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DRONE REGULATION MALAYSIA

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The use of unmanned aerial vehicles, or more commonly known as "drones", are quickly gaining popularity globally. In the Drone Readiness Index (DRI) 2023 - which measures the extent to which a country has in place the infrastructure and other factors to support drone projects - Malaysia is ranked as the top Southest Asian Country, achieving a 100% readiness rating in 3 out of the 6 categories in which the DRI is measured[1].

Drones were initially commonly used for aerial photography and videography. However, in recent years, the usage of drones has been extended to agriculture, mapping, forestry, river monitoring, transportation, construction, coastal management, flood management and other types of applications[2].

In this article, we look into the relevant laws governing the use of drones in Malaysia and also the main government initiatives to support the growth of drone technology in certain industries.

The Civil Aviation Authority of Malaysia, Civil Aviation Regulations 2016 and Civil Aviation Directives

The Civil Aviation Authority of Malaysia ("**CAAM**") is a government agency formed under the Ministry of Transport of Malaysia and it is the statutory body that regulates the nation's civil aviation matters. The operation of drones falls under the purview of the CAAM and is subject to Part XVI of the Civil Aviation Regulations 2016 ("**CAR**").

General Provisions

Under the CAR, an unmanned aerial system ("**UAS**") is defined as "an aircraft and its associated elements which are operated with no pilot onboard".

Regulation 140 (1) of the CAR provides that, unless authorization has been given by the CAAM, a person is not allowed to fly any UAS:

1. in certain categories of airspace as notified by the Chief Executive Officer of the CAAM;

2. within an aerodrome traffic zone[3]; and

3. at the height of more than 400 feet above the surface of the earth.

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[1] https://www.mida.gov.my/mida-news/malaysia-is-top-southeast-asian-country-in-drone-readiness-index-2023.

[2] Gohari, Adel & Ahmad, A. & Oloruntobi, O.. (2023). RECENT DRONE APPLICATIONS IN MALAYSIA: AN OVERVIEW. ISPRS - International Archives of the Photogrammetry Remote Sensing and Spatial Information Sciences. XLVIII-4/W6-2022. 131-137. 10.5194/isprs-archives-XLVIII-4-W6-2022-131-2023.

[3] "aerodrome traffic zone" means an airspace of defined dimension established around an aerodrome for the protection of aerodrome traffic as may be determined by the Chief Executive Officer of the Civil Aviation Authority of Malaysia.

The CAR also provides that the person in charge of an UAS shall not cause or permit any article of animal whether or not attached to a parachute to be dropped from the UAS[4].

It should also be noted that, under Regulation 141 of the CAR, no person is permitted to fly an UAS for the purpose of aerial work[5] without the authorization from the CAAM.

Categories of UAS

UAS are separated into 3 categories and each category of UAS is regulated under a different provision of the CAR. The categorisation of the UAS would determine whether or not it's usage is required to be approved by the CAAM:

1. "*small unmanned aircraft*" - This is defined as an unmanned aircraft system, other than a balloon or a kite, having a mass of not more than 20 kilogrammes without its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight. The use of a small unmanned aircraft is not required to be approved by the CAAM if the person flying it is satisfied that the flight can be safely made.

2. "*small unmanned surveillance aircraft*" - This is defined as a small unmanned aircraft which is equipped to undertake any form of surveillance or data acquisition. The use of a small unmanned surveillance aircraft under certain circumstances is required to be authorised by the CAAM.

3. in relation to unmanned aircraft systems of more than 20 kilogrammes, the prior authorisation from the CAAM is required for it's use.

Introduction of the Civil Aviation Directives

As the technology revolving around UAS is continuously evolving and UAS are expected to play a more significant role in our everyday lives, more regulations may be needed to overcome issues such as cybersecurity and public safety. Recognizing this, the Ministry of Transport has, through the CAAM, issued three Civil Aviation Directives ("**CADs**") to supplement and clarify the regulations relating to the use of UAS in Malaysia

The salient terms of the CADs are set out below:

1. <u>CAD 6011 Part I – Unmanned Aircraft System (Remote Pilot Training Organisation) ("**RPTO CAD**")</u>

   The RPTO CAD is applicable to all organizations that wish to conduct remote pilot training for UAS and it outlines the requirements, administrative process, instructions and guidance in relation to the operations of a Remote Pilot Training Organisation ("**RPTO**") within Malaysia.

[4] Regulation 140(3) of the Civil Aviation Regulations 2016.
[5] "Aerial work" means an aircraft operation in which an aircraft is used to provide specialized services in agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement and other similar activities.

An RPTO is an organization that has been permitted by the CAAM to submit reports for theoretical knowledge instruction, flight instruction and assessment with regard to the competency of remote pilots. These approved RPTOs are allowed to evaluate the competence of remote pilots against a specified set of requirements and are able to issue the necessary certificate on behalf of the CAAM.

2. CAD 6011 Part II – Unmanned Aircraft System (Agricultural UAS Operations) ("**Agricultural CAD**")

The Agriculture CAD is applicable to agriculture operations that utilize UAS, which includes the operations of an UAS for the purposes of:

(a) dispensing any agricultural payload intended for plant nourishment, soil treatment, propagation of plant life or pest control; or

(b) engaging in dispensing 'agricultural payload' and surveillance activities directly affecting agriculture, horticulture or forest preservation but not including the dispensing of live insects.

3. CAD 6011 Part V – Unmanned Aircraft System (Special UAS Projects) ("**Special UAS CAD**")

The Special UAS CAD is applicable to Special UAS Project operations that utilise an UAS. An UAS operation is considered to be a Special UAS Project if the operation involves:

(a) carriage of items, inclusive of carriage of dangerous goods;
(b) Beyond Visual Line of Sight (BVLOS);
(c) research and development; and
(d) any other operations that require an additional operational support activity from the CAAM due to additional risks involved.

Government Initiatives

There are several national initiatives that have been introduced by the Malaysian Government in recent years to encourage the use of drones and the development of drone technology in Malaysia.

Malaysia Drone Technology Action Plan 2022-2030

Most notably, in September 2022, the Malaysian Research Accelerator for Technology & Innovation ("**MRANTI**"), which is an agency under the purview of the Ministry of Science, Technology and Innovation of Malaysia ("**MOSTI**"), launched the Malaysia Drone Technology Action Plan 2022-2030 ("**MDTAP30**"). MRANTI is now the coordinating agency and secretariat of MDTAP30 with resources to support technology development, market access, prototyping, testing, funding and facilitation[6].

[6] https://www.malaymail.com/news/life/2021/11/19/mranti-to-play-key-role-in-accelerating-commercialisation-of-malaysias-tech/2022052

In order to further boost the drone industry in Malaysia, MRANTI launched Area 57, a five-acre integrated infrastructure that is dedicated to drone technology and innovation. Area 57 serves as a one-stop centre equipped with facilities such as covered netted flying area, industry-specific drone testing mock-up sites, training academy, maintenance, repair and operations (MRO) workshop and vertical take-off and landing to meet the needs of the drone communities. With the facilities provided, drone users are able to utilise Area 57 for research, development, testing, certification, manufacturing, commercialisation and maintenance of drone technologies[7].

National Technology and Innovation Sandbox ("NTIS") under MOSTI

The NTIS is a programme that enables researchers, innovators, start-ups and high-tech entrepreneurs to test their products, services, business models and delivery mechanisms in a live environment where certain regulatory requirements are relaxed.

The Malaysian Technology Development Corporation ("**MTDC**") is the corporation that provides the funding for the NTIS and it is also responsible for overseeing the usage of the approved funds. Companies that are successfully accepted into the NTIS are eligible to apply for government funding under NTIS to bring the products and services to market.

The basic eligibility of the government funding under the NTIS programme are as follows:

1. the applicant must be successfully accepted into the NTIS; and

2. the applicant must be a registered company in Malaysia (excluding sole proprietorships) with 51% equity held by Malaysians and it's primary operation base is in Malaysia.

Under the NTIS, foreign technology can be considered provided that the Malaysian-owned entity owns the solutions. Foreign companies are eligible to apply for the NTIS programme but foreign entities are not entitled to the government funding.

Global Testbed Initiative ("GTI") under Malaysian Digital Economy Corporation ("MDEC")

The GTI is an initiative to promote Malaysia as a leading technology hub by drawing local and foreign digital technology companies to test their solutions in Malaysia, especially in the Malaysia Digital (MD) promoted sectors. Drone technology is identified as one of the technology enablers.

With rapid advances in drone technology, the wide usage of drones has the potential to make an impact in our daily lives. With numerous government initiatives in place, it is evident that Malaysia is keen to embrace the innovation that drone technology could bring to various sectors.

[7] https://mranti.my/mranti-park/facilities/living-lab/area57

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