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STATE RESPONSIBILITY OVER SAFETY AND SECURITY ON AIR NAVIGATION OF CIVIL AVIATION IN INTERNATIONAL LAW

Andika Immanuel Simatupang*

Abstract

The Uberlingen Mid-Air Collision which happened in Germany in 2002 between Bashkirian Airlines and DHL had attracted the international community to international civil aviation activities. Bashkirian then brought this case before the District Court in Konstanz which sued Republic of Germany to indemnify the company for damage claims against the airline by third parties. The Court then decided Germany should be responsible to Bashkirian and indemnify all the costs claimed against the airline. The collision occurred at German's territory which is controlled by Skyguide. This thesis is aimed to elaborate the state liability on safety and security of air navigation in its territory which failure to do so will result in state responsibility. This thesis will analyze the provisions and the state's liabilities in providing the safe air navigation facilities according to international law

Keywords : Air Navigation, Safety and Security, State Liability and Responsibility

I. INTRODUCTION

Airspace is the second dimension of the territory of a state after the land.¹ As is well-known, international law recognizes that every State has full and exclusive sovereignty over the airspace above its territory. The concept of state sovereignty over this space develops from Roman law principle, which states: “*Cujus est solum, ejus est usque ad coelum*” that translates to “whoever possesses a piece of land thus possesses everything that is above the soil up to the sky and all that is underground”.²

The existence of aircrafts as a mode of transportation has prompted major changes in the world. By aircrafts, people can circumnavigate the globe in a matter of hours. Since such feat is an impossibility for ships and other method of transportation, the existence of aircrafts have be-

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¹ E. Saefullah, Penggunaan Ruang Udara Indonesia bagi Penerbangan Berjadwal Ditinjau Dari Segi Hukum Internasional (The Use of Indonesian Airspace for Scheduled Flights Reviewed from the Perspective of International Law), *Journal of International Law*, Vol.3.2, (Depok: Lembaga Pengkajian Hukum Internasional), page.174.

² *Ibid.*, page. 175.

come increasingly important. This is the result of the human needs for a method of transportation that is fast, safe and comfortable.

The operation of civil aviation in international and national level must refer to applicable norms in international and national law to guarantee the safety of passengers, flight crews, the aircrafts and the cargo as regulated by various international conventions. Within the domain of public international aviation law, Chicago Convention 1944 acts as the constitution of international civil aviation. The Convention is used as a reference in the formulation of national law by member States of International Civil Aviation Organization³ to the establishment of international civil aviation. In its development, in relevance to air law, international community has adopted several conventions relating to civil aviation, among which the most important is Chicago Convention 1944 that serves as replacement for the Paris Convention 1919.

Safety is the main principle contained within Chicago Convention,⁴ within which navigation facilities are included and considered as one of the most important aspects in flight. The safety and security of a flight are based on the navigation of the flight.⁵ The main purpose of air traffic management is to prevent accident and to avoid unexpected delay in flights. Annex 11 presupposes States to provide flight information center and air traffic monitoring devices. The devices would provide technical matters relating to flight navigation such as altitude and distance between aircrafts. Aircrafts in flight must comply with instructions provided by Air Traffic Control (ATC),⁶ regulations relating to flight navigation must not be discriminatory.⁷

³ International Civil Aviation Organization, or colloquially referred to as ICAO, is one of many subjects of international law, as mandated by Article 4 of Chicago Convention on International Civil Aviation.

⁴ Diederiks-Verschoor, *An Introduction to Air Law*, (The Netherland: Kluwer Law International), page. 253.

⁵ Quoted from the presentation of Prof. Dr. Paul Stephen Dempsey, lecturer of *Institute of Air and Space Law*, titled Air Navigation.

⁶ *Ibid.* 2nd slide.

⁷ Contained within Chicago Convention, in which Article 11 states: *Subject to the provisions of this Convention., the laws and regulations of a contracting state relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while eithin its territory, shall be applied to the aircraft of all contracting States without distictionas to*

An aircraft must comply with the instructions provided by ATC to follow the route that has been determined by the State it is passing over.⁸ In that regard, Chicago Convention prescribes obligations to member States towards flight navigation contained within the articles of Chicago Convention. Among which, Article 22 of Chicago Convention obliges States to adopt all practicable measures to provide and facilitate navigation by aircraft to avoid and prevent delays. In addition to Article 22, Article 28 provides that member States, within their respective territorial jurisdiction, must provide airports, radio, meteorology equipment and other navigation devices. States must implement SARPs relating to communication, codes, marks, signals and operation procedure as well as maps and aeronautical data. The obligations of the State are contained within Article 37 relating to SARPs. SARPs is a fundamental element of Chicago Convention to construct uniformity of rules to support the navigation system of civil international navigation.⁹ (1) *Personnel Licensing*, (2) *Rules of The Air*, (3) *Air Traffic Services*, (4) *Search and Rescue*, (5) *Aircraft Accident Investigation*, etc.

The tragedy wherein an aircraft was shot down in Ukraine is an example of multiple cases where States failed to provide navigational safety and security as mandated by the Chicago Convention. Malaysian Airlines MH17, en route to Kuala Lumpur from Amsterdam, was shot down and crashed in area surrounding Donetsk, Ukraine. The aircraft was allegedly hit by *Surface to Air Missile*, which perpetrator is still uncertain due to the lack of determination on whether the act was carried out by Ukrainian military or pro-separation Ukrainians. The incident serves as reminder of the case of Korean Airlines 007 that was shot down by a Russian interceptor aircraft and the case of Iran Air 655 that was shot down by US Navy guided missile cruiser. Another example is the case of *Uberlingen Mid-Air Collision* wherein two aircrafts collided in mid-air, which will be the main case discussed in the article.

nationality, and shall be complied with by such aircraft upon entering or departing from or while within the territory of that State.

⁸ Article 68 of Chicago Convention states: *Each contracting state may, subject to the provisions of this Convention, designate the route to be followed within its territory by any international air services and airports with any such service may use.*

⁹ Diederiks-Verschoor, *Op.Cit.*, page. 254.

II. REGULATIONS ON THE NAVIGATION SAFETY AND SECURITY OF CIVIL AVIATION

Navigation in civil aviation is manifested in *Air Traffic Services*¹⁰ granted by the State who possesses the jurisdiction over airspace passed by an aircraft and operated by *Air Traffic Controller*.¹¹ As previously mentioned, flight navigation facilities are constructed and provided in the interest of safety and security, not only to avoid mid-air aircraft collision and delays while the aircraft is *en route*.¹² Global airspace is divided into two (2) zones, with the first zone, *Flight Information Regions*¹³, which contains navigation facilities therein. Passing aircrafts are given instructions by ATC to fly from one FIR to another FIR. Secondly, the *Terminal Control Area* (TCA). When an aircraft approaches an airport where the aircraft intends to land, the aircraft enters the TCA zone.¹⁴ Pilot in command is then able to determine the use of navigation during the flight. A navigation instrument that may be utilized is *Visual Flight Rules* (VFR)¹⁵ or *Instrument Flight Rules* (IFR).¹⁶

In relevance to safety and security of flight navigation, one of the

¹⁰ *Air Navigation Services* are services provided to air traffic during all phases of flight operation that include *Air Traffic Management* (ATM), *Communications, Navigations and Surveillance* (CNS), *Meteorological Service* (MET), *Search and Rescue* (SAR) dan *Aeronautical Information Services* (AIS). Cholid Sukajaya, *Encyclopedia of Civil Aviation Terminologi*, 1st edition. (Jakarta: PT. Raja Grafindo Persada, 2013), page 192.

¹¹ Ruwantissa Abeyratne (a), *Air Navigation Law*, Chapter II, (German: Springer, 2012), page. 19-20.

¹² *En-route* is a part of the flight beginning from the end of the “take-off” and “initial” climb phase until the beginning of “approach” and “landing” phase. Cholid Sukajaya, *Op.Cit.*, page. 123.

¹³ *Flight Information Regions* is “an airspace of defined dimensions within which flight information service and alerting service are provided”, International Civil Aviation Organization (ICAO), Annex 2 to Convention on Civil Aviation.

¹⁴ Dempsey, *Loc.Cit.*

¹⁵ *Visual Flight Rules* (VFR) are a set of regulations under which a pilot may operate aircraft by solely relying by his sight. Therefore VFR is only allowed during clear weather, *inter alia* horizontal visibility of 5km or more, 1.000 ft above clouds or 500 ft below clouds and keeping horizontal distance of 2.000 ft from the aforementioned clouds. Airspace that may be crossed by VFR flight is limited, likewise generally VFR flights only operate during daylight.

¹⁶ *Instrument Flight Rules* (IFR) are flights in all controlled airspace by relying on the instruments in the aircraft as well as the qualification of the pilot (possessing instrument certification) as well as the regulations.

articles in the Chicago Convention that prescribes obligations to States relating to safety and security is Article 28 (a) of Chicago Convention.¹⁷ Within the article, States in their respective territorial jurisdiction are under obligation to provide airports, meteorological services, radio communication services and other navigation services to provide safe flight navigation facilities for international civil aviation. Article 28 further elaborates that States, in the construction of the facilities, must adhere to *Standards and Recommended Practices* that apply in the Convention.¹⁸ Therefore, a conclusion can be drawn that the construction of flight navigation facilities is an international obligation imposed towards States in accordance to the provisions of international law that will be further discussed in the article.

Flight navigation is the most important part of international aviation law to support the main principle of civil aviation. Some of regulations relating to navigation have been agreed upon prior to international regulation,¹⁹ for example in determining the allotted space in which an aircraft can maneuver itself for its own safety and other aircrafts in vicinity. In international aviation law, there exists an aviation organization named *International Civil Aviation Organization* (ICAO). ICAO is a specialized agency of United Nations that supervises and standardizes the safety of international aviation.²⁰ ICAO is a product of Chicago Conference 1944, which resulted in *Convention on International Civil Aviation 1944*, or colloquially known as *Chicago Convention 1944*. The causality between the Chicago Convention 1944 and ICAO is seen in Article 43 of the Chicago Convention, which serves as the foundation of ICAO.

The existence of ICAO in international community becomes significant considering that aviation industry promotes and prioritizes the element of advanced technology and related to human lives. Moreover, the subject matter in aviation law is a broad concept that synergizes

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ Georfe Grafton Wilson, Clement L. Bouve dan Blewet Lee, *International Law of Air Navigation*, *American Society of International Law*, Vol 26 April 29-30, (United States: American Society of International Law, 1932), page. 207.

²⁰ International Civil Aviation Organization, "ICAO Setting the Standart," (<http://www.icao.int/icao/en/settingthestandard.htm>), accessed on 3 November 2014.

national regulations and international law.²¹ Such is caused by various legal aspects in relevance to the usage of airspace such as society and the natural environment of a State. In that regard, there is an opinion that states:

Air Law is a vast concept encompassing both national and international law. It touches upon all branches of law that may govern different aspects of the social relations created by the aeronautical uses of airspace. Domestic air law evolves in accordance with the technical, economic, and political realities of each national constituency, namely, the state. Similarly, in view of the inherent international nature of aviation, international air law cannot evolve without regard to the evolution that takes place in national constituency.²²

As the result, ICAO functions to create a standard within international aviation in the interest of uniformity of regulations in aviation that supports the safety of flights. As previously discussed, flight safety is the essence of aviation.

In relation to flight navigation, Chicago Convention prescribes obligations towards States in relevance to flight navigation in Article 28 part (a) and (c).²³ The article engenders obligation of States from the aspect of modern aviation to provide navigation facilities relating to *air traffic services* that is provided in FIR zone.²⁴ To provide such facilities, States must comply with *Standards and Recommended Practices* (SARPs) prescribed by Article 38 of Chicago Convention. *Standards and Recommended Practices* (SARPs) is an instrument adopted by the

²¹ Michael Milde, "The International Civil Aviation Organization: After 50 Years and Beyond," *Australian International Law Journal*, 1996, hlm. 60-68.

²² *Ibid.*

²³ Article 28 Chicago Convention : "Each Contracting State undertake, so far as it may find practicable, to:

(a) Provide, in its territory, airports, radio services, meteorological services and other air navigation facilities to facilitate international air navigation, in accordance with the standards and practices recommended or established from time to time, pursuant to this Convention;

(c) Collaborate in international measures to secure the publication of aeronautical maps and charts in accordance with standards which may be recommended or established from time to time, pursuant to this convention.

²⁴ Ruwantissa Abeyratne (b), *Strategic Issues in Air Transport: Legal, Economic, and Technical Aspects*, (German: Springer, 2012), page. 23.

ICAO Council, which is the manifestation of Article 37 of Chicago Convention. SARPs is applied by ICAO that is contained in the annexes of Chicago Convention SARPs does not possess the legal binding power of the main convention, because SARPs is not an international convention.²⁵ However in this regard, states have agreed to “cooperate” and not “comply” which would have made the instrument a legally binding document.²⁶ Furthermore, a State may inform ICAO if in its application there are differences between SARPs and national legislation and practical application in the aforesaid State.²⁷

The responsibility over flight navigation is also strengthened within ICAO resolution that demands states to apply continuous responsibility over flight navigation that is achieved whether by division of resources, utilization of both internal and external resources, and experts from other States.²⁸ ICAO views navigation as fundamental in civil aviation.²⁹ Although the obligation of states to provide flight navigation is non-negotiable, nothing in international law prohibits a State from delegating the fulfillment of these delegations to third or other parties.³⁰

States may delegate the obligation to provide flight navigation facilities to third or other parties without waiving their sovereignty. The obligation to maintain the safety standard of civil aviation remains in effect and enforced by the provider of facilities towards the navigation of civil aviation.³¹ Discussion in relevance to the providing of navigation facilities is not only found within the Chicago Convention but also the Annex of Chicago Convention, specifically, Annex 11 relating to *Air Traffic Services*.

Supervision and control of air traffic was unheard of in 1944. However in the present day, *air traffic control*, *flight information*, and *alert-*

²⁵ Jiefang Huang (c), “Aviation Safety and Security”, dipresentasikan pada *The International Conference on Air and Space Law: The Commemoration of 50 Years Air and Space Law Studies*, 5 November 2014.

²⁶ Michael Milde, *International Air Law and ICAO*, Eleven International Publishing, 2008

²⁷ Chicago, Ps. 38.

²⁸ International Civil Aviation Organization, Appendix A38-2.

²⁹ Abeyratne (b), *Op.Cit.*, hal 22-25.

³⁰ Abeyratne, Air Navigation, *Op.Cit.*, page. 45.

³¹ *Ibid.*

ing services, of which are a part of *air traffic services*, are prioritized and cannot be neglected to guarantee safety and efficiency of international air traffic. Annex 11 of Chicago Convention defines ATS³² and explicates SARPs that are applicable relating to the subject matter. The main purpose of ATS, as contained within the Annex, is to avoid collision between aircrafts, whether during taxiing³³, take off, landing, *en-route* or when aircrafts are stationary on *holding point*³⁴ of the destined airport. Annex 11 is tasked to expedite and maintain the continuity of air traffic within an airspace by providing instructions to guarantee safety and efficiency of flights.³⁵ As previously discussed, an aircraft may opt to operate with IFR or VFR method. During IFR method, an aircraft shifts from one frequency to other frequency in accordance to flight plan, which allows the pilot to constantly determine the position of the aircraft.

III. THE PRACTICE OF STATE RESPONSIBILITY TO THE SAFETY AND SECURITY OF CIVIL AVIATION

Chicago Convention itself does not provide a definition for SARPs, however in the first meeting ICAO formulated a definition for “*standards*” as follows:

Any specification for physical characteristic, configuration, material, performance, personnel, or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which member States will conform in accordance with this Convention; in the event of impossibility of compliance, notification to

³² *Air Traffic Service* merupakan suatu istilah umum yang mempunyai beberapa jenis pelayanan ATC. Annex 2, 4, 10 Vol. III, 1, Doc. 4444, Sukajaya, *Op.Cit.*,page.195.

³³ *Taxiing* merupakan pergerakan suatu pesawat udara dengan tenaganya sendiri di permukaan suatu lapangan terbang, tidak termasuk pergerakan saat lepas landas dan mendarat. Annex 2, 4, 11, dan Doc. 4444. *Ibid.*,page. 171.

³⁴ *Holding Point* merupakan suatu lokasi yang ditetapkan, diidentifikasi secara visual atau cara lainnya, yang disekitar lokasi tersebut posisi pesawat udara dalam penerbangan tetap dipertahankan sesuai dengan “*air traffic control clearance*”. Doc. 4444. *Ibid.*,hal 216.

³⁵ International Civil Aviation Organization, *Annex 11: Air Traffic Services*, (ICAO Press, 2001), *Chapter 2.2*.

*the Council is compulsory under Article 38 of the Convention.*³⁶

Furthermore, there is a definition of “*Recommended Practices*”, which is:

*Any such specification, the uniform application of which is recognized as desirable in the interest of safety, regularity, or efficiency of international air navigation and to which Member States will endeavour to conform in accordance with the Convention.*³⁷

Therefore referring to the definition and stipulations in Chicago Convention, therefore SARPs may be defined as a set of regulations that applies to all States, because it is a part of the Convention, unless the State issues a statement precluding itself from all or some of the provisions of SARPs. In the stipulations of Chicago Convention, especially in relevance to flight safety, Article 37 of the Convention is an obligation that exists within international convention that may be considered to be a *jus cogens*, therefore the obligation that arises from the *jus cogens* is *erga omnes*.³⁸ The concept of accommodating navigation in civil aviation is not characteristically reciprocal. If a State applies a different regulations in granting flight navigation facilities in its territory, it does not mean that other States may apply different regulations in granting flight navigation facilities in their respective territory. Regulation relating to the safety of civil aviation in Chicago Convention is designed to protect the public interest of the community of international civil aviation.³⁹

Chicago Convention essentially recognizes the sovereignty of States in regulating civil aviation within their respective airspace. However, in practice, member States find that the Convention is applicable towards the creation of uniformity in regulation on civil aviation. ICAO is able

³⁶ Assembly Resolution A1-31: “Definition of International Standards and Recommended Practices”, in ICAO Doc. 7670, Resolutions and Recommendations of the Assembly 1st to 9th Sessions (1947-1955), Montreal 1956. Definisi mengalami sedikit modifikasi dalam ICAO Doc. 9848. Huang (b), “Aviation Safety, ICAO, and Obligations *Erga Omnes*”, *Chinese Journal of International Law*, (Oxford: Oxford University Press, 2009), page. 66.

³⁷ *Ibid.*

³⁸ Jiefang Huang, *Aviation Safety, ICAO, and Obligation Erga Omnes*, (Oxford: Oxford University Press, 2008), page. 72

³⁹ *Ibid.*

to exercise its legislative function to adopt or amend SARPs that is contained within the Annexes to the Chicago Convention. Every regulation relating to the procedure, implementation and others measures towards the realization of standardization in safety and security of civil aviation navigation is referred to as *Standards* towards which all States are obligated to comply.⁴⁰ Meanwhile, *Recommended Practices*, though founded on the same principle, differs from *Standards*. *Recommended Practices* is the manifestation of the recommendations and necessitated for the safety and order in civil aviation. However, a great effort is required to enforce the recommendations to States.⁴¹

For States, in accommodating navigation facilities for civil aviation, Article 28 of Chicago Convention states “*as far as they may practicable*”. Furthermore, in the implementation of SARPs as prescribed by Article 37 in relation to Article 28, States are required to collaborate in ensuring “*the highest practicable degree of uniformity*” to improve the quality of navigation services. Should a State find that the fulfillment of the standardized regulation or synchronization of its national regulation with the applicable standard is impracticable, the State is required to report its difficulties to ICAO immediately. In such situation, ICAO would notify other member States regarding the objection.⁴² Should a State expresses no objection or existence of differences, the standard must be considered to be binding towards the State.⁴³ The failure of a State to fulfill its obligations may be considered to be a breach towards international obligation.⁴⁴

Annual Report of ICAO on safety outlines the practice of several States in implementing and realizing a safe civil aviation.⁴⁵ In Australia, five government institutions are involved in cooperation programs with Asia-Pacific States, in particular Indonesia and Papua New Guinea. The

⁴⁰ Antwerpen futnot 81. ICAO, Resolusi Majelis Umum yang berlaku pada 8 Oktober 2004 (Resolution of Assembly that applies on 8 October 2004) (Doc. 9848), Resolution A35-14. Van Antwerpen, Cross Border..., *Op. Cit.*, page. 35.

⁴¹ ICAO Resolution A35-14. *Ibid.*

⁴² Van Antwerpen, *Op. Cit.*, page. 36.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ ICAO, *Safety Report: 2014 Edition*, (Montreal: ICAO Press, 2014), page. 17-19, downloaded from the website http://www.icao.int/safety/Documents/ICAO_2014%20Safety%20Report_final_02042014_web.pdf, accessed on 5 December 2014.

cooperation programs involve training, supervision and improvement of resources. Australia also contributes to *Pacific Aviation Safety Office* (PASO).⁴⁶ Subsequently United States, *U.S. Trade and Development Agency* (USTDA), entered into bilateral treaties with China, India and Brazil for technical in aviation that includes development of airport, aviation management and flight safety. In India, USTDA implements *Performance Based Navigation* program to aid airport authorities in India to improve airport technologies to enhance flight safety within the scope of capacity and energy efficiency.⁴⁷

Air Navigation Services in the United States is provided by a special government institution named *Federal Aviation Administration* (FAA). Every day FAA guides about 50.000 aircraft movements with the largest surge of activities on the East Coast, where large airports are located and among the busiest in the world.⁴⁸ In monitoring the movement of civil aviation, FAA prioritizes safety as the utmost importance. In 1994, the United States introduced the concept of *free flight* in their domestic civil aviation.⁴⁹ The concept reduces dependency with ground control, however the cost is exorbitant due to the optimization of technology in its use, which was then realized in 1998 by the government of United States. The concept of *free flight* is one of the solutions offered by the government of United States in the implementation of policies in Air Traffic Management imposed by ICAO.⁵⁰ However the concept does not erase the responsibility of ATC officer because pilots and ATC must communicate should there be threats on the route.

The United States preceded the implementation of the concept by improving flight safety and security standards in the territory of United States In 1992, Federal Aviation Authority (FAA) enforced flight safety inspection program to investigate the safety standards of airlines that pass through its territory. The government of United States subsequently established *International Aviation Safety Assessment Program*

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

⁴⁸ Van Antwerpen, Cross-border..., *Op.Cit.*,page. 19 .

⁴⁹ Abeyratne, Air Navigation, *Op.Cit.*page. 50.

⁵⁰ In the concept of *free flight*, pilot may relies on onboard instrument to maintain safe distance from other aircrafts. Pilot may also determine flight route as well as velocity in realtime therefore reducing dependency on ground control, *Ibid.* page. 51.

(IASA)⁵¹ program that focuses on the compliance of other States to SARPs published by ICAO. The purpose of the program is to ensure that every airline that operates or intends to operate in the United States must fulfill the criteria prescribed by SARPs and acquire the result of inspection over flight safety from Civil Aviation Authority (CAA). Towards the inspection, FAA applies two categories in the evaluation of the safety of the airline:

Category 1: Has fulfilled the standards of ICAO, in which the aviation authorities in that State have been examined by FAA and declared to have fulfilled the safety standards of ICAO.

Category 2: Has not fulfilled the standards of ICAO, in which is FAA, after examining the flight authorities of the State, declares that the State has not fulfilled the minimum standards of safety as applied by ICAO.⁵²

After the evaluation, the result of the investigation declares that of all 120 inspected States there are 19 States that are placed in Category 2.⁵³ In improving compliance towards civil navigation safety standard and security, ICAO established *ICAO Universal Safety Oversight Audit Programme* (USOAP) in 1999. The purpose of the audit is to improve global civil aviation safety by examining the compliance of States in implementing standards applied by ICAO such as SARPs, related procedures, guidelines and other matters relevant to the safety of civil navigation.⁵⁴ Setelah proses penilaian selesai, ICAO dapat menentukan apakah negara tersebut telah melanggar kewajiban internasional mereka terhadap Konvensi Chicago atau tidak.⁵⁵

With regard to Europe, the management of Air Traffic Management (ATM) is provided by *Eurocontrol*, which is the first regional organiza-

⁵¹ On the background of IASA, see <http://www.faa.gov/avr/iasa/iasabrl15>, Michael Milde, *International Law and ICAO*, (The Netherlands: Eleven International Publishing, 2008), page. 166.

⁵² *Ibid.*,

⁵³ States that are classified into Category 2 are among others; Aruba, Bangladesh, Belize, Bulgaria, Ivory Coast, Congo, Gambia, Guyana, Haiti, Honduras, Indonesia, Kiribati, Nauru, Nicaragua, Paraguay, Serbia, Swaziland, Ukraine, and Zimbabwe.

⁵⁴ Quoted from http://www.icao.int/safety/CMAForum/Documents/Flyer_US-Letter_ANB-USOAP_2013-08-30.pdf, downloaded on 3 January 2015.

⁵⁵ Van Antwerpen, Cross-border..., *Op.Cit.*, page. 38.

tion that performs the duty of Air Traffic Management.⁵⁶ In relevance to the current navigation system in European airspace, *Eurocontrol* initiated the concept of *Single European Sky*. Through the concept, European States attempt to paint a new color in providing navigation facilities. The main purposes of *Single European Sky* are: (1) improve safety, (2) improve efficiency, (3) optimize the capacity of European airspace, (4) minimalize delay and (5) create harmonization of regulations relating to Air Navigation Services.⁵⁷ European Union firmly applies “black list” to airlines considered unsafe. Several Asian and African airlines have been designated into the blacklist applied by European Union.⁵⁸

The analysis reveals that States comprehensively implement safety standards from ICAO in the interest of the safety of civil aviation. Although SARPs is not a binding legal instrument, ultimately States enforce SARPs optimally for the sake of safety of civil aviation in their territory.

IV. STATE RESPONSIBILITY OVER THE SAFETY AND SECURITY OF CIVIL AVIATION: THE CONTEXT OF UBERLIN-GEN MID-AIR COLLISION INCIDENT

For States, in accommodating navigation facilities for civil aviation, Article 28 of Chicago Convention states “*as far as they may practicable*”. Furthermore, in the implementation of SARPs as prescribed by Article 37 in relation to Article 28, States are required to collaborate in ensuring “*the highest practicable degree of uniformity*” to improve the quality of navigation services. Should a State find that the fulfillment of the standardized regulation or synchronization of its national regulation with the applicable standard is impracticable, the State is required to report its difficulties to ICAO immediately. In such situation, ICAO would notify other member States regarding the objection.⁵⁹ Should a State expresses no objection or existence of differences, the

⁵⁶ Verschoor, *Introduction to Air Law*, *Op.Cit.*, page. 42.

⁵⁷ EUROCONTROL, Performance Review Commission: Evaluation of the Impact of the Single European Sky Initiative on ATM Performance (December 2006), at 7-8. Van Antwerpen, *Cross-border...*, *Op.Cit.*, page. 13.

⁵⁸ Milde, *International Law and ICAO...*, *Op.Cit.*, page. 167.

⁵⁹ Van antwerpen, *Op.Cit.*, page. 36.

standard must be considered to be binding towards the State.⁶⁰ The failure of a State to fulfill its obligations may be considered to be a breach towards international obligation.⁶¹

According to the aforementioned regulations, one may conclude that Germany, as the authority over the airspace, is obligated to provide navigation facilities for civil aviation and guarantee as far as it is able the safety of every aircraft that passes the German airspace. Provision of navigation facilities must comply with the regulations of Chicago Convention, in accordance to the principle of civil aviation, which is *safety first*.

The concept of safety possesses two dimensions, of which are safety and security of the flight, therefore imposing responsibility to Germany over the technical dimension of civil aviation,⁶² other than navigation facilities, which also includes airport, airworthiness of aircrafts, license of crews and other matters. On the other hand the dimension of security involves protection from third party or external factor. Navigation facilities in Germany are provided by an institution named DFU, but only for territories adjacent to that of other States. In this case, the area of Uberlingen, which borders Switzerland. In the *Uberlingen Mid-air Collision* incident, navigation facilities were provided by *Skyguide* according to *Letter of Agreement* between the German government and *Skyguide*, although neither had signed the Letter of Agreement and therefore lacking legal binding power.⁶³ Dalam kasus ini berlaku ketentuan dalam Konvensi Chicago karena penerbangan Bashkirian Airlines dan DHL masuk dalam ruang lingkup Pasal 3 Konvensi Chicago 1944.⁶⁴

Germany is obligated to the best extent of its ability to provide navigation facilities in its territory and delegation of responsible towards other State or third party is permitted by written contract.⁶⁵ Such is necessary because providing flight navigation facilities is an international

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² Jiefang Huang, *Aviation Safety...*, *Op.Cit.* page. 5.

⁶³ Van antwerpen, *Cross-border...*, *Op.Cit.*,page.

⁶⁴ The case falls inside the scope of international flight in accordance to Article 3 of Chicago Convention 1944.

⁶⁵ International Civil Aviation Organization, *Annex 11: Air Traffic Services*, (ICAO Press, 2001), *Chapter 2.1*.

obligation that is characteristically *erga omnes*, which means that all parties involved have an interest towards such international obligation. The fulfillment of the obligation does not observe the rights and obligations of State, but emphasizing the actual implementation in the national regulation in respective States.

Obligation *erga omnes* reveals that Germany must follow every standards prescribed by international regulations relating to civil navigation to create a standardized uniformity and regulations as well as uniformity in the technical aspects of civil navigation to create common safety. In this case, the Tupolev aircraft operated by Bashkirian Airlines collided with a Boeing 757 operated by DHL at the altitude of 35.000 above sea level over the area of Uberlingen, Germany. The incident killed all passengers on board the two aircrafts. The collision is the result of the difference of instructions between ATCs, which in this case the Zurich ACC and the STCA instrument onboard each aircraft. The incident was also caused by the lateness of ATC officer in realizing that both aircrafts were cruising at the same altitude and flying towards the same point.

Bashkirian Airlines subsequently filed an indemnity lawsuit towards Germany to cover the lawsuit of third parties filed to Bashkirian Airlines. The Court of Konstanz found that Germany is responsible and therefore must cover for the losses addressed to Bashkirian Airlines. From the Court judgment, one may conclude that the responsibility of Germany over the incident is derived from negligence in providing navigation facilities executed by an agent of the State therefore resulting in an internationally wrongful act.

Internationally wrongful act manifests when: (1) there exists an act that may be active or passive; (2) the act is attributable to the State according to the principles of international law; and (3) the act is a violation towards an international obligation.⁶⁶ To determine whether a State has committed a breach of internationally wrongful act, one may refer to the Draft Articles on the Responsibility of States for Internationally Wrongful Act 2001 as an international legal norm, which states:

⁶⁶ Van Antwerpen, Page. 99-100. Also see ILC Draft on Responsibility of States for Internationally Wrongful Act Article 1 and 2.

There is an internationally wrongful act of a State when conduct consisting of an act or omission: (a) is attributable to the State under international law; and (2) constitutes a breach of an international obligation of the State.

One of the elements that must be fulfilled to declare that a State has committed a breach of international obligation is the reality that the act of breach is attributable to the State.⁶⁷ The principle is based on the fact that a State is an abstract entity that is incapable of physical act on its own.⁶⁸ A State may only act either on behalf of its agents or representatives.⁶⁹ As previously discussed in the *Uberlingen Mid-air Collision* incident, at the moment of the incident the airspace over Uberlingen was controlled by Skyguide that was mandated by Germany to perform supervision on air traffic over the area in accordance to the *Letter of Agreement* between two parties, therefore Skyguide may be referred to as an agent of Germany since it has been mandated to perform the obligation of the German state.⁷⁰ Furthermore Article 4 paragraph (1) of Draft Articles on the Responsibility of States for Internationally Wrongful Act 2001 provides a definition on what is considered *agent of State, inter alia*:

The conduct of any State organ shall be considered an act of that State under international law, whether the organ exercises legislative, judicial or any other functions, whatever position it holds in the organization of the State, and whatever its character as an organ of the central government or of a territorial unit of the State.

Based on the judgments of the Case, it may be concluded that in the *Uberlingen Mid-Air Collision* incident, Skyguide is an organ of the

⁶⁷ James Crawford, *The International Law Commission's Articles on State Responsibility: Introduction, Text and Commentaries*, Op. Cit., Article 2 paragraph 5.

⁶⁸ In the commentary to Article 2 paragraph 5 of the Draft Articles on Responsibility of States for Internationally Wrongful Act 2001, it is stated "...But to recognise this is not to deny the elementary fact that the State cannot act of itself. An "act of the State" must involve some action or omission by a human being or group... The question is which persons should be considered as acting on behalf of the State, i.e. What constitutes an "act of the State" for the purposes of State responsibility."

⁶⁹ *The German Settlers in Poland, Advisory Opinion, 1923, Permanent Court of International Justice*, Series B, No. 6, page. 22.

⁷⁰ Van antwerpen, *Op.Cit.*page. 17.

German state that, as mandated by the German government, performs the international obligation of Germany in providing navigation facilities. At the time of the incident Germany did not possess an effective control over the air traffic of civil navigation routes in the Uberlingen area because it has delegated its obligation to Skyguide, however the delegation of responsibility does not necessarily relinquish the jurisdiction of the German government according to the principles of international law.

In reference to the aforementioned articles, in accordance to the decision of the judge in the Court of Konstanz, the act may be attributed to the German government for its failure to fulfill an international obligation that should have been fulfilled by the state of Germany. In other words, Germany is responsible for the negligence in fulfilling its responsibility to provide reliable and safe navigation facilities in the Uberlingen area, Germany.

In the aftermath of the incident and the final result of investigation report published by the government of Germany, in 2006 Bashkirian Airlines filed a lawsuit to Germany by bringing the matter to the Court of Konstanz.⁷¹ As previously discussed, the Judge found that according to German law, the German government must bear the cost the losses addressed to Bashkirian Airlines, however the Court of Konstanz did not specify the amount of indemnity that the government of Germany must pay. The lack of document that bound involved parties means that the German government may not alter the responsibility to pay the indemnity to the Swiss government.⁷²

In the end in line with the legal theory invented by Hugo Grotius that “law is a social consciousness” that emphasizes in one of the principles that there must be compensation to every loss suffered and there must be punishment for every breach of law. In the incident Skyguide gave an apology in its negligence to provide a safe navigation during night time.⁷³ With regards to compensation, Bashkirian Airlines provid-

⁷¹ Lihat kembali *Bashkirian Airlines v. Bundesrepublik Deutschland*, (2006) with the District Court of Konstanz (Landgericht Konstanz 4.Zivilkammer) under case number 4 O 234/05 H.

⁷² Van Antwerpen, *Op.Cit.* page. 17

⁷³ National Geographic, *Seconds from Disaster*, *Loc.Cit.*

ed a compensation of 20.400 USD per person in adherence to the rules of Warsaw Convention.⁷⁴ Moreover, the cost borne by Germany is inter alia in 2003, Skyguide paid compensation to the families of the victims for SFr 390.000 per person. Every cost is a jointly borne by Germany, Switzerland and Skyguide.⁷⁵

V. CONCLUSION

The conclusion that can be drawn is as follows. Firstly, regulations relating to the safety and security of flight navigation from all activities of civil navigation in the world originate from the Chicago Convention 1944 on International Civil Aviation, other than other conventions that are relevant to the laws of civil aviation. According to Chicago Convention, Article 28 states that States must provide flight navigation facilities to all civil flights that pass through their territories by following existing standards and recommendations (SARPs). Regulations relating to SARPs are found within Article 37 and 38 of Chicago Convention. The regulations bring forth responsibilities to States to the best of their abilities attempt to provide safe flight navigation facilities to civil aviation, including by allowing the delegation of such responsibilities to other parties through contract.

Specifically, an Air Traffic Control unit has the obligation to supervise air traffic and the movement of the aircraft during flight and/or at airport to avoid the possibility of collision between aircrafts, improve the efficiency of civil aviation, expedite the traffic of civil aviation and avoid obstacles that may result in delays. Such points are the standards provided by the Annex to be complied by member States. Should a State declares that it is unable to comply with the regulations in SARPs, the State is obligated to inform ICAO regarding the matter.

Secondly, a form of direct practice in the responsibility of States relating to the safety and security of civil aviation navigation is by following the regulations of Chicago Convention and Annexes to the Con-

⁷⁴ Lanzi, *Liabilites and Automation...*, *Op.Cit.*

⁷⁵ Swiss Info, *Skyguide Starts to Pay Crash Victim Families*, as quoted from access <http://www.swissinfo.ch/eng/skyguide-starts-to-pay-crash-victim-families/3647798>, accessed on 22 December 2014.

vention. States are also requested to comply with the rules within *Standards and Recommended Practices* (SARPs) that are contained within the Annex to the Convention although SARPs does not possess legal binding power to States. Ultimately, the State practice in improving the safety of civil aviation in accordance SARPs becomes the guideline to be followed by a State and even other States that intend to operate civil aviation in the territory of that State. Compliance to flight safety is not only based on SARPs but also other regulations relevant to the flight safety as recognized by ICAO. Every State shall perform a safety standard evaluation by ICAO to evaluate the level of compliance of individual States.

Thirdly, in the incident of *Uberlingen Mid-Air Collision* occurring in 1 July 2002 between Bashkirian Airlines and DHL in Germany. A form of responsibility of States towards the safety and security of flight navigation as manifested by the responsibility of States over the act of its State agent is the obligation of Germany to compensate the losses that were addressed to Bashkirian Airlines from third parties. The breach of obligation that Skyguide committed manifests in the form of the negligence of the ATC officer that resulted in the accident. From such negligence, the German government became saddled with the obligation to pay compensation to all victims of the incident as well as bearing the cost every compensation claims that were addressed to Bashkirian Airlines. In the aftermath of the event, Skyguide issued an official apology to the families of the victims and general population.

Uberlingen Mid-Air Collision incident occurring in the territory of Germany that eventuated from the negligence of ATC officer resulted in the death of 71 passengers and other losses. The incident is then regarded as the negligence of Germany in providing safe navigation facilities in civil navigation. Regarding the provision of facilities, Germany is permitted to delegate its international obligation to other parties however it does not necessarily relinquish the sovereignty of Germany over its airspace, which means that the jurisdiction of Germany remains applicable over the area. Therefore, as the result Germany must perform and bear the cost of compensation for the losses that are the result of the incident.

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