

URGENCY OF REGULATING THE UNMANNED AERIAL VEHICLE (UAV) AS A TECHNOLOGY PRODUCT IN INDONESIAN AVIATION LAW

Gunardi Lie^{1*}, Moody Rizqy Syailendra², Indah Siti Aprilia³

¹Faculty of Law, Tarumanagara University, Jakarta
Email: gunardi@fh.untar.ac.id

²Faculty of Law, Tarumanagara University, Jakarta

³Faculty of Law, University of Indonesia, Jakarta

**Corresponding author*

Submitted: July 2022, Revised: December 2022, Accepted: February 2023

ABSTRACT

The development of the Unmanned Aerial Vehicle (UAV) as a Technology Product is the trigger for the enactment of Regulation of the Minister of Transportation of the Republic of Indonesia Number 180 of 2015 concerning Operational Control of Unmanned Aerial Vehicle System in the Air Space Served By Indonesia which was amended by Minister Regulation Number 47 of 2016 concerning the same matter. Such regulation has banned the operating of an unmanned aerial vehicle (UAV) on controlled airspace and uncontrolled airspace at altitudes of more than 500 feet Above Ground Level (AGL). The aim of this paper is to review the urgency of regulating the Unmanned Aerial Vehicle (UAV) as a technology product in Indonesian Aviation Law. The research method used in this study is normative. Normative method is utilized to review the urgency of regulating the Unmanned Aerial Vehicle (UAV) as a technology product in Indonesian Aviation Law. The urgency of regulating the Unmanned Aerial Vehicle (UAV) is related to aviation safety in Law of the Republic of Indonesia Number 1 of 2009 concerning Aviation and other related regulation. Secondary data used in this research consists of primary legal material and secondary legal material.

Keywords: *Urgency, unmanned aerial vehicle, aviation*

1. PREFACE

Unmanned Aerial Vehicle (hereinafter referred to as UAV) or better known as drone is one of the technology products that are often used for various purposes. In Indonesia, civil society often uses UAVs to do aerial photography. However, in World War 2, UAVs were often used as a means of war, precisely the remote control of flying weapons.

As objects flying in air space, the operation of the UAV is certainly limited by the operation of aircraft both commercial and non-commercial aircraft. This is because of air space in Indonesia has been enacted with regard to aviation safety culture and the authorities that implement such aviation safety culture in each airspace under their command. Aviation Operations Safety Areas (KKOP), controlled airspace and uncontrolled airspace are types of areas that are regulated by the Directorate General of Civil Aviation. Prohibited areas and restricted areas are regulated by the Indonesian National Army. Each area has its own purposes and the operating of UAV is limited to in those purposes.

One case of UAV operation that has occurred is a collision of a commercial plane and UAV in October 2017 in Canada. Canadian Transport Minister, Marc Garneau, said that the aviation crew was followed by emergency measures, ensuring a safe landing for the six passengers and two airline staffers on board. He added that, In Canada, it's a 'serious offense' to endanger aircraft in Canada, with potential penalties ranging from fines of up to \$ 20,000 or prison time [1].

In addition, in California there are several cases of litigation in State Courts drones. Among them is Joe v. McBay is included in the Small claims case. In this case, McBay shot down Joe's drone. The judge is ordered McBay to pay for the shot-down drone. In addition, there are also cases between Pituch v. Perfect Event Inc. Pi Kappa Phi of the University of Southern California hired Perfect Event to throw a party. This case happened because, one of the two defenders who were drone operator who crashed the drone into the plaintiff's head. She is suing both defendants for negligence and premises liability.

2. RESEARCH METHOD

The research method [2] used in this study is normative. Normative legal research is library research, namely research on secondary data. Normative method is utilized to review the urgency of regulating the Unmanned Aerial Vehicle (UAV) as a technology product in Indonesian Aviation Law. The urgency of regulating the Unmanned Aerial Vehicle (UAV) is related to aviation safety in Law of the Republic of Indonesia Number 1 of 2009 concerning aviation and other related regulation. Secondary data used in this research consists of primary legal material and secondary legal material. Primary legal material used is Regulation of the Minister of Transportation of the Republic of Indonesia Number 180 of 2015 concerning Operational Control of Unmanned Aerial Vehicle System in the Air Space Served by Indonesia which was amended by Minister Regulation Number 47 of 2016 concerning the same matter. Secondary legal materials used are journals related to Unmanned Aerial Vehicle (UAV) as a Technology Product in Indonesian Aviation Law.

3. RESULT AND DISCUSSION

Unmanned Aerial Vehicle (UAV) as a technology product

As a technology product, Unmanned Aerial Vehicle (UAV) has been operated by developed countries in the world since the second world war [3]. Philosopher Grégoire Chamayou applies the point of view of philosophy of how UAV are changing our world by claiming the right to wage war across a mobile battlefield using UAV remote-control flying weapons [4]. Because UAVs are controlled by remote control, in some writings, wars carried out by unmanned planes are often called 'robotic warfare' [5] due to the ability of UAV to generate particular ways of visualizing the spaces and targets of war [6].

Figure 1

TDR-1, the early Unmanned Aerial Vehicle (UAV) in World War II



Source: Popular Mechanics

UAV also is used for humanitarian purpose of as an emerging technology for emerging needs [7]. Besides, it also plays an important role in the law of armed conflict, security studies, political science, international relations [8] and journalism [9] Related to photography and videography,

UAV is utilized to capture stunning aerial photographs and gorgeous high-altitude videos [10] UAV is also can be a robot assistant to help shoppers [11].

Due to the risks and benefits that can occur related to the operating of UAV, several countries and states has been enacted the limitation of operating UAV. For instance, in Washington State, the regulation related to UAV has been enacted namely due to 'drone strikes' in the Middle East meant to kill terrorists that also kill and innocent civilians [12] UAV regulation commonly has been planned to be as a part of Fourth Amendment to the United States Constitution [13]

Regulating the Unmanned Aerial Vehicle (UAV) as a technology product in indonesian aviation law

UAV as a technology product has been enacted in Regulation of the Minister of Transportation of the Republic of Indonesia Number 180 of 2015 concerning Operational Control of Unmanned Aerial Vehicle System in the Air Space Served By Indonesia (hereinafter referred to as Minister Regulation Number 180 of 2015) [14] which was amended by Minister Regulation Number 47 of 2016 concerning the same matter [15].

An unmanned aerial vehicle system must not be operated on controlled airspace and uncontrolled airspace at altitudes of more than 500 feet Above Ground Level (AGL) (Annex 2.3 Minister Regulation Number 180 of 2015). The operation of the UAV system in the air space with the following conditions: (a) not having a permit; (b) operating not in accordance with the permit granted; and (c) in certain emergency conditions, namely changes in the priority schedule for the use of air space with the time that is in conjunction with the operating license of the drone, will be given strict action by the authorities. The action is in the form of coercion to get out of the area or air space or up to dropping the UAV in a safe area (Annex 5.1 Minister Regulation Number 47 of 2016).

The part of government of the Republic of Indonesia that have been authorized to implement UAV sanctions are the Directorate General of Air Transportation and the Indonesian National Army. The Directorate General of Civil Aviation sanctions the UAV system that is operated on: (a) the Aviation Operations Safety Area (KKOP); (b) controlled airspace; and (c) uncontrolled airspace at an altitude of more than 500 feet Above Ground Level (AGL). The Indonesian National Army sanctions the UAV system which is operated in prohibited areas and restricted air areas (Annex 5.3 Minister Regulation Number 47 of 2016).

UAV operators who operating UAV shall be subject to administrative sanctions in the form of: (a) warning; (b) freezing of licenses; (c) revocation of permits; and (d) administrative fines (Annex 5.4 Minister Regulation Number 47 of 2016).

Urgency of regulating the Unmanned Aerial Vehicle (UAV) as a technology product in indonesian aviation law: Comparison with a case of collision of a commercial plane and UAV in october 2017 in Canada

The urgency of regulating the UAV as a technology product in Indonesian Aviation Law in a formal juridical way is stated in Paragraph 2 of Consideration of Regulation of Minister of Transportation Number 180 of 2015: "that in order to increase aviation safety against possible hazard due to the operation of Unmanned Aerial Vehicle (UAV), it is necessary to regulate the operating conditions of Unmanned Aerial Vehicle (UAV) system in the air space served by Indonesia"

Aviation Safety is defined in Chapter 1 Paragraph 48 Law Number 1 of 2009 concerning Aviation: [16] "A condition for fulfilling safety requirements in the use of airspace, aircraft, airports, air transport, aviation navigation, and supporting facilities and other public facilities." Aviation safety is related to the era with the determination and use of air space. National airspace records are established to realize reliable aviation navigation services with reference to national regulations and the International Civil Aviation Organization (ICAO) regulations relating to the determination and use of air space (Elucidation of Law Number 1 of 2009 concerning Aviation). This is related to the aviation safety culture that would be applied in Indonesian Aviation Law. The culture of aviation safety referred to is related to Elucidation of Article 315 of Law Number 1 of 2009 concerning Aviation: "certain beliefs, patterns of thought, patterns of attitudes and feelings that underlie and direct the behaviour of a person or organization to create aviation safety." The culture of aviation safety referred to above needs to be built namely in the form of informed culture and learning culture.

The urgency of regulating the UAV as a technology product in Indonesian Aviation Law is also correlated to the protection of buildings and people under the area and the air space used by the intended UAV (Annex 5.2 Minister Regulation Number 47 of 2016). Besides, it is also important to minimize the risk that can occur due to the possibility of UAV crash with aircraft, such crash has occurred Canada. Such crash that may endanger passengers' life and may come a liability of the aircraft related to the damages [17] Related to a collision of a commercial plane and UAV in October 2017 in Canada, according to Canada's national aviation authority, Transport Canada Civil Aviation (TCCA), flying a drone is legal in Canada but it is illegal in Canada to fly a drone within 3.4 miles of an airport without special permission. You must fly at least 5.6 kilometers (3.5 miles) away from aerodromes (any airport, seaplane base or area where aircraft take off and land). This regulation should be applied to Indonesian UAV Regulation since there is no particular rules that embodied minimal distance of UAV from aerodromes.

4. CONCLUSIONS AND RECOMMENDATIONS

The urgency of Unmanned Aerial Vehicle (UAV) are to protect aviation safety, buildings, and people under the area and the air space used by the intended UAV and to prevent collisions. Such collision may endanger passengers' life and may come a liability of the aircraft related to the damages. The urgency has been enacted in Paragraph 2 of Consideration of Regulation of Minister of Transportation Number 180 of 2015, Chapter 1 Paragraph 48 Law Number 1 of 2009, Elucidation of Article 315 of Law Number 1 of 2009 and Annex 5.2 Minister Regulation Number 47 of 2016. Those are regulations in Indonesian Aviation Law. As a recommendation, the user of UAV is supposed to respect the aviation safety culture that would be applied in Indonesian Aviation Law, namely in the form of informed culture and learning culture.

Acknowledgment

The author would like to thank profusely to all parties who have helped and supported in the process of writing this article.

REFERENCES

- Banjamin M, Drone Warfare (HarperCollins 2013)
Baude W and Stern J Y, 'The Positive Law Model of the Fourth Amendment' [2016] Harvard Law Review 129 69

- Butler S, *The Future of Shopping: Drones, Digital Mannequins and Leaving Without Paying* (The Guardian 2016)
- Chamayou G, *Drone Theory* (Penguin 2015)
- Custers B, *The Future of Drone Use: Opportunities and Threats from Ethical and Legal Perspectives* (The Hague 2016)
- Guttman C, *The Handbook of Drone Photography: A Complete Guide to the New Art of Do-It-Yourself Aerial Photography* (Skyhorse Publishing 2017)
- Law Number 1 of 2009 of the Republic of Indonesia concerning Aviation
- Martono H K and Sudiro A, *Hukum Angkutan Udara: Berdasarkan UU RI No. 1 Tahun 2009* (RajaGrafindo Persada), Martono H K and Sudiro A, "National and International Air Transport Regulation in Indonesia" [2016] *IOSR Journal of Applied Chemistry* 9
- Mizokami K, *The Forgotten Drone of WWII* (Popular Mechanics 2017)
- Parks L and Kaplan C, *Life in the Age of Drone Warfare* (Duke University Press 2017)
- Regulation of the Minister of Transportation of the Republic of Indonesia Number 180 of 2015 concerning Operational Control of Unmanned Aerial Vehicle System in the Air Space Served By Indonesia.
- Regulation of the Minister of Transportation of the Republic of Indonesia Number 47 of 2016 concerning the Amendment of Regulation of the Minister of Transportation of the Republic of Indonesia Number 180 of 2015 concerning Operational Control of Unmanned Aerial Vehicle System in the Air Space Served By Indonesia
- Rhodes A B, 'Legislating Agency Use of Unmanned Aerial Vehicles in Washington State' [2016] *Washington Law Review* 91 42
- Roug L, 'Eye in the Sky' [2014] *Columbia Journalism Review* 52 6
- Shah S A, *International Law and Drone Strikes in Pakistan: The Legal and Socio-political Aspects* (Routledge 2014)
- Soemitro R H, *Metodologi Penelitian Hukum* (Ghalia 1982)
- Zorthian J, *This Should Not Have Happened: A Drone Crashed Into a Canadian Passenger Plane* (New York Time 2017)