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DRONE OPERATION UNDER 25KG (SMALL DRONES) IN INDONESIA





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Executive Summary

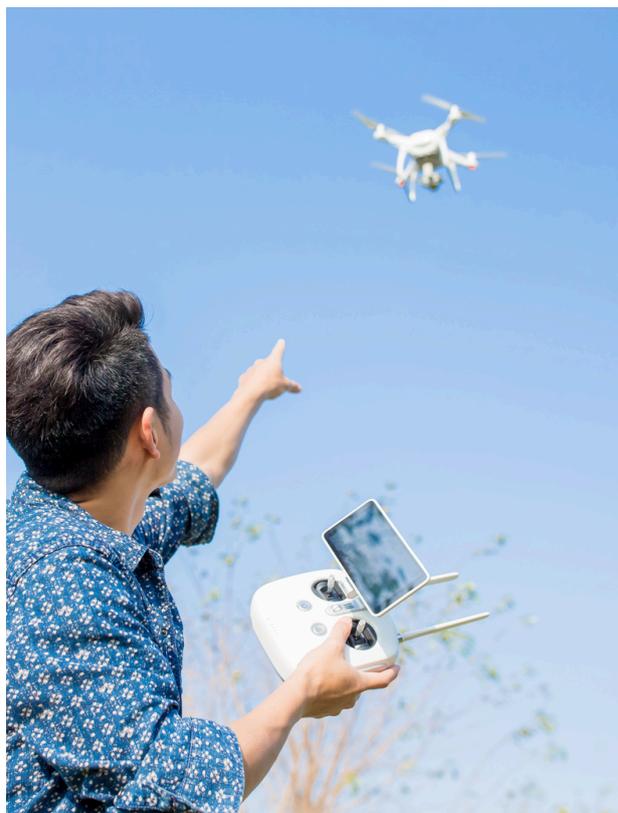
- As the number of drone units and small drone operators continues to rise, it is imperative for the Government of Indonesia to promptly harmonize regulations governing drone operations.
- The establishment of regulations for drone operations necessitates coordination across various agencies and institutions, rendering the existing Regulation of the Indonesian Ministry of Transportation inadequate. In the short term, a Joint Ministerial Regulation and a Joint Decree among government institutions are essential.



- The Joint Ministerial Regulation concerning small drones may encompass aspects such as registration, pilot certification, operational limitations, security measures, privacy protocols, institutional authority, and law enforcement guidelines.
- The Indonesian Directorate General of Civil Aviation (DGCA) should be proactive in assuming a leadership role by providing specialized training and socialization initiatives for government entities and law enforcement agencies.
- Drone regulations must also include provisions that grant exemptions for government officials and law enforcement personnel, incorporating special procedures, licenses, and Certificates of Authorization (COA) for their operational activities.

Introduction

In recent years, the proliferation of drones has risen from 5.1 million units in 2020 to 8.2 million units in 2024, with projections indicating a potential increase to 9.5 million units by 2029. This growth has been attributed to the easing of lockdown measures during the COVID-19 pandemic, which subsequently led to an increased utilization of drones for recreational activities and aerial photography. In Indonesia, the drone market is anticipated to experience a compound annual growth rate of 6.30% throughout the forecast period, ultimately reaching a value of USD 11.798 million by 2029. Prominent drone manufacturers in Indonesia include Halo Robotics, Terra Drone Corp, and MSDI.



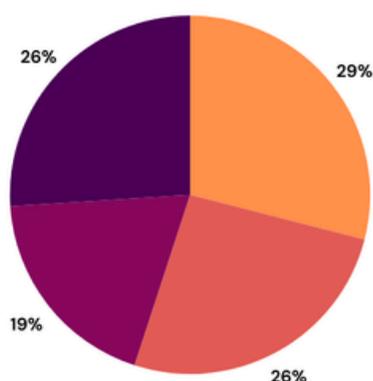
However, the regulation of drones weighing under 25 kilograms (small drone) in Indonesia remains inadequately addressed by law enforcement, particularly concerning violations of operational guidelines and frequency of use, which could present inherent risks if not promptly managed. Currently, there exist three pertinent regulations governing drones under 25 kilograms:

- 1.Regulation of the Minister of Transportation Number 63/2021;
- 2.Regulation of the Minister of Environment and Forestry Number 16/2018; and
- 3.Regulation of the Minister of Defense Number 26/2016. Additionally, the distribution of drones is governed by the Regulation of the Minister of Trade Number 7/2024.

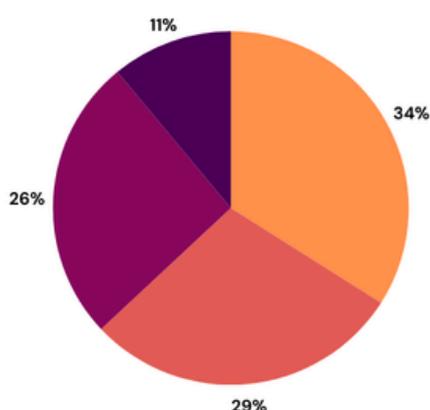
Introduction

From both a conceptual and material perspective, the Indonesian Ministry of Transportation's Regulation 63/2021 stipulates guidelines for drone usage, encompassing drone pilot certification, operational protocols, and altitude limitations. Consequently, Regulation 63/2021 aligns with CASR 107, emphasizing safety, the harmonization of international standards, and the advancement of national industrial development. It is essential that the components related to law enforcement—specifically institutional authority, certification processes, and exemptions for drone operation—are further elucidated and refined.

PRESENTATION OF DRONE UNITS OFFICIALLY REGISTERED



PRESENTATION ON OWNERSHIP OF DRONE PILOT LICENSES



The enforcement of regulations regarding small drones remains uncertain, particularly within the private sector, which constitutes the majority of small drone users. A significant number of small drone operators are unaware of whether their drones are officially registered with the governmental platform, SidopiGo. Moreover, the frequency of flights is primarily regulated by manufacturers rather than by regulatory authorities. It is noteworthy that the majority of drone pilots lack the necessary licenses. While the DGCA has established a procedure for obtaining a drone flight permit, the licensing process is complex, often requiring 14 days to complete, and is frequently overlooked. In light of this situation, it is imperative for the government to clarify and streamline the permitting process, particularly for operations conducted at altitudes exceeding 400 feet.

Issue Description: Policy Options and Analysis

The operation of drones is intended to be governed by the Indonesian Aviation Act; however, specific provisions pertaining to drones have not been included in the Act, as the technology was not recognized at the time of its drafting. A comparative analysis of policies and regulations concerning small drones in the United States, European Union, and Indonesia is presented below:

| | United States/European Union | Indonesia |
|---|--|---|
| Law enforcement and compliance | Aviation federations/authorities have a strong and centralized law enforcement system. | Law enforcement presents a significant challenge, particularly regarding the coordination among diverse agencies, the authority conferred by national regulations, and the resources that are available for effective implementation. |
| Awareness and Education | An extensive educational program is available for operators of small drones, focusing on regulatory compliance and operational guidelines. | Education regarding regulations and policies related to small drones is continually evolving. Most socialization and counseling efforts are conducted by private entities or hobbyist clubs. |
| Conclusion Aviation Administration | Have a licensing administration system to record all drones | A licensing administration system is already in place; however, its effectiveness must be reinforced through the implementation of supportive policy instruments to enhance monitoring capabilities. |

Issue Description: Policy Options and Analysis

This study advocates for the establishment of regulatory frameworks pertaining to both administrative and criminal sanctions involving small drones. Relevant institutions include the Ministry of Transportation, the Ministry of Industry, the Ministry of Home Affairs, the Ministry of Communication and Informatics, the Ministry of Finance, and regional government authorities for administrative sanctions. In contrast, the entities responsible for enforcing criminal sanctions encompass the Police, the National Narcotics Board (BNN), the Prosecutor's Office, the Indonesian National Armed Forces (TNI), and civil servant investigators. Furthermore, the policy instruments proposed for governing small drones may include both long-term and short-term alternatives, ensuring comprehensive oversight and regulation.

In the long term, it is imperative to amend the Aviation Act to encompass the regulation of small drones, including the establishment of definitions, terms, characteristics, and sanctions, particularly concerning the criminal misuse or violations related to the operation of small drones. An alternative approach would be the enactment of a Presidential Regulation to govern the technical use of small drones and delineate inter-agency authority.

Additionally, a Joint Ministerial Regulation is essential to regulate technical specifications, which should include pilot competencies, small drone specifications, licensing procedures, and provisions addressing misuse. The Joint Ministerial Regulation serves as a normative legal instrument and represents a viable option, as the Ministry of Transportation is the primary entity involved. This regulation would require collaboration among various ministries, including the Ministry of Communication and Information, the Ministry of Industry, and the Ministry of Home Affairs, to facilitate effective cross-sectoral coordination. The Joint Ministerial Regulation is both administrative and specific, focusing on the implementation of certain policies.

STAKEHOLDERS WITH INTERESTS RELATED TO LAW ENFORCEMENT

Administrative and Civil Sanctions

- Ministry of Transportation, c.q. Directorate General of Civil Aviation (DGCA)
- Ministry of Industry
- Ministry of Trade
- Ministry of Communication and Information Technology
- Ministry of Finance, c.q. Customs and Excise
- Regional Government

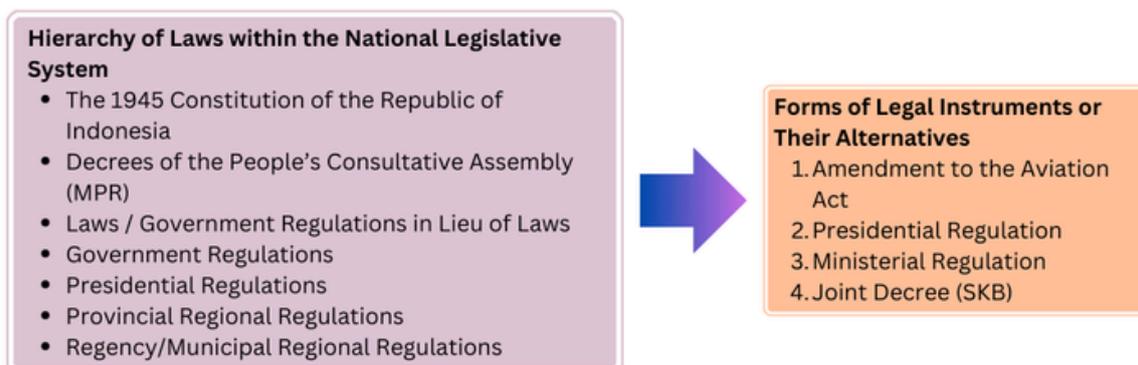
Criminal Sanctions

- Indonesian National Police
- National Narcotics Agency
- Public Prosecution Service
- Indonesian National Armed Forces
- Civil Servant Investigators (PPNS)



Issue Description: Policy Options and Analysis

ALTERNATIVE LAW ENFORCEMENT POLICY OPTIONS



The Joint Ministerial Regulation serves to consolidate regulations in order to prevent the duplication of existing rules, align the objectives of various agencies, provide clear guidelines for pilots, facilitate effective oversight and law enforcement, safeguard national security and public privacy, and promote the technological innovation of small drones. Joint Ministerial Regulation also addresses conflicts and ensures compliance with small drone regulations in Indonesia with international standards.

Regulation adjustments for small drones have to be implemented with considerations:

- **Aviation Safety:** It is essential to establish regulations for small drones that delineate altitude, speed, and designated flight area limitations in order to mitigate associated risks. Furthermore, it is necessary to implement unit specifications and pilot certification requirements that entail comprehensive training and competency assessments. The study's findings indicate that pilots often erroneously perceive the training certificate as a form of licensure. This misconception necessitates regulation by the Directorate General of Civil Aviation (DGCA).
- **National Security:** The utilization of small drones posits potential disruptions and risks to critical infrastructure, military installations, and other sensitive locations. Consequently, stringent regulations govern small drone operations in proximity to military facilities, airports, and designated airspace. The research indicates that small drones either assembled internally or those not produced by an authorized manufacturer frequently infringe upon restricted zones.
- **Public Privacy:** The regulation of small drone must protect the privacy of the public when using cameras and sensors for commercial or recreational purposes in the case of cameras on small drone.
- **Support for Innovation and Industry:** The Joint Ministerial Regulation establishes a legal framework to facilitate the innovation and application of small drones across various sectors, including agriculture, construction, and aerial photography.
- **Flexibility and Adjustment:** Regulations should incorporate a waiver mechanism that allows for exceptions to certain rules, particularly for government agencies or law enforcement entities.

Policy Recommendations

01

In order to harmonize the use of small drones, it is essential to establish a Joint Ministerial Regulation aimed at integrating and coordinating the regulations set forth by various pertinent ministries and institutions. This approach is intended to provide legal certainty and enhance the efficiency of legal frameworks, thereby preventing discrepancies and overlaps. Additionally, stakeholders are encouraged to implement subordinate policies to address cross-sectoral issues related to small drones, ensuring policy coherence while allowing for necessary flexibility.

02

The registration mechanism for small drones will be enhanced through the SidopiGO platform to ensure interoperability across various ministries. Institutions beyond the Ministry of Transportation that possess authority related to small drones may participate as operators in matters pertaining to industry, trade, and security.

03

Streamlining the licensing process for small drones is imperative to accelerate and facilitate operators' acquisition of flight permits, thereby fostering growth within the small drones industry and enhancing operational efficiency. Simplified procedures minimize bureaucracy and administrative burdens, thereby promoting innovation and broader applications of small drone technology. Furthermore, the ease of the licensing process enhances regulatory compliance, as operators are more likely to adhere to clear and accessible regulations designed to uphold aviation safety and public welfare.

Policy Recommendations

04

Establish competencies for small drone pilot licenses that will enhance operational quality and safety, provide professional recognition on a national level, and foster the growth of the small drone industry across various sectors. This initiative aligns with international standards, promotes environmental protection and public safety, and facilitates the development of training and certification programs by accredited institutions.

05

The provision of exemptions for government officials and law enforcement regarding the utilization of small drones encompasses the following points:

- Distinct flight exemption procedures may be implemented to facilitate urgent and specialized operations;
- Small drone flight licenses can be issued to government officials, permitting them to operate small drones in the execution of their duties without adhering to the standard licensing requirements applicable to commercial operators; and
- The issuance of a Certificate of Authorization (CoA) enables law enforcement agencies to function as general aircraft operators, allowing them to self-certify as small drone aviators to effectively support official law enforcement activities.

Conclusion



The policy governing small drones necessitates harmonization through the establishment of a Joint Ministerial Regulation. This approach is essential to ensure coordinated efforts among ministries and institutions while providing legal certainty that mitigates regulatory overlap. The implementation of such a regulation will facilitate the resolution of cross-sectoral issues, maintain consistency in policy, and allow for the necessary flexibility to adapt rules in response to evolving field dynamics.

Furthermore, the integration of the small drones registration mechanism via the cross-ministerial SidopiGO platform will enhance inter-agency collaboration, particularly in managing industrial, trade, and security matters related to small drones. Streamlining the licensing process for small drones will expedite access for operators, promote industry growth, and enhance operational efficiency.

It is also imperative to establish clear competencies for small drone pilots to ensure adherence to national safety standards and professional recognition while aligning with international benchmarks. Exemptions from licenses and Certificates of Authorization (COAs) for government officials will contribute to more effective law enforcement. These initiatives are anticipated to render the operation of small drones in Indonesia more organized, secure, and compliant with prevailing technological advancements and regulatory developments.