DANGEROUS GOODS PANEL (DGP)

TWENTY-EIGHTH MEETING

Virtual, 15 to 19 November 2021

Agenda Item 6:   Coordination with other panels
          6.3: Safety Management Panel (SMP)

RECOMMENDATIONS OF THE ICAO HIGH LEVEL SAFETY CONFERENCE (HLCC) RELATED TO DANGEROUS GOODS

(Presented by the Secretary)

SUMMARY

Dangerous goods related working papers presented to the ICAO High-level Conference on COVID-19 (HLCC) (Virtual, 12 to 22 October 2021) are provided in Appendices A and B to this working paper. They were discussed under Agenda Item 3.2: Standardization — Risk management. An extract from the HLCC yellow cover report is provided in Appendix C to this working paper. It includes a summary of the discussion of these working papers and the recommendation developed under this agenda item is provided in Appendix C to this working paper.

APPENDIX A

HLCC 2021-WP/78: SAFETY OF THE CARGO AND MAIL SUPPLY CHAINS

International Civil Aviation Organization

WORKING PAPER

HIGH-LEVEL CONFERENCE ON COVID-19 (HLCC 2021)

SAFETY STREAM

Montréal, Canada, 12 to 22 October 2021

Agenda Item 3:   Standardization
           3.2: Evolving regulatory capacity in aviation

SAFETY OF THE CARGO AND MAIL SUPPLY CHAINS

(Presented by Qatar, supported by the Contracting States, member of the
Arab Civil Aviation Organization (ACAO))

EXECUTIVE SUMMARY

This paper presents concerns over the risks to aviation stemming from inadequate safety oversight of the cargo and mail supply chain.

Action: The Conference is invited to:
a) discuss the concerns raised; and
b) consider the actions proposed.

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1.   **INTRODUCTION**

1.1   The State of Qatar has established the new ICAO Annex 6 — *Operation of Aircraft*, Chapter 15 provisions concerning cargo compartment safety within national regulations and is engaged with our primary airline regarding implementation. From this experience, we are concerned that the new provisions will not adequately address the risks from undeclared and mis-declared dangerous. Non-compliant shipments of lithium batteries are of particular concern as these present a significant risk of fire and/or explosion.

2.   **DISCUSSION**

2.1   The new Annex 6 provisions obligate the air operator to address "safety of the supply chain for items to be transported" within their safety risk assessment including cargo, mail and baggage. Conducting the risk assessment is not a particular challenge, however, effectively mitigating the risks is, shippers and forwarders are the customers of airlines, not their service providers. Also, postal consignments and cargo are often consolidated and built up as complete units prior to being offered for air transport. This

makes it extremely difficult for the air operator to apply effective controls at acceptance due to the absence of visual cues and because there is no business relationship directly between the operator and the shippers.

2.2   There is significant concern that any potential measures implemented in isolation by an operator will transfer the risk to another operator rather than improve aviation safety.

2.3   As with all other Standards and Recommended Practices (SARPs), current measures are reliant on relevant stakeholders' awareness of and compliance with the requirements. However, evidence indicates that awareness of the requirements in the supply chain is inconsistent, and that deliberate circumventing of the rules remains a problem. This causes concern that many States do not perform adequate dangerous goods oversight, do not have sufficiently strong regulators, and do not provide for and/or enforce penalties sufficient to deter bad behaviours of the supply chain, whether these behaviours be deliberate or through ignorance. As a result, a joint approach is required and the industry requires support from ICAO and States to effectively mitigate the risks.

2.4   The new Annex 6 provisions are supported by ICAO Doc 10102, *Guidance for Safe Operations Involving Aeroplane Cargo Compartments*. This discusses the mitigation against the risk of an uncontained fire provided by using fire-resistant containers (FRCs) and fire containment covers (FCCs). However, the absence of ICAO certification standards for this aircraft equipment, or at least a definitive position that standards will not be introduced in the foreseeable future, some operators may be delaying a decision on whether to obtain such equipment due to the commercial risk of the equipment becoming obsolete within its service life.

3.   **CONCLUSION**

3.1   Despite the measures introduced by ICAO, which the State of Qatar fully supports, an aircraft incident or accident due to the carriage of undeclared/misdeclared dangerous goods (including lithium batteries) remains a significant risk. It is therefore suggested that ICAO should take further action as described within Appendix A to this working paper.

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APPENDIX

PROPOSED ACTION AIMED AT PREVENTING AN ACCIDENT CAUSED BY THE CARRIAGE OF UNDECLARED/MISDECLARED DANGEROUS GOODS

1. ICAO Universal Safety Oversight Audit Programme to prioritize verification that States have:

    a) sufficient resources for the conduct of dangerous goods oversight upon shippers, freight forwarders and designated postal operators;

    b) effective enforcement procedures including measures aimed at preventing the recurrence of undeclared and mis-declared dangerous goods, such as audits, warning letters, or ultimately significant penalties to drive required behaviour;

    c) reviewed and approved designated postal operator dangerous goods training programmes and controls over the introduction of dangerous goods into air mail; and

    d) implemented the ICAO Annex 6, Chapter 15 provisions.

2. Airworthiness Panel to:

    a) establish certification standards for FRCs and FCCs; and

    b) review the adequacy of cargo compartment certification standards with regards to fire safety to meet current advances in technology.

— END —

APPENDIX B

HLCC 2021-WP/86: TRANSPORT OF DANGEROUS GOODS AND EMERGING RISKS

International Civil Aviation Organization

WORKING PAPER

HIGH LEVEL CONFERENCE ON COVID-19

SAFETY STREAM

Montréal, Canada, 12 to 22 October 2021

Agenda Item 3: Standardization
3.2: Risk management

TRANSPORT OF DANGEROUS GOODS AND EMERGING RISKS

(Presented by the United States, United Kingdom and co-sponsored by France)

SUMMARY

The COVID-19 pandemic continues to significantly impact the global supply chain. With limited access to traditional storefronts, consumers rely even more on e-commerce platforms to meet the demand for goods, to include dangerous goods. This trend and the ongoing impacts of the pandemic suggest that we will continue to see more consumer demand for e-commerce and expansion of the online market place. This expansion results in "new entrants", those that are new to offering goods for cargo, at a time when the rates for shipping are high and cargo capacity is limited. These factors lead to a high likelihood for unintentional or inadvertent noncompliance with dangerous goods regulations. Civil aviation authorities (CAAs) and stakeholders must join forces to proactively mitigate this risk before it enters the air cargo supply chain. The global response to combat the pandemic led to unique opportunities for greater collaboration among government entities to help facilitate the safe movement of critical air cargo, medical personnel, safety equipment, passengers, and repatriated citizens all while meeting cargo demands for consumer goods. To address real time needs, regulators and industry quickly came together to work on the air transport logistics of moving dangerous goods such as dry ice for vaccines, medical equipment and other pharmaceutical supplies. As the aviation industry contends with these challenges, and the impacts brought about by the COVID-19 pandemic, it is imperative that CAAs continue to work together to identify and mitigate risks, globally. States must build on the collaborative practices put in place over the past year to ensure the safe movement of cargo and dangerous goods through global cooperation and information sharing among CAAs and stakeholders.

Action: The Conference is invited to agree with the recommendations in 3.3.

1.   **INTRODUCTION**

1.1   The COVID-19 pandemic continues to significantly impact the global supply chain. Limited access to traditional storefronts draw consumers to e-commerce platforms to meet the demand for goods, to include dangerous goods. This evolution, in turn, drives more retailers to the online market place. In the first three months of 2021 alone, e-commerce grew by 13.8 per cent compared to the same timeframe

in 2020, according to the United States Census Bureau[1]. As this demand grows, States have an opportunity to work together to address safety risks posed by the rise of consumer goods in air cargo containing dangerous goods.

1.2   While air cargo plays a critical role in moving consumer goods, it also maintains a critical role in the global response to combat the pandemic. In the past year, unique opportunities emerged for greater coordination and collaboration among government entities to help facilitate the safe movement of critical air cargo, medical personnel, safety equipment, passengers, and repatriated citizens. To address real time needs, regulators and industry worked more closely together, more quickly, with the air transport logistics of moving dangerous goods such as dry ice for vaccines, medical equipment, and other pharmaceutical supplies all while meeting cargo demands for consumer goods.

1.3   As the aviation industry contends with these new challenges, and the impacts brought about by the COVID-19 pandemic, it is imperative that civil aviation authorities (CAAs) continue to work together to ensure that dangerous goods are properly identified and safely managed in air transport. Operator tools to identify the hazards of dangerous goods and risk mitigations depend upon shippers' recognizing and identifying dangerous goods cargo. States must build upon the collaborative practices put in place over the past year to ensure the safe movement of cargo and dangerous goods through global cooperation and information sharing by CAAs.

1.4   As ICAO considers the safety aspects as a precursor to developing procedures in response to the challenges introduced during the pandemic year, it should consider how to build upon the new business models that have benefited both industry and government.

2.   **DISCUSSION**

2.1   Through Annex 6 — *Operation of Aircraft*, Chapter 15, *Cargo Compartment Safety*, ICAO recognized that items, when carried in an aircraft cargo compartment, can introduce hazards that might exceed the capabilities of an aircraft, such as cargo compartment fire suppression capabilities, which may lead to an incident or accident. To enhance safety, it is critical that those that offer cargo for transport on aircraft understand and comply with the relevant regulations for the safe carriage of dangerous goods by air. Their compliance is the first step in enabling operators to identify hazards associated with items carried in aircraft cargo compartments and managing the risks posed to aviation safety.

2.2   ICAO Annex 18 — *Safe Transport of Dangerous Goods by Air* provides the structure for State oversight authorities to ensure that dangerous goods are properly classified, contained and communicated. This process provides critical information to operators on potential hazards and risk mitigations necessary for the safety of flight. The recent addition of Chapter 15, *Cargo Compartment Safety*, to Annex 6, Part I requires the State of the Operator to ensure operators establish policies and procedures for the transport of items in the cargo compartment, which includes the conduct of a specific safety risk assessment.

2.3   An operators' safety management system establishes the roles of hazard identification and safety risk management. As these systems mature, the importance of data collection and analysis of the hazards and emerging risks posed by aircraft cargo will play an increasingly important role in fully understanding and mitigating global risk.

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[1] https://www.census.gov/retail/index.html

2.4   The United States recognizes the many challenges brought about by the COVID-19 pandemic greatly impacted passenger airlines and air cargo operators. However, key practices were put into place that resulted in greater coordination and collaboration among government entities to address unique situations with the air transport of dangerous goods. These practices should remain in the years ahead.

2.5   For example, government regulators came together quickly to specifically address the demand for air cargo capacity with the conversion of passenger aircraft and the transport of dangerous goods in aviation, such as those needed to move the COVID-19 vaccine. The swift coordination among the relevant authorities, including logistics, pharma, operators, and others cannot be understated. The continued success of the global distribution of these vaccines depends greatly on the continued coordination and collaboration among States and private organizations.

2.6   The ICAO Council Aviation Recovery Task Force issued a new recommendation in its Phase III Report (March 2021) urging States to adopt the revised ICAO *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284)[2]. The new measures involve a range of key concerns and are designed to ensure that vaccines will be safely and efficiently accepted, handled and transported[3].

2.7   The new measures also support the use of a competency-based approach to dangerous goods training. The revisions include changes to the existing requirements and the addition of guidance material to facilitate implementation of such an approach. Through continued coordination among States, sharing of information and adopting best practices, to include training, States will be better prepared to quickly respond to the issue.

2.8   COVID-19 response mechanisms accelerated communication and urgency among States and other government organizations in order to allow regulatory review, safety scrutiny and testing, and eventual approvals for new ways of doing business in order to transport the COVID-19 vaccines as safely and efficiently as possible. For almost one year now, States and operators continue to work together to ensure the safe and efficient transport of the vaccines. This coordination and collaboration can carry over to build future work to mitigate safety risks of transporting other dangerous goods by air by building upon the communication channels created during the COVID-19 pandemic to share information and data on safety risks, trends, training and best practices for the safe transport of dangerous goods by air.

2.9   ICAO, States, and private organizations should now establish permanent ways to continue the timely coordination and sharing of safety information to further understand global risks of dangerous goods in air transport such as undeclared goods and lithium batteries, especially, as demand for e-commerce continues to expand.

2.10   In the United States, the Federal Aviation Administration (FAA) engages stakeholders, passengers, flight crews, shippers, manufacturers of lithium batteries, manufacturers of electronic devices, as well as air travel associations in a national dialogue to support the safe transportation of passengers and cargo by air. Through consistent messaging across multiple platforms including, seminars, events, social media, email, and other online engagement, the FAA works to inform the public on the safe transport of dangerous goods by air. Effectiveness is measured through captured metrics. The FAA is working to share these approaches with other CAAs for continued global collaboration on dangerous goods safety through the development of CAA safety partnerships. Other States are encouraged to participate and can contact the FAA for further information at www.faa.gov/hazmat/.

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[2] https://www.icao.int/covid/cart/Documents/CART%20III%20High-Level%20Cover%20Document.final.en.pdf
[3] https://www.icao.int/sustainability/Documents/ICAO-PRIORITY-BRIEF_Air-Cargo_2021.04.19.FINAL.pdf

2.11   Adaptation to virtual engagement helps to drive swift collaboration and coordination among governments and industry. The exchange of information and transparency with objectives result in maintaining the safety aspect at the forefront of any operational changes while responding rapidly to industry needs with any significant operational changes to support air cargo realities. The flexibility with all parties involved helps to ensure that adequate mitigations support any changes to individual carrier operations or aircraft type. States and industry are therefore encouraged to share information and intelligence on shipments of undeclared, faulty or damaged lithium batteries so that the community can work together to educate, mitigate and enforce the regulations for the safe transport of dangerous goods by air.

3.   **CONCLUSION**

3.1   COVID-19 has reinforced the importance of collaboration, system level thinking and multi-disciplinary approaches to challenges. It has provided an opportunity to look at aviation more broadly, consider diverse perspectives and implement lessons learned to advance the safe transportation of dangerous goods by air. Together, the aviation community can work to build trusted relationships among States and across the global air cargo supply chain to advance the transport of dangerous goods safety culture.

3.2   It is critical that ICAO and its Member States promote safety across the global air cargo supply chain by raising awareness of the risks posed by dangerous goods in air transport and ensuring that all entities that offer dangerous goods for cargo services are aware of and fulfilling their roles and responsibilities. As the supply chain evolves, the aviation community must educate new entrants to the air cargo supply chain and enable safety management tools that support proactive risk mitigation to yield the positive safety outcomes that aviation demands.

3.3   In light of the above, the Conference is invited to agree with the following recommendations:

a)   urge Member States to fulfil their responsibilities under Annex 18 — *Safe Transport of Dangerous Goods by Air*;

b)   encourage Member States to build upon the collaborative engagements established in order to share timely, safety data and information on identified hazards; and

c)   recommend that ICAO and Member States collaborate to share best practices to educate stakeholders on the risks of shipping dangerous goods (referenced in 2.10).

— END —

APPENDIX C

EXTRACT FROM HLCC YELLOW COVER REPORT

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3.14   HLCC 2021-WP/78-SAF/56, presented by Qatar and supported by Member States of the Arab Civil Aviation Organization (ACAO), and HLCC 2021-WP/86-SAF/64, presented by the United States and the United Kingdom and co-sponsored by France and Singapore, both highlighted concerns related to risks associated with non-compliance with dangerous goods regulations. HLCC 2021-WP/86- SAF/64 described the growth in consumer reliance on e-commerce to meet the demand for goods during the pandemic and the expansion of the online market place, which could lead to the increased likelihood of unintentional non-compliance by entities unaware of the safety risks associated with shipping dangerous goods as air cargo. The Safety Stream supported the proposals in HLCC 2021-WP/86-SAF/64. HLCC 2021-WP/78-SAF/56 highlighted the need for States to conduct dangerous goods oversight of shippers, freight forwarders and designated postal operators and to apply effective enforcement procedures to prevent recurrent non-compliance. It was noted that the proposed recommendation related to certification Standards for fire-resistant containers (FRCs) and fire containment covers (FCCs) did not fall within the purview of the Airworthiness Panel (AIRP). The Safety Stream acknowledged ongoing efforts to clarify State oversight responsibilities in relation to Annex 18 — The Safe Transport of Dangerous Goods by Air, as well as various initiatives such as an ICAO training course on air cargo safety management, and the development of an implementation package (iPack) on establishing and maintaining a cargo safety programme as part of the SSP.

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3.16   As a result of the discussion, the Safety Stream agreed on the following recommendation:

Recommendation 3.2/1 – Improving the effectiveness of aviation safety risk management

That States:

a)   continue to develop and implement risk management strategies to overcome the effects of the pandemic, while working collaboratively with other States, regional safety oversight organizations (RSOOs), international organizations and service providers;

b)   consider the impact on other domains when managing aviation safety risk and the impact on safety when managing risk in other domains to support an integrated risk management approach and reduce the overall risk across the aviation system;

c)   increase attention to the management of interfaces by service providers in order to ensure hazards are identified and associated risks are effectively mitigated;

d)   build upon the collaborative engagements established during the pandemic in order to share safety data and safety information on identified hazards and best practices in a timely manner;

e)   develop aviation safety intelligence capabilities in collaboration with other States, RSOOs and international organizations, and share their experience and lessons learned to support safety risk management and data-driven decision-making; and

f)   contribute practical sector-specific examples of processes, case studies and lessons learned related to complex safety risk management and the development of safety intelligence for sharing on the ICAO Safety Management Implementation (SMI) website.

That ICAO:

g)   promote collaborative and cooperative approaches for the management of safety risks during extraordinary circumstances;

h)   continue to evolve ICAO SARPs and associated guidance material to further support a more proactive, predictive and integrated approach to risk and resilience management;

i)   consider the need to enhance existing provisions to recognize the need to support human performance for effective safety risk management;

j)   develop additional implementation support initiatives to assist States in building capacity in all aspects of State safety programme (SSP) implementation to be prioritized based on an analysis of feedback collected through various mechanisms;

— END —