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AGENDA ITEM 5:   AVIATION SECURITY

DEVELOPMENTS IN AVIATION SECURITY AND
AVIATION CYBERSECURITY

(Presented by the ICAO Secretariat)

INFORMATION PAPER

SUMMARY

This Paper highlights recent developments in the global aviation security and aviation cybersecurity policy framework.

DEVELOPMENTS IN AVIATION SECURITY AND AVIATION CYBERSECURITY

1. INTRODUCTION

1.1   This Paper highlights recent developments in the global aviation security policy and aviation cybersecurity policy framework.

2. DISCUSSION

ANNEX 17 – AVIATION SECURITY

2.1   On 28 February 2022, the Council adopted Amendment 18 to Annex 17 — *Aviation Security* and prescribed 18 July 2022 and 18 November 2022 as the effective and applicability dates, respectively (C-DEC-225/5).

2.2   By way of State letter AS 8/2.1-22/20 Confidential dated 17 March 2022, and Corrigendum of 19 April 2022, States were notified of the Annex amendment and were requested to notify: a) any disapproval before 18 July 2022; and b) any difference(s) with Amendment 18 to Annex 17, along with the expected date of compliance, before 18 October 2022. Replies were received from 70 States and one Special Administrative Region (SAR) indicating compliance or differences.

2.3   A total of 49 States and 1 SAR have indicated compliance (of which 12 States and 1 SAR in the APAC region). Differences to Annex 17 were notified by 21 States (of which 4 in the APAC region), which indicates both those new/revised definitions and provisions in Amendment 18 to Annex 17 and other provisions already in existence. In most cases where differences have been filed along with expected dates of compliance, States have indicated their intention to comply at the very latest by 1 January 2024.

2.4   Concurrently, it is also recalled that a survey was disseminated via State letter AS 8/2.1-22/71 dated 29 July 2022, which sought Member States' perspectives on Annex 17 compliance challenges generally and their understanding and interpretation of the above Standards specifically. The survey also requested views on any enhancements to the ICAO *Aviation Security Manual* (Doc 8973, Restricted), the USAP-CMA, and the Global Aviation Security Plan (GASeP) that could help improve compliance.   States were also asked about ways ICAO could support and improve effective implementation. While survey participation was voluntary, the high response rate (55% of Member States or 106 replies (of which 23 replies from the APAC region)) shows the level of engagement and importance of the subject. Survey data were anonymized, and State names were not provided to groups using the survey data.

2.5   The Aviation Security Panel, during its 34th meeting in May/June 2023, considered the outcomes of the abovementioned survey along with analysis thereto and found the information offers significant value specifically as it identified the following common concerns and issues and possible root causes for low compliance. As such, the Panel agreed that the survey data and analysis be taken into account by AVSECP expert groups, including the Working Group on Annex 17 (WGA17), Working Group on Guidance Material (WGGM), Working Group on Training (WGT), Working Group on Air Cargo Security (WGACS), Task Force on the Global Aviation Security Plan (TF-GASeP) and SSG on the USAP-CMA, as key input in making progress in their respective work programmes.

GUIDANCE MATERIAL

2.6   New and updated guidance material was endorsed by the Thirty-fourth meeting of the Aviation Security Panel (AVSECP/34) in June 2023 and subsequently approved for distribution. The areas addressed by the guidance material include the use of explosives detection dogs (EDDs) for persons and personal belongings (cabin and hold baggage), including an update on the use of EDDs for cargo, and mitigating the effects of airport disruptions on operations. The guidance material can be found on ICAONET (portal.icao.int) under "Publications" and "Others".

2.7   The 13th Edition of the *Aviation Security Manual* (Doc 8973 — Restricted) is accessible electronically to authorized Member State users through the Digital Rights Management (DRM) website https://drmstore.icao.int/.   Member State users requiring access to the manual will need to request access by emailing DRMAccounts@icao.int and providing the following information*: State, first and last names, and email address.

        * *Please ensure to also indicate that you require access to the Aviation Security Manual (Doc 8973). Any request for general information on ICAO publications, including the purchase of print or digital copies, should be directed to the ICAO E-Commerce and Publication Sales Unit at* sales@icao.int.

2.8   As guidance material is an invaluable resource designed to assist stakeholders in effectively implementing the Standards and Recommended Practices outlined in Annex 17, accessibility is key in carrying out such efforts. That is why ICAO is committed to sharing guidance material on its public website whenever permissible. At the time of this information paper, guidance material on the recognition of equivalence of security measures (one-stop security), the implementation of a reporting system, and the establishment, implementation and maintenance of aircraft operator security programmes (AOSP) and supplementary station procedures (SSP) can be found at https://www.icao.int/Security/SFP/Pages/Guidance-Material.aspx.

2.9   The following sets of guidance material, developed by ICAO, with the support of the AVSEC Panel Working Group on Training, are also available to Member States in all six official languages of the Organization. The guidance material can be found on the ICAO public website under the specified links:

a)   Starter Pack on Human Factors, Human Performance and Security Culture in AVSEC, www.icao.int/Security/Security-Culture/Pages/Human-Factors-Starter-Pack.aspx; and

b)   Summary Document on Measuring the Effectiveness of Aviation Security Training, www.icao.int/Security/isd/Training/Pages/Measuring-the-Effectiveness-of-AVSEC-Training.aspx.

2.10   The Third Edition of the ICAO *Aviation Security Global Risk Context Statement* — (Doc 10108, Restricted) is available on ICAO-NET (portal.icao.int) under "Publications" and "Documents". This document contains a global aviation security risk assessment, including the most up-to-date global risk picture, and is intended to assist ICAO Member States and interested stakeholders in conducting national and local aviation security risk assessments.

2.11   The Third Edition of the ICAO *Risk Assessment Manual for Civil Aircraft Operations over or near Conflict Zones* (Doc 10084) is available in English, with other languages to follow as they become available. This new edition of Doc 10084 has been produced as a proactive response to the request made by the 41st Session of the ICAO Assembly and draws from the input received from 31 States (of which six replies from the APAC region) and other stakeholders. Doc 10084 has been amended to expand the advice for States and operators regarding the risks from surface-to-air missiles (SAMs), including ballistic missiles, surface-to-surface missiles (SSMs), and air-to-air attacks.

NEW TRAINING AND ASSISTANCE PRODUCTS

2.12   By way of Electronic Bulletin EB 2023/15 dated 24 April 2023, ICAO alerted States to a suite of new ICAO Security Culture Products. This includes **Discussion Cards** (www.icao.int/Security/Security-Culture/Pages/Discussion-Cards.aspx) to help organizations initiate meaningful discussions about security with their staff and encourage positive security behaviours; **Customizable Resources** (www.icao.int/Security/Security-Culture/Pages/Customizable-Resources.aspx), i.e. display posters, staff wallet cards, manager checklists, induction briefings, blogs to support organizations in promoting a strong and effective security culture; two **short films** (www.icao.int/Security/Security-Culture/Pages/Films.aspx) to help raise security awareness in aviation and to highlight that "*Security is Everyone's Responsibility*"; and an interactive **e-learning training package** (www.icao.int/Security/Security-Culture/Pages/E-learning-Package.aspx) to provide users

with a comprehensive understanding of security culture and its importance in aviation.

2.13   These products are available on the **ICAO Security Culture website** www.icao.int/Security/Security-Culture/Pages/default.aspx at no cost to Member States, international organizations and industry and in all official ICAO languages (excluding the e-learning training package, which is only available in English). The website also includes new tools and guidance material on mitigating insider threats to civil aviation, which includes an **Insider Threat Toolkit** (www.icao.int/Security/Security-Culture/Pages/ICAO-Insider-Threat-Toolkit.aspx) and a **Pamphlet on Managing Insider Risks** (www.icao.int/Security/Security-Culture/Pages/ICAO-Pamphlet-Insider-risks.aspx).

GLOBAL AVIATION SECURITY PLAN (GASeP)

2.14   The Global Aviation Security Plan (GASeP) was approved by the ICAO Council in 2017 with the objective of assisting Member States and other stakeholders in enhancing the effectiveness of a global aviation security system through a set of priority outcomes, priority actions and aspirational targets.

2.15   The GASeP has been a useful and relevant framework to advance aviation security and has helped to raise the profile of aviation security at the political level, as confirmed by the 41st Session of the ICAO Assembly. However, the Assembly also noted some areas for improvement during its next revision, such as reviewing the global aspirational targets and rationalizing the number of priority actions and related tasks.

2.16   Work on revising the GASeP is being led by the Aviation Security Panel's Task Force on the GASeP. The objective is a revision to ensure the GASeP continues to be an overarching global strategic guidance document – not a tactical document – that can be used as a tool to support Member States' efforts to achieve full implementation of Annex 17 – *Aviation Security*. The revision of the GASeP will also be participatory, involving Member States and relevant stakeholders.

2.17   A State letter attaching a draft Second Edition of the GASeP, in English only, will be sent out in September inviting Member States to review and comment.

AVIATION CYBERSECURITY[1]

2.18   The 41st Session of the ICAO Assembly reaffirmed the importance and urgency of addressing cybersecurity in civil aviation and adopted Resolution A41-19 on the topic. It urged States to adopt and ratify the *Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation* (Beijing Convention) and *Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft* (Beijing Protocol) as a means for dealing with cyber attacks against civil aviation. It also called on States and stakeholders to undertake specific actions to address cyber threats against civil aviation and called on ICAO to continue ensuring that aviation cybersecurity is addressed in a cross-cutting and holistic manner across the Organization and its expert groups through the new mechanism in ICAO to address aviation cybersecurity.

2.19   The new mechanism, approved by the ICAO Council, includes the establishment of three new bodies: A Cybersecurity Panel (CYSECP) reporting to the Council's Aviation Security Committee, which continues the work of the Secretariat Study Group on Cybersecurity (SSGC), a Trust Framework Panel reporting to the Air Navigation Commission which continues the work of the Trust Framework Study Group (TFSG), and a new Council Committee, the Ad Hoc Cybersecurity Coordination Committee, which ensures the coordination and streamlining of cyber-related activities of all ICAO Panels.

2.20   The 40th Session of the ICAO Assembly noted some gaps in the structure addressing cybersecurity in ICAO and called on bringing the work in the cybersecurity field under the aegis of an

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1 https://www.icao.int/aviationcybersecurity/Pages/default.aspx

overarching structure and discussed a set of criteria which could underpin a revised cybersecurity structure. The ICAO Council, during its First Meeting of its 228th Session, decided to establish the Ad Hoc Cybersecurity Coordination Committee (AHCCC). Following extensive consultations, the Council appointed 13 experts to serve on the Committee. The first meeting of the AHCCC will take place in Montréal on 10 and 11 October 2023.

2.21   The Cybersecurity Panel (CYSECP) was established in 2022. It held its first meeting from 16 to 20 May 2022 and its second meeting from 5 to 9 June 2023. The second meeting (in-person) of the CYSECP was attended by 101 experts from 41 Member States and 10 international organizations.

2.22   The CYSECP organizes itself into two Working Groups:

  i.   The Working Group on Cyber Threat and Risk (WGCTR): The WGCTR is developing an aviation cyber threat and risk assessment methodology that takes into account aviation safety, security, efficiency, and capacity requirements. The methodology will be published in a document (Global Cyber Risk Considerations) which will also include a global cyber threat picture.

  ii.   The Working Group on Cybersecurity Guidance Material (WGCGM): The WGCGM is supporting the development of four guidance documents: a guidance on integrating aviation cybersecurity into States' national programmes (State Safety Programme – SSP, and National Civil Aviation Security Programme – NCASP), a guidance on cyber incident reporting, a guidance on cyber information sharing, and a guidance on cyber incident response and recovery and integrating cyber incident response and recovery into corporate emergency response plans.

2.23   Moreover, the CYSECP is considering the need for aviation cybersecurity Standards and Recommended Practices (SARPs) across the Annexes of the *Convention on International Civil Aviation*. The work was initiated by a study conducted by the Secretariat that identified areas of potential interest to aviation cybersecurity in 16 Annexes of the Convention by cross-referencing the Annexes with high-level information security management systems and with the ICAO Aviation Cybersecurity Strategy.

2.24   In terms of guidance material available to States and stakeholders, the ICAO Aviation Cybersecurity Strategy remains the chief document guiding the work of the civil aviation sector on the topic. The Cybersecurity Action Plan (second edition) complements the Strategy and provides a roadmap that States and stakeholders can utilize to implement the pillars of the Strategy. The Cybersecurity Action Plan supports States and stakeholders in implementing the Aviation Cybersecurity Strategy. ICAO also produced guidance material to support States and stakeholders in addressing aviation cybersecurity (Guidance on Traffic Light Protocol, Cybersecurity Policy Guidance, and Guidance on Cybersecurity Culture in Civil Aviation).

2.25   In addition, ICAO continues to organize and participate in national, regional, and international conferences, meetings and webinars to promote cooperation between all stakeholders in aviation cybersecurity.

2.26   Moreover, ICAO continues to provide capacity-building and training activities to support States and stakeholders in addressing aviation cybersecurity. In 2021, ICAO launched its first aviation cybersecurity, Foundations of Aviation Cybersecurity Leadership and Technical Management, which was developed in partnership with Embry-Riddle Aeronautical University. ICAO also launched a second course, developed in partnership with the United Kingdom Civil Aviation Authority, in 2023 that focuses on aviation cybersecurity oversight.

ICAO SECURITY WEEK 2023

2.27   The ICAO Security Week: AVSEC & CYBERSEC will be convened in person from 23 to 27 October 2023 at ICAO Headquarters in Montréal, Canada. This week-long event will have

sessions that cover both AVSEC and cybersecurity emerging topics. The event will also be live-streamed on ICAO TV.

IMPLEMENTATION OF UNITED NATIONS SECURITY COUNCIL RESOLUTIONS

2.28   In October 2022, the ICAO Secretary General provided remarks during the Special Meeting of the Counter-Terrorism Committee of the United Nations Security Council on "countering the use of new and emerging technologies for terrorist purposes" in India, which focused on unmanned aircraft (UA) and cybersecurity. The Counter-Terrorism Committee unanimously adopted the Delhi Declaration on countering the use of new and emerging technologies for terrorist purposes at the closing of its special meeting. Additionally, as a result of this Declaration, the Secretariat is currently working closely with the United Nations Counter-Terrorism Committee Directorate (UNCTED) on the draft set of non-binding guiding principles on the "Threats posed by misuse of unmanned aircraft systems (UAS)", including by terrorists and for terrorist purpose.

2.29   In April 2023, UNCTED and ICAO jointly held a closed briefing to the Counter-Terrorism Committee (CTC) on the progress made under UNSCR 2309(2016), and in August 2023, the Director of Air Transport Bureau provided remarks during the first CTC "Open Briefing on Border Security & Control in the context of Counter-Terrorism".

2.30   ICAO continues to collaborate with UNCTED, providing experts to participate in the CTC visits to Member States to evaluate Member States' implementation of civil aviation counter-terrorism-related United Nations Security Council resolutions and determine the efficacy of States' aviation statutes, regulations, and policies and provide recommendations to enhance capacity-building, in particular, related to aviation security and API and PNR provisions. During 2022-2023, ICAO contributed to 18 CTC visits.

2.31   In June 2023, ICAO participated in the United Nations Third Counter-Terrorism Week, which included the Third United Nations High-level Conference of Heads of Counter-Terrorism Agencies of Member States, the Plenary Meeting of the General Assembly, and the adoption of the eighth biennial review resolution of the United Nations Global Counter-Terrorism Strategy. Additionally, ICAO participated as a speaker in the following side events: "Counter-Terrorism Training Programme (CTTP) and CT Travel Programme: Donors Forum: Highlighting Achievements, Impact and Lessons Learned"; "Preventing and Countering Terrorist Use of Unmanned Aircraft Systems: Good Practices and Trends in the Acquisition, Weaponization, and Deployment of UAS". Additionally, ICAO, jointly with UNCTED and the UN Office of Counter-Terrorism (UNOCT), organized the side event on "Aviation Security contribution to the prevention and response to the evolving global terrorism landscape", which focused on the exchange of views on ways to support the resilience of civil aviation's critical infrastructure against existing, new, and evolving threats and addressing threats to aviation through reinvigorated multilateralism and institutional cooperation.

2.32   The United Nations Global Counter-Terrorism Strategy (UNGCTS) continues to shape ICAO's cooperation with other UN Agencies under the UN Global Counter-Terrorism Coordination Compact (UNGCTCC). The Strategy Action Plan refers to ICAO's mandate in the areas of aviation security, facilitation, and border control under its Pillar II - Measures to prevent and combat terrorism, and Pillar III - Measures to build States' capacity to prevent and combat terrorism and to strengthen the role of the United Nations system in that regard.

2.33   ICAO, as a member of the UNGCTCC, actively participated in the work of Border Management and Law enforcement relating to Counter-Terrorism and Emerging threats and critical infrastructure protection Working Groups and participated as a speaker in various thematical webinars organized by the Working Groups on unmanned aircraft systems (UAS) and preventing terrorists from acquiring weapons, cyber and biometrics.

2.34   ICAO collaborated with UNOCT on projects such as the UNCT Travel Programme (as of August 2023, 66 States have participated since its inception in 2019), the United Nations Programme on Threat Assessment Models -TAM Programme (5 States including the Philippines and Viet Nam),

and other UNOCT projects dedicated to cybersecurity and the protection of vulnerable targets, in particular, ICAO gave a presentation on the Autonomous and Remotely Operated Systems (AROS) Programme and ICAO's role and activities relating to unmanned aircraft systems (UAS) during a side event of the High-level International Conference on Regional Cooperation among Central Asian States within the Framework of the Joint Plan of Action (JPoA) for the Implementation of the United Nations Global Counter-Terrorism Strategy (UNGCTS) in Tashkent.

3.   ACTION BY THE CONFERENCE

3.1   The Conference is invited to note the information contained in this Paper.

— END —