



WORKING PAPER

THIRTEENTH AIR NAVIGATION CONFERENCE

Montréal, Canada, 9 to 19 October 2018

COMMITTEE A

Agenda Item 5: Emerging issues

5.3: Remotely piloted aircraft system (RPAS)

**INTEGRATION OF THE ICAO REMOTELY PILOTED AIRCRAFT SYSTEMS
WORK PROGRAM**

(Presented by the United States)

EXECUTIVE SUMMARY

Since 2014, the Remotely Piloted Aircraft Systems Panel (RPASP) has been developing an RPAS regulatory concept to include reviewing existing Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS), proposing amendments, and coordinating the development of new SARPs and PANS to support States in the safe integration of RPAS. The RPASP has established an ambitious timeline to achieve delivery of a comprehensive initial suite of SARPs and PANS, envisioned to be applicable by 2025. Timely completion of this cross-disciplinary work program requires coordination with other ICAO panels and expert groups that are concurrently engaged in carrying out their individual activities. This working paper discusses the need for the comprehensive integration of the RPASP work program with the activities of other Panels and expert groups in preparation for the incorporation of RPAS provisions into applicable annexes and guidance material. To support the RPASP in its role as the focal point and coordinator of all ICAO RPAS-related work, ICAO and States are encouraged to prioritize the maturation of the current RPAS work program and synchronize projected delivery of SARPs and guidance material through the assignment of tasks to the technical expert groups.

Action: The Conference is invited to agree to the recommendations in paragraph 3.1

1. INTRODUCTION

1.1 In 2014, the Remotely Piloted Aircraft Systems Panel (RPASP) succeeded the Unmanned Aircraft Systems Study Group (UASSG) as the expert group with the responsibility to develop the regulatory framework for the safe integration of remotely piloted aircraft in non-segregated airspace. The current scope of the RPASP is for instrument flight rules (IFR) operations by certificated aircraft in controlled airspace and aerodromes.

1.2 The RPASP is tasked, inter alia, with:

- a) serving as the focal point and coordinator of all ICAO RPAS-related work with the aim of ensuring global interoperability and harmonization;
- b) developing an RPAS regulatory concept and associated guidance material to support and guide the regulatory process; and
- c) reviewing ICAO SARPs, proposing amendments and coordinating the development of RPAS SARPs with other ICAO expert groups.¹

1.3 Although the current focus of the RPASP's work is on standards related to airworthiness, flight operations, operator certification, air traffic management, detect and avoid, security, and environment,² it is envisioned that RPAS-related provisions will ultimately be incorporated into nearly all of the ICAO annexes.

2. DISCUSSION

2.1 During the last four years, the RPASP has matured a detailed concept for the development of a comprehensive RPAS regulatory framework addressing both standards (SARPs and PANS) and related guidance material. This concept includes a timeline (Appendix) from 2018 onward projecting the creation of an initial complement of SARPs to be incorporated into Annex 1 — *Personnel Licensing*, Annex 6 — *Operation of Aircraft*, Annex 8 — *Airworthiness of Aircraft*, Annex 10 — *Aeronautical Telecommunications*, Annex 11 — *Air Traffic Services*, and Annex 19 — *Safety Management*, envisioned to be applicable by the end of calendar year 2024. The panel subsequently intends to address amendments to Annex 3 — *Meteorological Service for International Air Navigation*, Annex 4 — *Aeronautical Charts*, Annex 9 — *Facilitation*, Annex 12 — *Search and Rescue*, Annex 13 — *Aircraft Accident and Incident Investigation*, Annex 14 — *Aerodromes*, Annex 15 — *Aeronautical Information Services*, Annex 16 — *Environmental Protection*, Annex 17 — *Security — Safeguarding International Civil Aviation against Acts of Unlawful Interference*, and Annex 18 — *The Safe Transport of Dangerous Goods by Air*.

2.2 Review and adoption of the proposed SARPs produced by the RPASP will require coordination across the other Air Navigation Commission (ANC) technical panels and expert groups in addition to consultation with Member States and the Council. In particular, panels will be expected not only to provide feedback and expertise to the new SARPs and guidance material but also to oversee, together with the Secretariat and the ANC, the amendment process incorporating these new provisions into applicable annexes and guidance material.

2.3 The timeline developed by the RPASP projects delivery of four packages of proposed amendments to the Secretariat in 2018, four in 2019, and one additional in 2020 with review and consultation to be completed by early 2023. Achievement of this ambitious schedule requires that technical panels and expert groups are both aware of the RPASP activities, and prepared to receive, review, and coordinate RPAS-related proposals within the next one to two years in addition to their existing work programs.

2.4 Two key challenges may affect the RPASP's ability to deliver on its timeline: the identification of the relevant expert groups to be included in the development of new RPAS requirements,

¹ AN-Conf/13-WP/6, Remotely Piloted Aircraft System (RPAS), presented by ICAO Secretariat refer

² ICAO Air Navigation Commission Special 200th Session Commemorative Review, Fall 2015

some of which may not meet formally or regularly, and the assignment of RPAS-related tasks to these groups to ensure dedication of appropriate resources to this priority technical activity. The cross-disciplinary nature of the RPASP's work means that RPAS-related tasks must be simultaneously assigned to both the RPASP and all other relevant expert groups according to an agreed schedule. It will therefore be important for the RPASP to be aware of which expert groups may have primary responsibilities or other interests in various topics and documents, as well as the optimal timing for engagement with these groups.

2.5 To address these issues, ICAO should direct the panels and expert groups to initiate a review of existing work programs and identify the activities required of each group – including sub-groups and work groups – to implement new RPAS-related SARPs and guidance material into applicable annexes and guidance material. These activities should be coordinated by the RPASP and documented in any planning tools (e.g., timelines and schedules) used by individual expert groups, as well as in the Air Navigation Work Programme. ICAO should further ensure that new RPAS-related tasks are formally assigned to individual panels and expert groups, and that these tasks reflect a synchronized timeline that aligns with the RPASP's projected delivery of proposed amendments.

2.6 A fully integrated RPAS work program is essential to advance priority RPAS projects while avoiding negative impacts to other ongoing technical activities, and will support the continued safe integration of these new entrants into the global aviation system.

3. CONCLUSION

3.1 In light of the above, the Conference is invited to agree to the following recommendation:

Recommendation 5.3/xx – Integration of the ICAO Remotely Piloted Aircraft Systems Work Programme

That the Conference:

- a) support the maturation and execution of the RPAS work program by encouraging panels and expert groups to work together to assess their current work programs and identify additional activities required to implement RPAS-related SARPs and guidance material into applicable annexes and guidance material;
- b) ensure the dedication of resources to RPAS-related activities by assigning the appropriate tasks (job cards) to panels and expert groups;
- c) request States to support the cross-disciplinary development of RPAS-related SARPs and guidance material across panels and expert groups; and
- d) request ICAO to provide a status update on the development of a fully integrated RPAS work program to the 40th Session of the Assembly in 2019.