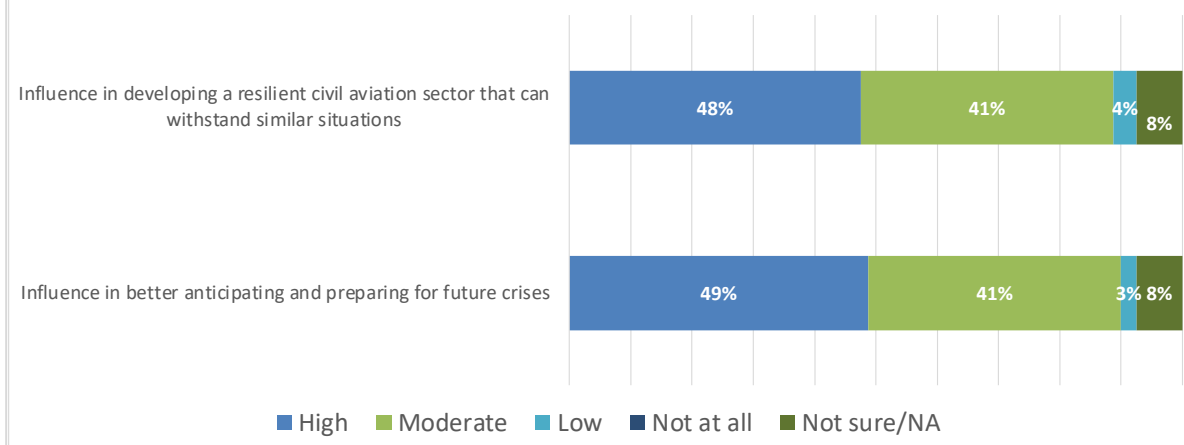
B.   Selected Figures from ICAO Staff Survey

Figure 1. Involvement of ICAO Staff in the Implementation of the CART Recommendations and/or ICAO's COVID-19 Response

- Very high: 16%
- High: 23%
- Moderate: 26%
- Low: 18%
- No involvement at all: 17%
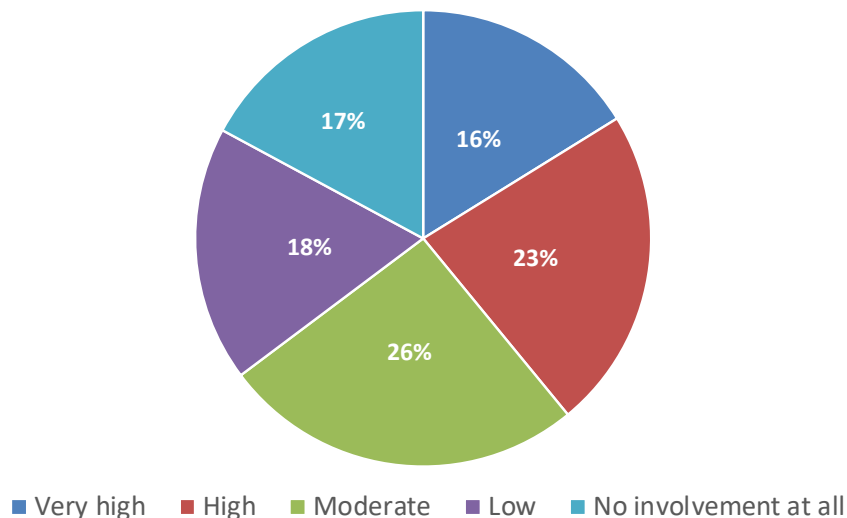
Figure 2. Perception of ICAO Staff on the following issues:

Issue	High	Moderate	Low	Not at all	Not sure/NA
Relevance and usefulness of CART recommendations to reduce the impact of COVID-19 on the aviation sector	56%	26%	12%		4%
Relevance and usefulness of CART recommendations to keep the recent gains of the aviation sector	38%	40%	16%		6%
Relevance and usefulness of CART recommendations to Member States	59%	24%	12%		6%
Relevance and usefulness of CART recommendation to other aviation stakeholders (e.g., industry, service providers, etc.)	44%	32%	19%		4%
Existence and adequacy of mechanisms to incorporate the changes outlined in CART recommendations	24%	40%	24%		13%
Flexibility of CART recommendations to adapt to new developments and challenges	29%	49%	12%		9%
Availability of clear guidelines and tools to implement CART recommendations	40%	37%	15%		6%
Relevance of CART recommendations/ICAO's support to face similar future crises in the aviation sector	43%	29%	18%		7%

Figure 3. Perception of ICAO Staff on the Coherence and Complementarity of the CART Recommendations

Coherence and complementarity of ICAO's support to Member State's COVID-19 response plans/programs
| 51% | 28% | 15% | 5% |

Coherence and complementarity of CART recommendations to the efforts carried out by the industry and other aviation partners (service providers)
| 46% | 28% | 18% | 8% |

■ High   ■ Moderate   ■ Low   ■ Not at all   ■ Not sure/NA
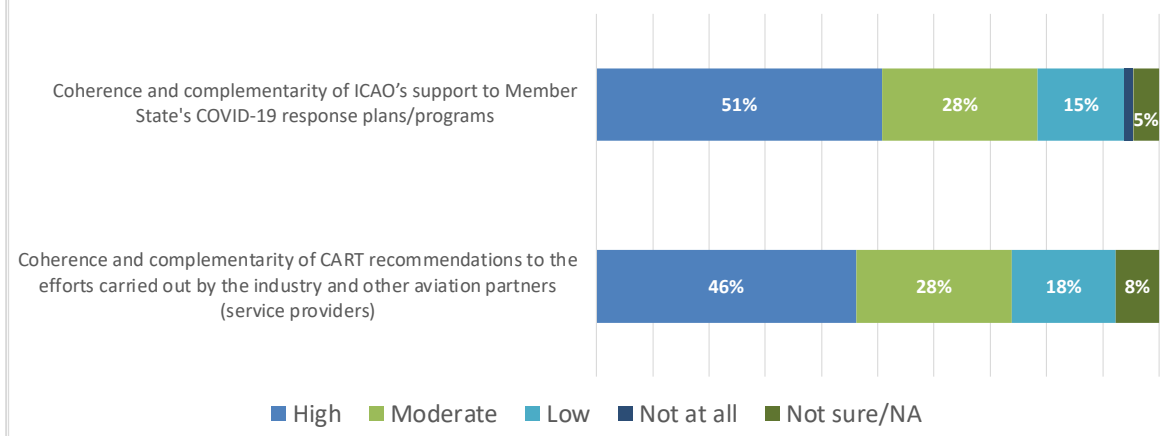
Figure 4. Perception of ICAO Staff on whether the Number of Partnerships and Collaboration among Stakeholders increased due to the CART Recommendations and/or ICAO's Support

35%
52%
12%

■ Yes   ■ No   ■ Don't know/Not sure
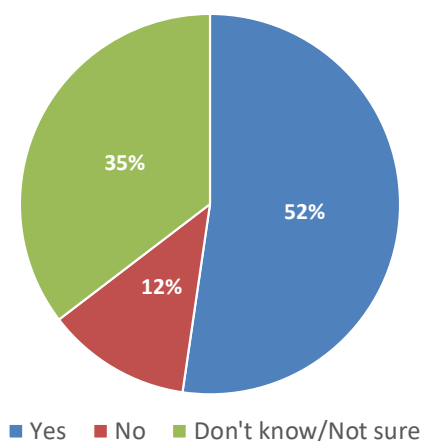
Figure 5. Perception of ICAO Staff on the Usefulness of iPacks

12%
37%
23%
28%

■ Extremely or very useful   ■ Moderately useful   ■ Slightly or not useful at all   ■ Don't know/Not sure
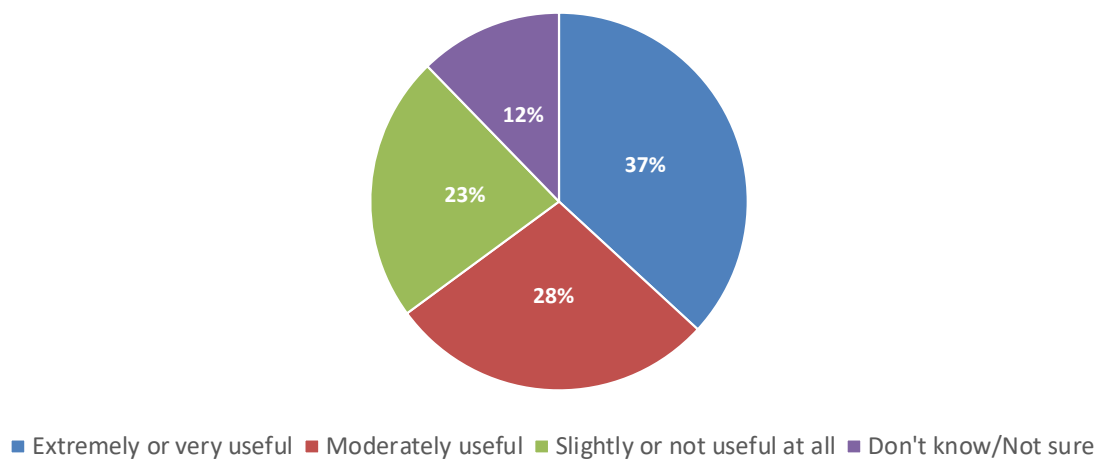
Figure 6. Perception of ICAO Staff on ICAO's Support to Implement the CART Recommendations

	High	Moderate	Low	Not at all	Not sure/NA
Effectiveness of ICAO's overall support to Member States to implement CART recommendations	45%	38%	13%		5%
Adequacy of ICAO's support to Member States	30%	54%	13%		2%
Quality of ICAO's support to Member States	43%	43%	13%		2%
Effectiveness of Regional Offices' support to Member States to implement CART recommendations	57%	27%	5%	2%	9%
Usefulness of trainings/workshops organized by ICAO to implement CART recommendations	46%	34%	14%		5%
Usefulness of ICAO's guidance materials, manuals, and tools to implement CART recommendations	55%	38%	4%		2%
Timeliness of ICAO's support and guidance material to implement CART recommendations	32%	52%	11%	4%	
Usefulness of the monitoring and reporting mechanisms (e.g., tools in CRRIC) to monitor the implementation of CART recommendations and the timely exchange of information/experience	34%	36%	25%		5%
Usefulness of ICAO's guidelines, manuals, and tools to face similar crises in the future	39%	46%	9%	4%	
Organization and clarity of ICAO's coordination, communication, and information-sharing during the pandemic	41%	45%	11%	0%	

Legend: ■ High ■ Moderate ■ Low ■ Not at all ■ Not sure/NA

Figure 7. Perception of ICAO Staff on the Adequacy of Financial and Human Resources for Effective COVID-19 Response

	Adequate	Not adequate	Not sure/NA
Financial Resources	20%	54%	27%
Human Resources	29%	55%	16%

Legend: ■ Adequate ■ Not adequate ■ Not sure/NA

Figure 8. Perception of ICAO Staff on the Level of Influence of the CART Recommendations

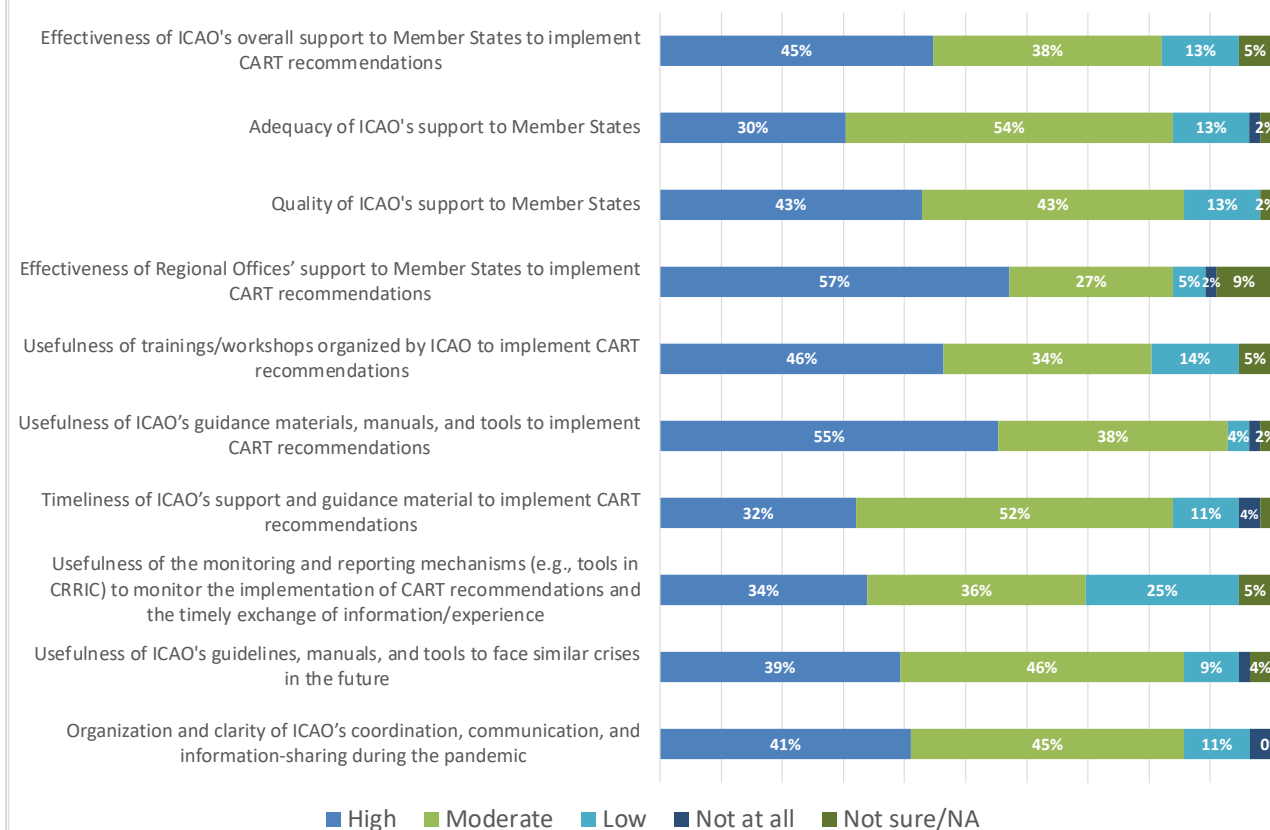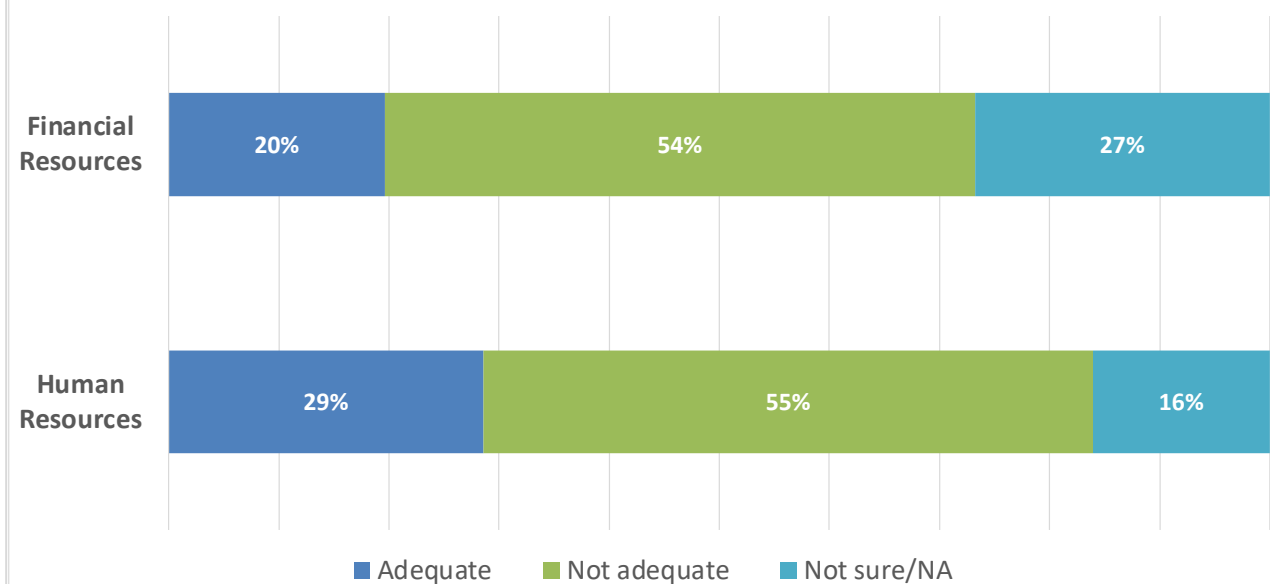Influence in developing a resilient civil aviation sector that can withstand similar situations: High 48%, Moderate 41%, Low 4%, Not sure/NA 8%

Influence in better anticipating and preparing for future crises: High 49%, Moderate 41%, Low 3%, Not sure/NA 8%

Legend: High, Moderate, Low, Not at all, Not sure/NA