



International Civil Aviation Organization

SEVENTH MEETING OF THE ASIA PACIFIC REGIONAL AVIATION SAFETY TEAM  
(APRAST/7)

(Bangkok, Thailand, 31 August to 4 September 2015)

**Agenda Item 6: Presentations – State / Industry / ICAO**

**ICAO GUIDANCE MATERIAL TO SUPPORT  
IMPLEMENTATION OF RPAS IN MEMBER STATES**

(Presented by the Secretariat)

**SUMMARY**

In order to support a safe and efficient integration of RPAS into non-segregated airspace and aerodromes, ICAO has developed guidance material as a means to inform the many stakeholders on a broad range of issues that such integration entails. The recently developed Doc 10019, *Manual on Remotely Piloted Aircraft Systems (RPAS)* along with web-based supplementary material, provides basic information on the different aspects of certification, operation and oversight as the necessary steps to welcome RPAS into the civil aviation community.

**1. INTRODUCTION**

1.1 The goal of ICAO in addressing RPAS is to provide an international regulatory framework through Standards and Recommended Practices (SARPs), with supporting Procedures for Air Navigation Services (PANS) and guidance material, to underpin routine operation of RPAS throughout the world in a safe, harmonized and seamless manner comparable to that of manned operations.

1.2 ICAO, through the Remotely Piloted Aircraft Systems Panel (RPASP), is currently developing SARPs regarding RPAS in different areas that include airworthiness, telecommunications for command and control (C2) and air traffic control, detect and avoid (DAA), licensing, medical and training, RPAS operations, safety management and ATM integration issues.

1.3 The first set of SARPs on licensing, medical and training are expected to be adopted in 2018 followed by the other areas in 2020. Further SARPs and guidance are expected on a biennial basis for next 10+ years. In the meantime, guidance material has recently been developed in form of a manual. Additionally, ICAO has recently developed a public RPAS website to inform the stakeholders on a broad range of issues required to support a safe and efficient integration of RPAS into non-segregated airspace and aerodromes.

**2. DISCUSSION**

2.1 The content of the RPAS Manual was developed over a period of three years with input from many groups of experts including RPAS inspectors, operators and manufacturers, pilot representatives, air navigation service providers (ANSPs), air traffic control representatives, accident investigation bureaus, human performance specialists, surveillance and communications experts and

others. It is based upon the latest forms of technology available at the time of its publication. As such, it will be subject to a regular revision process that will be based on development of SARPs and PANS and input from the RPAS community.

2.2 There are other ICAO documents referred in the RPAS Manual, including Annexes with existing SARPs on RPAS and other guidance material such as Doc 9859, *Safety Management Manual (SMM)*, that contain important information for States when developing their regulations.

2.3 The new ICAO RPAS webpage has been designed to showcase RPAS related activities that ICAO is involved in, and to help those who are looking for material from ICAO as well as from States/International Organizations by facilitating the interchange of RPAS related information. The proposed structure of the RPAS website allows the different members of the RPAS community to review the regulatory systems in place in other areas of the world, as well as how newer developments in technology are affecting the operation of RPAS in different operational environments.

2.4 The ICAO RPAS webpage is accessed through the Air Navigation Bureau section on the public ICAO website, under the tab of 'RPAS Programme'. Alternatively it can be accessed directly via the link:

<https://www4.icao.int/rpas/>

2.5 This guidance material along with the RPAS website and other supporting material will assist States and industry in examining the interaction between ongoing RPAS development and their regulatory developments.

### **3. ACTION BY THE MEETING**

3.1 The Meeting is invited to:

- a) Note the information contained in this working paper
- b) Consider the ICAO guidance material and the information contained in the ICAO RPAS webpage when developing national regulations on RPAS
- c) Contribute to the RPAS webpage with related documents or links when developed.