



ICAO

International Civil Aviation Organization

Third Meeting of the Asia/Pacific Unmanned Aircraft  
Systems Task Force (APUAS/TF/3)

Bangkok, Thailand, 04 – 07 March 2019

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**Agenda Item 5: Asia/Pacific UAS Regional Guidance Material**

**OVERSIGHT MECHANISM OF UAS OPERATION**

(Presented by DGCA INDONESIA)

**SUMMARY**

This paper presents the urgency of oversight mechanism for UAS operations within an airspace in order to maintain aviation safety.

**1. INTRODUCTION**

1.1 The technology of UAS evolves rapidly and the operation is increasingly in recent years. Governments as the regulator are actively reviewing how to cope with the latest technological development and the needs of the public and commercial operators to use the UAS for various purposes. Some areas have specified characteristics in its environment and societal factors, governments have to consider these situations, and formulate policies and regulatory regimes which suit the local needs.

**2. DISCUSSION**

Approval Mechanism in Indonesia

2.1 The UAS particularly sUAS in Indonesia shall not operate in prohibited area, restricted area, Aerodrome OLS, controlled airspace and uncontrolled airspace more than 150m (500 ft) AGL, unless approved by DGCA. The approval process normally takes 14 days (maximum) after the requirement is completed by the applicant or operator. For the intended purposes in prohibited or restricted area, the applicant shall get the permission from the authority under Ministry of Defense.

2.2 To comply with the administration requirements, the applicant shall attach the insurance document in order to guarantee the operation include for the third-party losses caused by the failures of maintaining UA system. The applicant shall conduct an intensive coordination with the air navigation service provider prior to the operations concerning the needs of NOTAM publication.

2.3 According to the data, there were hundreds UAS operations that equipped with the approval starting from 2016 until the 2<sup>nd</sup> quarter of 2018.



The operations are intended for survey/photo flight of plantation land (50%), documentary films (25%), survey/photo flight infrastructure (20%), flight test/research (5%) in addition to military and hobbies.

Early Jan 2019, DGCA had issue approval for trial flight of delivery drone after completing risk assessment. DGCA gave one trial flight only and observed by regulator and ministry of defense. The trial flight result is under evaluation now.

#### Oversight Mechanism of UAS Operation

2.4 Some near miss collision was reported caused by UAS operation, such as the operation of small UAS in final approach area while the manned aircraft is in the approach phase.

2.5 To ensure that UAS operation is safe for the manned aircraft operations, the state shall develop a proper oversight mechanism for UAS operations within their airspace. The scope should be covered (at least) personnel that operate the UAS operation, the conformity of UAS operation with the approval and the law enforcement.

2.6 The mechanism is required the establishment of guidance that clearly defined the scope, the personnel qualifications and also the methodology in conducting the oversight activities.

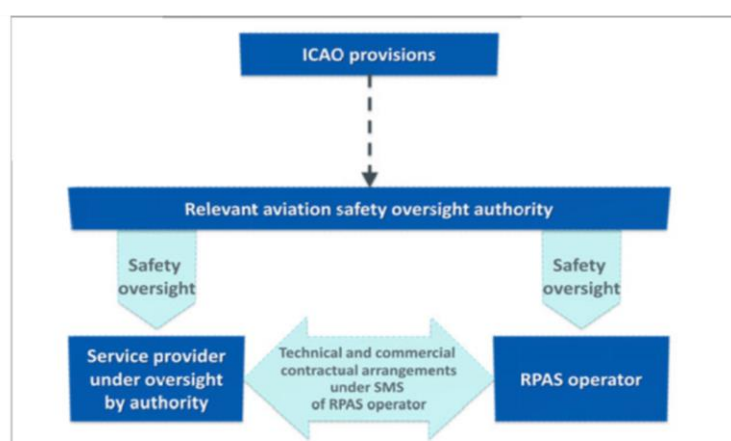


Figure 6-1. Oversight by aviation safety oversight authority

The illustration from ICAO Doc 10019 of Manual RPAS

2.7 Nowadays, DGCA Indonesia has developed an oversight mechanism of UAS operations. The scope of the oversight (but not limited to these activity) are as follows:

- a. The conformity of the UAS operation with the approval issued by DGCA;
- b. The conformity with the NOTAM of UAS operations;
- c. The conformity of UAS registration, operator certification and remote pilot certificate; and
- d. The conformity of security clearance for UAS operation in the specified areas or airspace.

2.8 DGCA Indonesia in the collaboration with other entities (Indonesian Air Force, Pilot Drone Association, UAS Manufacturer association, etc) will conduct the oversight activities.

2.9 The enforcement will conduct if the UAS operation meets the condition below:

- a. The sovereignty infringements;
- b. Endanger aviation safety and security;
- c. Endanger the vital object;
- d. The operation without an approval; or
- e. The UAS operation is not appropriate with the scope in the approval.

2.10 The enforcement is consisting of some activities which listed below:

- a. The punishment burden (criminal);
- b. The imposition of administrative sanction;
- c. the assertive action using counter drone/anti drone such as frequency jamming, forcing the UAS to exit the areas or airspace, dropped the UAS in the secure area.

2.11 In order to increase security aspect, DGCA has proposed update regulation that UA above 250 gr shall be registered.

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Urged the Regional Office to provide guidance material on oversight mechanism of UAS operations in regulatory perspectives; and
- b) discuss any relevant matters as appropriate.

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<b>Draft Conclusion/Decision APUASTF/3-X: APAC UAS Guidance Material</b>	
<p>What: To ensure that UAS operation is safe for the manned aircraft operations, the state shall develop a proper oversight mechanism for UAS operations within their airspace. The mechanism is required the establishment of guidance that clearly</p>	<p>Expected impact:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Political / Global</li> <li><input type="checkbox"/> Inter-regional</li> <li><input type="checkbox"/> Economic</li> <li><input type="checkbox"/> Environmental</li> </ul>

defined the scope, the personnel qualifications and also the methodology in conducting the oversight activities		<input checked="" type="checkbox"/> Ops/Technical	
Why:	the increasing of UAS operation	Follow-up:	<input type="checkbox"/> Required from States
When:	7-Mar-19	Status:	Draft to be adopted by Subgroup
Who:	<input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: JARUS		