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## Protection of aviation security through the establishment of prohibited airspace

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## Introduction

### 1 BACKGROUND

On 17 July 2014, flight MH17 was hit by a missile over eastern Ukraine and caused hundreds of families much grief.<sup>1</sup> Unfortunately, a similar tragedy happened again on 8 January 2020 when flight PS752 was shot down at a moment of heightened military tensions between the United States (US) and Iran.<sup>2</sup> In response to these tragedies, the international community demanded to know why civil aircraft were flying over a conflict zone.<sup>3</sup> These tragedies would not have happened, if the appropriate authorities had established prohibited airspace over conflict zones. Prohibited airspace should have been established to protect aviation safety and security.

Meanwhile, the world has seen prohibited airspace established as a sanction measure. Such a sanction measure may give rise to disputes. For example, in 1956, Israel alleged that the Arab States refused Israeli flights to fly over Arab territory and established prohibited/restricted areas to an unreasonable extent;<sup>4</sup> in 2017, Bahrain, Saudi Arabia, Egypt and the United Arab Emirates (UAE) made an air blockade against Qatar, preventing Qatari aircraft from entering their airspace.<sup>5</sup> In particular, the establishment of prohibited airspace over strategic places, such as international straits, can lead to diplomatic disagreement. An example is a permanent Restricted Area over Pasir Gudang, adjacent to the Johore Strait between Singapore and Malaysia.<sup>6</sup> In these contentious cases, Member States of the International Civil Aviation Organization (ICAO) challenged the legality of these prohibited areas.<sup>7</sup> Lawyers need to answer difficult questions as to when, how and who to establish prohibited airspace in a way that is consistent with international air law.

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1 Dutch Safety Board, *Crash MH17 July 2014*, October 2015, p. 1.

2 <https://www.nytimes.com/2020/01/10/world/middleeast/missile-iran-plane-crash.html>, last accessed 12 January 2020.

3 See ICAO Second High-Level Safety Conference 2015 (as of 5 February 2015), *Montreal Declaration on Planning for Aviation Safety Improvement*, WP No.108.

4 ICAO Assembly, Executive Committee of the Tenth Session, 1956. See Cheng, Bin. *The Law of International Air Transport*. Stevens 1962. Print. The Library of World Affairs, p. 114.

5 <https://news.un.org/en/story/2020/07/1068341>, last accessed 7 November 2020.

6 <https://www.channelnewsasia.com/news/singapore/singapore-malaysia-southern-johor-airspace-seletar-airport-10997022>, last accessed 9 April 2020.

7 See Chapters II, Section 3.

The Convention on International Civil Aviation of 1944 ('Chicago Convention') and ICAO have prescribed rules for prohibited airspace in national territories. In light of the aforementioned incidents relevant to prohibited airspace, stakeholders have called for renewed scrutiny of the Chicago Convention and ICAO regulations regarding airspace closure.<sup>8</sup>

On the one hand, establishing prohibited airspace is necessary as a preventive measure to protect aviation safety and security; on the other hand, prohibited airspace must be established in accordance with international air law. Therefore, it is essential to study rules relevant to prohibited airspace, in order to make sure that airspace closure is to mitigate risks to a reasonable extent. This PhD study focuses on the legal regulations of prohibited airspace for the safety and security of civil aircraft.<sup>9</sup>

## 2 RESEARCH QUESTIONS

The risk inherent in navigating by air over conflict zones has evoked concerns over the current state of aviation security.<sup>10</sup> Armed conflicts<sup>11</sup> have begun or continue to take place in many parts of the world.<sup>12</sup> The danger is that aircraft flying over such areas may become the 'next MH17'. In the interest of enhancing aviation security, this study endeavors to answer the following research questions:

- 1) *What are the conditions, including legal requirements, for establishing prohibited airspace?*
- 2) *Who has jurisdiction to establish prohibited airspace?*
- 3) *How can the status quo be changed with respect to prohibited airspace to enhance aviation security?*

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8 ICAO, International Air Transport Association (IATA), Airport Council International (ACI), Civil Air Navigation Services Organization (CANSO), Joint Statement on Risks to Civil Aviation Arising from Conflict Zones, <http://www.icao.int/Newsroom/Pages/Joint-Statement-on-Risks-to-Civil-Aviation-Arising-from-Conflict-Zones.aspx>.

9 The definitions of aviation safety and security are presented in Chapter I.

10 ICAO State Letter, AN13/4.2-14/59, 24 July 2014.

11 See "International humanitarian law and the challenges of contemporary armed conflicts", prepared by the International Committee of the Red Cross for the 32nd International Conference of the Red Cross and Red Crescent, 8–10 December 2015, available at: <http://rcrc.conference.org/wp-content/uploads/sites/3/2015/10/32IC-Report-on-IHL-and-challenges-of-armed-conflicts.pdf>, last accessed 20 December 2017. For an outline of prevailing legal opinion, see International Committee of the Red Cross (ICRC), How is the term "armed conflict" defined in international humanitarian law?; Opinion Paper, March 2008, available at [www.icrc.org/web/eng/siteeng0.nsf/htmlall/armed-conflict-article-170308/\\$file/Opinion-paper-armed-conflict.pdf](http://www.icrc.org/web/eng/siteeng0.nsf/htmlall/armed-conflict-article-170308/$file/Opinion-paper-armed-conflict.pdf), last visited 7 May 2017.

12 Uppsala Conflict Data Program (Data of retrieval: 2020/11/07) UCDP Conflict Encyclopedia: [www.ucdp.uu.se](http://www.ucdp.uu.se), Uppsala University.

The research questions concern the ‘who, how and when’ of establishing prohibited airspace. The establishment of prohibited airspace relates to, on the one hand, the principle of air sovereignty, as agreed by governments as recognized in Article 1 Chicago Convention,<sup>13</sup> and on the other hand, the object of agreeing on the principle to “develop international civil aviation in a safe and orderly manner”.<sup>14</sup> This author explores how to align the principle with that object through answering the three research questions. The roadmap and methodology for this study are as follows.

### 3 ROADMAP OF THE STUDY

The analysis of the above research questions is developed in six chapters. Threads running through the chapters are the themes of sovereignty, jurisdiction, and territory. Chapter I sets forth the methodology employed herein and clarifies terminology to preempt any potential confusion.

Chapter II explains the regulatory regime concerning prohibited airspace, including the Chicago Convention and ICAO regulations.<sup>15</sup> This chapter explains the reasons and conditions necessary for establishing prohibited airspace to answer the first research question. It presents a normative analysis of Article 9 of the Chicago Convention and case studies relevant for the analysis of Article 9 of the Chicago Convention. This chapter examines airspace over territorial sea, archipelagic waters and straits for international navigation to clarify the meaning of airspace “over [a State’s] territory”.

Chapter III addresses the technical and operational aspects of prohibited airspace. This chapter explains the importance of information for decision-making concerning prohibited airspace, and examines the effectiveness of existing ICAO regulations regarding flight information services. It discusses the jurisdiction to establish a prohibited area in delegated airspace, whereas Chapter IV considers prohibited airspace over the high seas and in airspace of undetermined sovereignty.

Chapter V covers the establishment of prohibited areas in situations of national emergency and war. This chapter discusses the relationship between prohibited airspace, war zone, and conflict zone. Due to the development of modern humanitarian law, this chapter argues that States should have an obligation to establish prohibited airspace over conflict zones as a precautionary measure to protect civilians.

The final chapter, Chapter VI, proposes a legal regime for prohibited airspace covering three different situations. Finally, this chapter concludes that

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13 Michael Milde, *International Air Law and ICAO*, Eleven International Publishing 2016, pp. 11 & 35 (‘Milde’).

14 See Chicago Convention, Preamble.

15 The definitions of ICAO regulations are presented in Chapter I.

States should work together on technical jurisdiction to establish prohibited airspace to enhance aviation security.

#### 4 SUMMARY OF METHODOLOGY

This study employs the methodology of normative analysis, complemented by case studies. The normative analysis of existing aviation security rules forms the basis of this study. First, this study identifies and interprets rules governing prohibited airspace with recognized methods of interpretation in the Vienna Convention on the Law of Treaties (1969);<sup>16</sup> second, it examines the application of the rules related to prohibited airspace; finally, it explores how to improve implementation of rules that are already in place or what new rules can be proposed to safeguard aviation security in relation to prohibited airspace. A single thread of thought that runs through all chapters is the reflection of sovereignty, territory, and jurisdiction. Chapter I will further elaborate on the sources of rules governing prohibited airspace and treaty interpretation methods.

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<sup>16</sup> Vienna Convention on the Law of Treaties, 1155 U.N.T.S. 331, 8 I.L.M. 679, entered into force Jan. 27, 1980.