

THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY AIR IN THAILAND

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ABSTRACT

In recent years, the carriage of goods by air in Thailand has increased and continues to rise because the transportation by aircraft is widely used. The carriage is not only limited to general goods but also includes chemicals and raw materials which are categorized as dangerous goods. Such increase in activity and demand results in several issues which consist of the carriage routes having to pass through communities followed by the increase in risks of collateral damage from accidents caused by the goods.

Hence, owing to the problem on the carriage of dangerous goods, international organizations made regulations to control the carriage of dangerous goods in order to prevent damage instead of specifying the remedy.

Therefore, it is crucial to enact the law and regulatory measures that control and monitor the carriage of dangerous goods as well as limit the accidental damage as low as possible in order to ensure the safety for both the public and the activity itself.

The objective of this thesis is to study the means of enacting a specific law governing the regulation of the carriage of dangerous goods by air. The methodology includes study and comparative analysis of the international regulations, namely United Nations Recommendations on the Transport of Dangerous Goods, IATA Dangerous Goods Regulations, Annex 18 of Chicago Convention, and Technical Instructions for the Safe Transportation of Dangerous Goods by Air, Foreign Laws and Thai law that concerns and governs the carriage of dangerous goods.

According to a study, it is evident that Thai law governing the carriage of dangerous goods by air is still inadequate due to the

insufficiency of the regulations. In addition, it does not meet the requirement of ICAO; both legal and practical.

Such issues lead to a necessity in amending the related law. To make the law appropriate for the current social and economic state, the author suggests the resolution of these issues by enacting the specific law and amending the general rules as well as transportation and penalty rules stated in the same act in order to fit with the current situation and be sufficient for enforcement.

Keywords: carriage, dangerous goods, by air

บทคัดย่อ

ในปัจจุบันการขนส่งสินค้าทางอากาศในประเทศไทยเพิ่มขึ้นอย่างต่อเนื่อง เนื่องจากการขนส่งทางอากาศเป็นที่นิยมอย่างแพร่หลาย การขนส่งนี้ไม่ได้จำกัดเพียงแต่สินค้าทั่วไป แต่ยังรวมถึงสารเคมีและวัตถุอันตราย ซึ่งได้รับการจำแนกว่าเป็นสินค้าอันตราย การเพิ่มขึ้นของปริมาณความต้องการและการผลิตมีผลต่อการเพิ่มขึ้นของความเสี่ยงและความเสียหายอันเกิดจากอุบัติเหตุในการขนส่งสินค้า ฉะนั้นจากปัญหาที่เกิดขึ้นจากการขนส่งสินค้าอันตราย องค์การระหว่างประเทศได้จัดทำกฎระเบียบเพื่อควบคุมการขนส่งสินค้าอันตราย เพื่อที่จะป้องกันความเสียหายที่จะเกิดขึ้น

การออกกฎหมายและมาตรการควบคุมและจัดการการขนส่งสินค้าอันตรายนั้นเป็นสิ่งที่สำคัญ ซึ่งจะสามารถช่วยลดความเสียหายจากอุบัติเหตุที่เกิดขึ้นให้น้อยที่สุดเท่าที่จะเป็นไปได้ เพื่อให้เกิดความปลอดภัยต่อสังคมและส่วนรวม

งานเขียนนี้มีวัตถุประสงค์ที่จะศึกษาการออกกฎหมายเฉพาะเพื่อควบคุมการขนส่งสินค้าอันตรายทางอากาศ ซึ่งจะใช้วิธีการศึกษาโดยการวิเคราะห์เปรียบเทียบกฎเกณฑ์ระหว่างประเทศ ได้แก่ United Nations Recommendations on the Transport of Dangerous Goods, IATA Dangerous Goods Regulations, Annex 18 of Chicago Convention, and Technical Instructions for the Safe Transportation of Dangerous Goods by Air กฎหมายต่างประเทศและกฎหมายไทยที่เกี่ยวกับการขนส่งสินค้าอันตรายทางอากาศในประเทศไทย

จากการศึกษาพบว่ากฎหมายไทยที่ควบคุมการขนส่งสินค้าอันตรายทางอากาศยังไม่เพียงพอ เนื่องจากยังขาดกฎระเบียบบางประการ นอกจากนี้ยังพบว่า การขนส่งสินค้าอันตรายทางอากาศยังไม่ตรงตามเงื่อนไขมาตรฐานสากลของ ICAO

ดังนั้นประเด็นดังกล่าวจึงนำไปสู่ความจำเป็นในการแก้ไขเพิ่มเติมกฎหมายที่เกี่ยวข้องกับการขนส่งสินค้าอันตรายทางอากาศ เพื่อพัฒนากฎหมายของไทยให้เหมาะสมกับสภาพสังคมและเศรษฐกิจ ผู้เขียนจึงเห็นควรมีการออกกฎหมายเฉพาะและกำหนดให้มีบทลงโทษให้เข้ากับสถานการณ์ปัจจุบันและมีการบังคับใช้ที่เหมาะสม

คำสำคัญ: การขนส่ง, สินค้าอันตราย, ทางอากาศ

1. Introduction

In recent years, the carriage of goods by air in Thailand has increased and continues to rise because the transportation by aircraft is widely used. The carriage is not only limited to general goods but also includes chemicals and raw materials which are categorized as dangerous goods. In the carriage of dangerous goods, one should be more careful because it can cause harm to life, property, and environment. To prevent this damage, it is crucial for the government to impose statutory and regulatory measures to control and monitor the carriage of dangerous goods as well as limit the accidental damage as low as possible to ensure the safety for the public and the activity.

Due to rapid development in the world, the demand for these dangerous goods has also increased exponentially. Because of the obvious advantages of air carriage, great deal of these dangerous goods are transported by the aircrafts. With an increasing demand of dangerous goods, the role of air transportation in their carriage is becoming more important than ever.

Since they are transported every day by air around the world, there is an International Standard that the contracting states of Chicago Convention have to apply in their respective national legislations to ensure the safety of the aircrafts. This, in turn, ensures that the carriage of dangerous goods has been controlled within the

safety standard, thereby providing a worldwide harmonization in aviation.¹

The carriage of dangerous goods by the airline in Thailand still does not meet the requirements of International Civil Aviation Organization (ICAO) and has resulted in the issuance of Significant Safety Concerns (SSC) by ICAO. Since Thailand does not have any distinct regulation on the carriage of dangerous goods by airlines, it should be concerned about this matter and comply with the international regulations such as Annex 18 of Chicago Convention which states about the procedure, inspection, training and emergency procedures.² For these reasons, more attention should be paid on the carriage of dangerous goods by air in both legal and practical sense. Thailand should also consider it imperative to have a specific law to handle the carriage of dangerous goods by air which covers all aspects on this matter.

2. Basic Concepts of Dangerous Goods

2.1 The Importance of International Civil Aviation

International civil aviation has become one of the most closely regulated activities in the world. Practically all its activities are related to the operations of international air services and the carriage of goods. With the continuous development of civil aviation and airline operations, the existing regulations and authorizations have to be continuously adapted to meet the new situations.³

There are mainly two ways to regulate international civil aviation:

¹International Civil Aviation Organization, “*The Transport of Dangerous Goods by Air*”, <http://www.icao.int/safety/DangerousGoods/Pages/background.aspx> (last visited Jan. 4, 2016).

²Thaipublica, “การดำเนินการแก้ไขปัญหามาตรฐานการบิน” (“*The Resolve of Civil Aviation Problems*”), <http://thaipublica.org/2015/06/icao-4/> (last visited Jan. 4, 2016).

³H.A. Wassenbergh, **Public International Air Transportation Law in a new era**, Henkes Senefelder, (1997).

- A) agree on common general principles and apply these principles to the operation of international air services; or
- B) for individual states to try and enlarge their sphere of influence in international civil aviation by any available means.⁴

2.2 Definition of Dangerous Goods

In the term of aviation, dangerous goods are the articles which can cause harm to the aircraft if they are carried and therefore must be forbidden if these are not in compliance with specific instructions on the packaging, carrying, stowage location, proximity to the other items, or class of flight.⁵

UN Recommendations on the Transport of Dangerous Goods define the meaning of dangerous goods as “articles or materials that can cause damage or injury to human, health, property, or environment when transported in a sizeable amount”.⁶ It also covers the items of daily use, for example, perfumes, paint, can, etc.

Even though most of the transport regulations are now framed so as to adhere to basic principles under the UN Recommendations, the regulations for the road, air, rail, and sea vary as per the specific requirements of different modes of transportation.⁷

The classification of Dangerous Goods is based on the standard determined by the “United Nations Committee of Experts” (CoE). This classification determines the acceptability of the articles and substances for air transportation as well as the conditions for their transportation. It is the duty of the shipper of the cargo to decide

⁴ *Id.*

⁵ “*Definition of Dangerous Goods*”,
http://www.skybrary.aero/index.php/Dangerous_Goods (last visited Jan. 4, 2016).

⁶ UN Recommendations On The Transport Of Dangerous Goods, “*Definition of Dangerous Goods*”,
<http://www.businessdictionary.com/definition/dangerous-goods.html> (last visited Jan. 4, 2016)

⁷ *Id.*

if the articles and substances are dangerous goods or not, and if dangerous goods, to determine the correct class or division.⁸ These classes are;

- 1) Explosive
- 2) Gas
- 3) Flammable Liquid
- 4) Flammable Solid
- 5) Oxidizing Substance
- 6) Toxic and Infectious Substance
- 7) Radioactive Material
- 8) Corrosive
- 9) Miscellaneous Dangerous Goods⁹

3. The Carriage of Dangerous Goods by Air in Foreign Countries

3.1 Australia

The Australian airline is the leader in the development of airline system, flight data record, crew performance, time monitoring and safety and security system that can detect the problem from a major safety issue.¹⁰ The evidence that supports this idea is that Australia's Qantas is the world's safest airlines of 2016 ranking from the world's plane safety and product rating website. It got this prize continuously for 3 years. It has never had any fatal accident or incident in the aircraft era.¹¹

⁸ UN Recommendations on the Transport of Dangerous Goods, "*The 9 Classes of Dangerous Goods*", <http://www.dgiglobal.com/classes> (last visited Jan. 4, 2016).

⁹ *Id.*

¹⁰ The Telegraph, "*The world's safest and least safe airlines revealed*", <http://www.telegraph.co.uk/travel/news/The-worlds-safest-airlines-revealed/> (last visited Jun. 30, 2016).

¹¹ Christine Forbes Smith, "*Who are the world's safest airlines for 2016?*",

Australia is one of the members of the International Civil Aviation Organization and signatories of the Chicago Convention. It has applied the provisions that are detailed in the Technical Instructions to its regulations to reach a higher safety standard.

There are many regulations that provide the carriage of goods by air. In the carriage of dangerous goods by air, there are “Australian Civil Aviation Act 1988” and “Civil Aviation Safety Regulations 1998” which are regulated by the Civil Aviation Safety Authority. They enact the regulations for the carriage of dangerous goods, consignment, the training of aircraft personnel and the shipper of dangerous goods. They also enact the regulations for the cargo shipper to declare the goods which are not dangerous and a description of the contents.¹²

Civil Aviation Safety Regulations Part 92, the law on governing the carriage of dangerous goods by air, was adopted with the ICAO Technical Instructions through the act.¹³ Moreover, there is the competent organization Civil Aviation Safety Authority that authorizes and fulfills this role. These regulations include all details that are require for the global harmonized standard and they are applied to all aircraft related matters.

3.2 New Zealand

The world’s second safest airline belongs to “Air New Zealand”, the national airline of New Zealand, it offers the greatest peace of mind when flying. According to the safety aviation network,

<http://www.airlineratings.com/news/630/who-are-the-worlds-safest-airlines-for-2016> (last visited Jun. 30, 2016).

¹² Australian Government Civil Aviation Safety Authority, “*Dangerous Goods-Risk Reduction Strategy*”, <https://www.casa.gov.au/standard-page/dangerous-goods-risk-reduction-strategy> (last visited May. 17, 2016).

¹³ Civil Aviation Safety Authority, “*How to use the Civil Aviation Safety Regulations 1998*”, <http://www.recreationalflying.com/tutorials/regulations/guidcasr.pdf> (last visited Jun. 30, 2016).

the results of the accidents are well below the 10-year average and it has not suffered from any significant incidents.¹⁴

In the case of New Zealand, the airlines in this country are concerned about the safety measures both the legal and practical. There is Civil Aviation Rule Part 92 which controls the carriage of dangerous goods and it has the same content as Technical Instructions for the safe transport of dangerous goods by air, and the IATA Dangerous Goods Regulations include the necessary detail about airline industry standard and convention.¹⁵

4. The Carriage of Dangerous Goods by Air in Thailand

4.1 Legal problem analysis in the Carriage of Dangerous Goods by Air in Thailand

1) Insufficient Details of the Act

Hazardous Substances Act B.E. 2535 (1992) is the Act that deals with the production, importation, exportation and possession of dangerous goods, but it does not cover in details the carriage of such dangerous goods. This act regulates only the general principle, for example, the label in the carriage has to clearly present the state of dangerous goods or the container, equipment etc. in the carrier have to be carefully inspected during the transportation. Following the above example, the Act does not specify in details how the correct transportation and equipment should be. Although, this Act is applicable to all kinds of transportation, it is not suitable in practice and the ministry concerned does not have competency because each kind of transportation is different in detail, technicality and procedure so it is difficult to enforce all kinds of transportations using the same standard.

¹⁴ NZ Herald, "*Air NZ world's second safest airline*", http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11183011 (last visited Jun. 30, 2016).

¹⁵ Civil Aviation Authority of New Zealand, **The Offering Of Dangerous Goods For Carriage By Air**, (2010)

In the case of the Air Navigation Act B.E.2497 (1954), it was enacted since B.E. 2497 (1954) and the substances of this act do not cover all the matter of the international carriage by air. There are only a few provisions stating about dangerous goods and they are not enough for the current situation. Therefore, some sections of the act should be amended such as the carriage of dangerous goods, penalties to be suitable in practice.

For the Department of Civil Aviation Regulation No.92, although it is compatible with some parts of Technical Instruction such as Chapter 8 Operator's Responsibilities, it still lacks some details such as limitation on the transport of dangerous goods by air, shipper's responsibilities, dangerous goods transportation documents, compliance and inspection systems etc., because it was enacted urgently to solve the encountering problem. It also does not clarify some sections such as packing, labeling and marking that should specify more details in these matters.

Moreover, there is no provision which states about the penalties in this regulation. So in effect the problem persists regarding the responsibility and penalties for the persons who do not comply with the regulation.

2) Implementation Problems

Because the dangerous goods accidents can severely affect humans, properties and environments, it is imperative to have clear regulations to control the carriage of dangerous goods procedure to prevent the damages that can happen, and solve the problem in this matter.

All the regulations and the measures to control the carriage of dangerous goods are the subordinate legislations that are enacted by respective organizations. It means that each part of the carriage including production, packaging and transportation is controlled by different organizations which lead to obstruction for the entrepreneurs in doing business.

Moreover, the organizations concerned may neglect or refuse to take responsibility in case of any problems arising because they have a limited authority and the problem may be under the jurisdictions of other organizations. So it is necessary to have a competent authority be responsible directly in the carriage of dangerous goods by air for the harmonization and convenience.

In Thailand, although there are some related regulations on the carriage of dangerous goods by air, they are not adequate. The existing laws are not able to regulate the carriage of dangerous goods efficiently and sufficiently because most of them are subordinate laws, they cannot be applied uniformly to all cases and are too complicated in practice. Since the dangerous goods accidents can severely harm life, health, property or environment, it should have a law that can be strictly enforced. For example, in Department of Civil Aviation Regulation No.92, there is no provision which mentions about the penalties so it is necessary to have the specific law to enforce in this matter.

Moreover, the law on the carriage of dangerous goods by air should be amended every two years, as suggested by the UN recommendation. It should be done through the enactment of a ministerial regulation because it is simpler and faster to amend the ministerial regulation than enacting the act. The reason to amend this law every two years is because of the various types of dangerous goods and the continuous improvements in the transportation technologies, thereby increasing the chance of causing more damage than the past. Therefore, the law should be amended and updated appropriately for the current situation.

To solve Thailand's civil aviation and for it to be in compliance with the standards of the ICAO, according to SSC, some of the important measures are to improve the certification of transportation of dangerous goods by air by setting up a special unit responsible for issuing the rules and regulations concerning

transportation of dangerous goods as well as drafting a Dangerous Goods Manual and a Dangerous Goods Inspector Manual.¹⁶

The organization that will enforce the specific law should have the knowledge and understanding in the carriage and state of dangerous goods. Therefore, a specialist committee should be appointed to consider the specific law. Furthermore, the personnel is an important part in controlling the carriage of dangerous goods and needs to be of the same standard as the international one. Thus, there should be a training course on the carriage of dangerous goods by air for the personnel to improve its potential and specialization in this matter.

In conclusion, Thailand should make amendments to laws to make the carriage of dangerous goods by air meet the international standards. This is because airline industries play an important role in the national economic system. Furthermore, it is also for the protection of people's life, health, property and development of Thai airline industries simultaneously.

3) Problems of the substance of the law

According to the study, there are some regulations that can be enforced in the carriage of dangerous goods by air but they are still inadequate because they do not cover all the matters as desired.

In Department of Civil Aviation Regulation No.92, they were adopted and translated from the Technical Instruction for the transportation of dangerous goods. However, there are some parts that this regulation does not applied and it can be effected in practice such as the limitation on the transport of dangerous goods, shipper's responsibilities, dangerous goods transportation documents, compliance and inspection systems. Moreover, in Air Navigation Act B.E.2497 (1954), which is the parliamentary act, does not have the penalty in the carriage of dangerous goods by air that can cause the problem such as the punishment in the event of an infringement.

¹⁶ PPTV, "*Civil Aviation Standard in Thailand*", <http://www.pptvthailand.com/news> (last visited Jun. 30, 2016).

4.2 The Advantages of the Specific Law on Carriage of Dangerous Goods by Air

There are many advantages if Thailand enacts the specific law on carriage of dangerous goods by air as follow:

1) The advantage for business and economy

By having a specific law on the carriage of dangerous goods by air in Thailand, the carriage can be controlled systematically and effectively. It can reduce the risk that causes the accident and the problem of the standard in carriage of dangerous goods. It can also make the carriage business more convenient and can increase the confidence of the foreigners to travel in and accept the Thai airlines. Moreover, it can support investment in the carriage of dangerous goods more than the past.

2) The advantage for society

If there is a specific law to control in this matter, it can improve the safety standard in the carriage of dangerous goods by air. It can prevent and minimize the dangers that cause severe harm to life, health, property or environment. Moreover, if there is a specific law, it can reduce the incident or accident that can occur from dangerous goods.

3) The advantage for public

Accidents that are caused by the dangerous goods can severely affect not only the private operators but also the state ones. Such accidents can reduce the confidence of carriers from the other countries. So if there is a specific law which can control the carriage and make it more systematic and effective, it will be advantageous for public. It can make the standard in Thai's airline industry to meet the international requirement and increase the confidence to the foreign countries.

5. Conclusions and Recommendations

In Thailand, it appears that the carriage of dangerous goods has not been given sufficient consideration, according to the case study in 2015 which observed that Thai DCA does not meet the requirement of ICAO in Significant Safety Concerns (SSC)¹⁷. Resultantly, it has had an effect on the Thai airlines, and therefore, Thailand should consider enacting the specific law on the carriage of dangerous goods by air for safety, standard and harmonization with the international regulation.

In conclusion, as a preliminary solution, the author suggests enacting the ministerial regulations under the Air Navigation Act B.E. 2497 as soon as possible, because they can provide more details under the existing act and can be promptly amended or implemented with the international regulations. Since enacting the act has to be considered by the legislative assembly, it has a complicated process and also takes time to enact the law. So it cannot be immediately amended or applied with the current situation and may affect the development of society and economy. Therefore, the ministerial regulation is the suitable way to solve the encountering problem because it can provide more details under the existing act and can be promptly amended or implemented together with the international regulations.

However, for the long-term goal, there should be an act on the carriage of dangerous goods by air because the law on this matter is essential as it has an effect on the society and people if there is any accident or damage, it can severely affect people's health, life, state properties and the environment. Thus, a new act should be brought into force to cover all aspects of this matter by considering the international regulations.

¹⁷ PPTV, *supra* note 14.

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