

A REVIEW OF THE SPACE DEVELOPMENT PROMOTION ACT OF THE REPUBLIC OF KOREA

Yoon Lee *

I. INTRODUCTION

The Space Development Promotion Act (hereinafter the Act)¹ of the Republic of Korea (hereinafter Korea) was promulgated on 31 May 2005 and entered into force on 1 December 2005. The Korean government stated the purpose of the legislation as follows:²

- to establish a legal and institutional framework for promoting space development in a systematic way and using and administering space objects in an efficient way; and
- to establish, as a space-faring state, a legal ground for carrying out state obligations which are stipulated in international conventions.³

* Deputy Director-General for Overseas Koreans and Consular Affairs, Ministry of Foreign Affairs and Trade, Republic of Korea. The views expressed in this article are those of the author alone and do not commit the organization to which he belongs. This article is a shortened version of the author's LL.M. thesis at Leiden University.

¹ The Act in Korean is available at the website of the Ministry of Government Legislation, <http://www.moleg.go.kr/>. Its unofficial English version translated by the author is attached as an Annex.

² The purpose of the legislation is stated in the Proposed Space Development Promotion Act, an official document of the Korean government for submitting the bill to the National Assembly on 29 December 2004. See Proposed Space Development Promotion Act, Dec. 29, 2004, available at http://kr.geocities.com/quantumba/171229_100.HWP.pdf.

³ Korea is a party to the following four of the five UN space treaties:

1) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. 6347, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty];

In terms of its contents, as will be seen in the following chapters, the Act covers issues which have been identified as “building blocks for national space laws”⁴ in the Report of the ‘Project 2001’ Working Group on National Space Legislation. The Report presented five building blocks: authorization of space activities, supervision of space activities, registration of space objects, indemnification regulation and other additional regulation.

In these respects, the Act can be said to be a typical national space law and the latest addition to the worldwide stock of national space laws.

This paper is aiming to provide an overview of the Act and find out how rules of space treaties are reflected in the Act. In other words it will review and analyze major provisions of the Act from the international space law perspective. Focus will be placed on issues related to “building blocks for national space laws” and the jurisdictional scope of the Act.

II. OVERVIEW OF THE ACT

II.1. LEGISLATIVE HISTORY

The Korean government started working for national space legislation in 2003. The Ministry of Science and Technology which is the principal government body responsible for space

2) Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, Apr. 22, 1968, 19 U.S.T. 7570, T.I.A.S. 6599, 672 U.N.T.S. 119 [hereinafter Rescue Agreement];

3) Convention on International Liability for Damage Caused by Space Objects, March 29, 1972, 24 U.S.T. 2389, T.I.A.S. 7762, 961 U.N.T.S. 187 [hereinafter Liability Convention];

4) Convention on Registration of Objects Launched into Outer Space, Sept. 15, 1976, 28 U.S.T. 695, T.I.A.S. 8480, 1023 U.N.T.S. 15 [hereinafter Registration Convention].

⁴ See M. Gerhard and K. Schrogel, *Report of the ‘Project 2001’ Working Group on National Space Legislation*, in ‘PROJECT 2001’ – LEGAL FRAMEWORK FOR THE COMMERCIAL USE OF OUTER SPACE: RECOMMENDATIONS AND CONCLUSIONS TO DEVELOP THE PRESENT STATE OF THE LAW, PROCEEDINGS OF AN INTERNATIONAL COLLOQUIUM, COLOGNE 556-67 (K. Böckstiegel ed., 2002).

development policies and activities initiated⁵ the drafting of a bill on space development promotion in October 2003 and had consultations with other relevant Ministries on the draft. As a result a draft bill on space development promotion was drawn up in July 2004.

The draft bill was made public for comments of interested individuals or groups during the period of July to August 2004 and then went through other necessary procedures⁶ inside the government. The President signed the final version of the government-initiated bill in December 2004. The bill was submitted to the National Assembly on 29 December 2004.

The government bill having reached the National Assembly was referred to the Science, Technology, Information and Telecommunications Committee of the National Assembly. The Committee held a public hearing on 28 February 2005 at which five experts in legal and scientific fields made comments on the bill. After deliberations, the Committee passed the government bill with modifications on 22 April 2005. The modified bill was sent to the Legislation and Judiciary Committee and then forwarded to the Plenary Session of the National Assembly, which finally approved it on 3 May 2005.

The President promulgated the Act on 31 May 2005. The Act came into force six months later in accordance with paragraph 1 of the Addenda of the Act.

II.2. SUMMARY OF THE ACT⁷

The Act consists of 29 articles and addenda of 3 paragraphs. They cover a wide range of issues such as national space program, national space committee, registration of space objects, launch license, liability and insurance, space accident investiga-

⁵ There are two ways of initiating a bill in Korea: one is government-initiated legislation and the other is National Assembly members-initiated legislation. Either bill needs to pass through the National Assembly to become a law and there is no difference in its effect as a law between the two. The Act was government-initiated legislation.

⁶ They include procedures such as review by the Government Deregulation Committee, review by the Ministry of Government Legislation and approval by the Cabinet.

⁷ As the Act is in Korean and there is no official English translation by the Korean government, the English version used in this paper is an unofficial one translated by the author, which is attached as an Annex.

tion, support for private space projects, rescue and return of astronauts and punishment of violators. For the convenience of explanation, they are classified and summarized according to their contents as follows:

- General provisions: Articles 1-4

- Article 1 states the purpose of the Act, which is to facilitate the peaceful use and scientific exploration of outer space and to contribute to national security and economic development.
- Article 2 defines several terms. Space development is defined as (i) research and technology development activities related to design, production, launch, operation, etc. of space objects or (ii) use and exploration of outer space and activities to facilitate them.
- Article 3 is about the tasks of the government.
- Article 4 is about the relationship of the Act with other laws. The Act prevails, unless there are special provisions in other laws.

- Establishment of national space program: Article 5

- The government is to formulate a basic program on space development promotion every five year. The Minister of Science and Technology establishes and carries out its annual implementing program.

- Relevant authorities: Articles 6, 7 and 26

- Article 6 establishes the National Space Committee headed by the Minister of Science and Technology and commissioned to deliberate matters related to the national space program, major policies and projects of space development.
- Article 7 allows the Minister of Science and Technology to designate and support a special agency conducting space projects.
- Article 26 allows the Minister of Science and Technology to entrust functions such as safety judgment for launch license and collection of information on space activities to government-funded research institutes.

- Registration of a space object other than a launch vehicle: Articles 8-10

- Article 8 on domestic registration establishes a two-step registration system of a space object other than a launch vehicle: preliminary registration not later than 180 days before its launch and registration within 90 days after its entry into orbit.⁸

- Article 9 on international registration requires the Minister of Science and Technology to register a space object with the United Nations, except a satellite to be registered with the United Nations by the Minister of Information and Communication in accordance with the Radio Wave Act.

- Launch license for a launch vehicle: Articles 11-13

- Article 11 stipulates the obligation of acquiring a launch license to be issued by the Minister of Science and Technology.

- Articles 12 and 13 concern disqualification and revocation of a launch license.

- Liability and insurance: Articles 14 and 15

- Article 14 imposes the liability for damage from a space accident caused by a space object upon a person who launched it.⁹

- Article 15 provides for mandatory insurance to be secured by a person seeking a launch license. The minimum amount of its coverage is to be stipulated by a regulation of the Ministry of Science and Technology.

- Space accident investigation commission: Article 16

⁸ Since there is no specific term in the Act for the registration of a space object to be done within 90 days after its entry into orbit, it will be called hereafter, if needed, “after-launch registration” in contrast to “preliminary registration” which is to be done before the launch. *See Act, supra* note 1.

⁹ As will be seen *infra* at Section III.4.2.2., it is the argument of this author that the liability referred to in Article 14 of the Act has nothing to do with the international liability for damage referred to in the Outer Space Treaty and the Liability Convention, but it is the liability for damage held domestically or locally. *See Act, supra* note 1, at art. 14.

- The Minister of Science and Technology may establish a space accident investigation commission to be composed of 5 to 11 experts.

- Space development promotion: Articles 17, 18 and 24

- Article 17 allows the Minister of Science and Technology to take measures to promote the spread and utilization of satellite information.

- Article 18 requires the Minister of Science and Technology to contrive policy measures such as manpower supply, tax incentive, financial support and priority procurement in order to encourage private sector space projects.

- Article 24 allows the Minister of Science and Technology to request data or opinions on space development and industry from other government authorities, research institutes and companies.

- Concerns on public order, national security and safety: Articles 19-21

- Article 19 authorizes the Minister of Science and Technology to order the suspension or rectification of space activities in emergencies or for public order or national security.

- Article 20 enables the Minister of Science and Technology to receive assistance and cooperation from other government authorities in respect of entry control of a launch site, communication, rescue operation, safety management, etc.

- Article 21 requires the Minister of Science and Technology to consult other government authorities in respect of space projects related to national security.

- Rescue and return: Articles 22 and 23

- Article 22 states the obligation of the government to rescue astronauts in distress in Korea or on the adjacent high seas. Article 23 is about the obligation of the government to return foreign space objects.

- Confidentiality: Article 25

- A person engaged in working in accordance with the Act has the obligation of not leaking secrets obtained during work.

• Punishment: Articles 27-29

- Violations of provisions on launch license, suspension or rectification of space activities, confidentiality, registration of a space object and space accident investigation may result in fine, imprisonment or negligence fine.

II.3. DISCUSSIONS DURING THE LEGISLATIVE PROCESS

Since the drafting of a bill initiated by the Ministry of Science and Technology in 2003, discussions had been held at various levels and occasions until its final passage through the National Assembly in May 2005. Major discussions had happened during consultations among Ministries concerned in drafting and finalizing the government bill, during the review of the government bill by the National Assembly and during a public hearing at the National Assembly.

As no comprehensive and detailed record of all discussions is available, it is not possible to produce a full account of arguments, counter-arguments and conclusions on major issues. It is therefore tried here to provide a limited and partial picture on them by showing what issues were raised and discussed during the legislative process. The report of the Senior Counsel to the Science, Technology, Information and Telecommunications Committee of the National Assembly,¹⁰ the record of discussions between government officials and lawmakers during the sessions of the same Committee,¹¹ the record of experts' opinions

¹⁰ See Report of the Senior Counsel to the Science, Technology, Information and Telecommunications Committee of the National Assembly (April 2005), available at http://search.assembly.go.kr/bill/doc_30/17/pdf/171229_300.HWP.PDF.

¹¹ The government bill was on the agenda of the second meeting on 21 February 2005 of the Science, Technology, Information and Telecommunications Committee during the 252nd Session of the National Assembly and of its third meeting on 22 April 2005 during the 253rd Session of the National Assembly. The bill was also on the agenda of a Subcommittee on Bills of the Science, Technology, Information and Telecommunications Committee on 21 April 2005 during the 253rd Session of the National Assembly. A verbatim record of discussions in Korean can be retrieved from the website of the National

and discussions during a public hearing held by the same Committee¹² and the record of discussions during a seminar hosted by the Sci. & Tech. Forum, a study group of interested members of the National Assembly¹³ are main sources for that purpose in this paper. A comparison between the Act and the two draft texts¹⁴ which had appeared in the legislative process is also tried as a supplementary means of figuring out the contents of discussions, because differences among the three texts must be reflecting discussions and their outcome.

The following can be said to be major issues raised and discussed during the legislative process. They focus more on domestic policy-oriented, legal and organizational issues than on those of international legal character.

- Purpose of the Act

- There was a discussion on whether to specifically mention national security as one of the purposes of the Act. National security was added in the provision of Article 1.

- Definition of terms

Assembly at The National Assembly of the Republic of Korea, <http://www.assembly.go.kr/index.jsp> (last visited Aug. 4, 2007).

¹² Five experts stated their opinions and answered questions of lawmakers at the public hearing on 28 February 2005. Two of them were law professors, another two were professors of space science and engineering, and another one was the chief of the space center at KARI, a space research institute. A verbatim record of their statements and questions and answers in Korean can be retrieved from the website of the National Assembly at The National Assembly of the Republic of Korea, <http://www.assembly.go.kr/index.jsp> (last visited Aug. 4, 2007).

¹³ The seminar was an informal meeting to exchange opinions among working-level government officials, professors, members of space research institutes and private sector participants under the auspices of the Sci & Tech Forum. Its verbatim record in Korean can be retrieved at Sci&Tech Forum, http://www.snt.or.kr/bbs_event/read.php?field=&word=&page=1&no=4 (last visited Aug. 4, 2007).

¹⁴ There are two important draft texts. One is the draft bill of the Ministry of Science and Technology that was made open to the public for comments from July to August 2004 as explained *supra* at Section II.1. It used to be available at the website of the Ministry of Science and Technology, but is no longer available. The other text is the government bill that was submitted to the National Assembly on 29 December 2004. For the text of the government bill, see the Proposed Space Development Promotion Act, *supra* note 2.

- Questions were raised about the appropriateness of definitions of terms such as damage, space accident, space object, space development, space development project and satellite information. The wording of some definitions was changed accordingly.

- Concerns were expressed over the difference in the definitions of similar terms between the Act and other related laws such as the Act for the Promotion of Aerospace Industry Development and the Radio Wave Act.

- **Establishment of National Space Committee**

- The establishment of the National Space Committee was widely welcomed as a necessary step to promote space development. Opinions were expressed on the need to strengthen the status of the Committee, enhance its coordinating role among various Ministries concerned and make its operation more efficient on paper as well as in practice. The need to clarify its relationship with other existing committees in the field of science and technology in general was also pointed out.

- **Relationship with other related laws**

- Questions were raised on whether the scope of the Act was overlapping with that of the Act for the Promotion of Aerospace Industry Development. It was understood that while the Act for the Promotion of Aerospace Industry Development was focusing on aero-industry, the Act would focus on space development promotion.

- The provision of the Act, saying “This Act applies to matters relating to the promotion of space development and the use and administration of space objects unless there are special provisions in other laws,” was viewed with worry for not ensuring the supremacy of the Act in space matters.

- **Registration of a space object**

- In respect of satellites, domestic registration is to be filed with the Ministry of Science and Technology in accordance with the Act, while international registration with the United Nations is to be made by the Ministry of Information and Communication in accordance with the Radio

Wave Act. This complex system resulting from the division of authority between the two Ministries was suspected of producing inefficiency and inconvenience.

- Problems were pointed out and corrected as to the unclear deadline of registration, the lack of duty to report changes happening after the registration and the lack of a provision on the register for preliminary registration.

- A considerable change among the three texts is found as to persons or cases registration of a space object is required for. The final text, that is, the Act has a detailed and clear provision in this respect, applicable to a Korean national as well as a non-Korean national.

- A launch vehicle is excluded from the scope of space objects to be registered under the second and final texts, whereas it was not under the first draft text.¹⁵

- Launch license for a launch vehicle

- It was proposed that the Act would include a detailed list of documents required for the application for a launch license. A paragraph was added to accommodate this proposal.

- A considerable change among the three texts is found as to cases for which a launch license is required. The Act is clearer and broader in its jurisdictional scope than the draft bills.

- There were discussions on whether a project conducted by a government-funded space institute is required to have a launch license. It was understood that a license would be also applied for by a government-funded space institute.

- There was an opinion arguing that a launch license should be also made necessary for space objects other than launch vehicles.

- Liability and insurance

- The definition and scope of damage were extensively discussed. There were arguments for limiting the scope of damage and liability in order not to discourage space ac-

¹⁵ The first draft text is the draft bill prepared by the Ministry of Science and Technology in July 2004 and the second text is the government bill submitted to the National Assembly on 29 December 2004. *See supra* note 14.

tivities and investment of the private sector. Noticeable change between the first and second draft bills and the Act is the deletion of the word 'all' before the word 'damage' in Article 14.

- Concerns were expressed over Article 15(2) providing that the minimum amount of insurance coverage, not the maximum amount, is to be stipulated, because it might produce discouraging effect on the private sector engaging in space activities. There was a suggestion for doing a careful study on other countries' examples in allocating the burden of compensation for damage between the government and the private sector.

- There was an opinion arguing for introducing more detailed liability provisions to reflect relevant provisions of the Liability Convention more faithfully, such as the absolute and fault liabilities and the joint liability.

- There was an opinion arguing for introducing a provision on cross-waiver among participants in space projects.

- There was an opinion arguing for the need to prescribe the minimum amount of insurance coverage in the Act itself, not in a regulation of the Ministry of Science and Technology.

- **Space accident investigation commission**

- As the government bill contained four articles detailing the space accident investigation commission, it was suggested to delete three of them and retain only one for the sake of overall balance of the Act. The Act keeps only one article on the commission.

- There was an opinion arguing for including a provision on the necessity to cooperate with other states or international organizations concerned in case of a space accident.

- **Utilization of satellite information**

- Concerns were expressed over the possible infringement on privacy while promoting the spread and utilization of satellite information. A provision on the protection of privacy was added to address this concern.

- **Suspension and rectification of space development**

- Concerns were expressed as to how to compensate a person for losses when the person is ordered to suspend or rectify space activities for national security reasons which the person is not responsible for.

- Rescue and return

- There was a proposal to change the wording of the provision on rescue and return in order to reflect relevant provisions of the Rescue Agreement more accurately. This proposal was partly reflected in the Act.

- Addition of new provisions

- The Science, Technology, Information and Telecommunications Committee of the National Assembly proposed three new provisions during its review on the government bill. Thus, Article 24 on data collection and survey, Article 25 on the obligation of confidentiality and Article 26 on entrusting of authority were added.

II.4. FOLLOW-UP LEGISLATION

The Ministry of Science and Technology prepared follow-up regulations to implement the Act. A draft presidential decree was submitted by the Ministry of Science and Technology to the Cabinet for deliberation and finally authorized by the President in November 2005. The Presidential Decree¹⁶ entered into force on 1 December 2005 together with the Act. The Presidential Decree consists of 24 articles that provide for procedural matters, issues related to the composition and operation of bodies established under the Act and other details.¹⁷

¹⁶ See Decree for Implementing the Space Development Promotion Act, Dec. 1, 2005, Presidential Decree No. 19606 [hereinafter Presidential Decree]. It was amended on 4 July 2006 to introduce provisions for establishing sub-committees under the Working-level Committee of Article 6(5) of the Act.

¹⁷ The articles consist of the procedure for establishing the Basic Program on Space Development Promotion (Arts 2 and 3), the composition and operation of the National Space Committee (Arts 4-6), the designation and support of the Special Agency for Space Development (Arts 7-9), the procedure for the registration of a space object (Art 10), the procedure for acquiring a launch license (Arts 11-13), the composition, task and operation of the Space Accident Investigation Commission (Arts 14-19), the procedure for requesting other Ministries to provide cooperation such as entry control of the launch

A ministerial regulation that is another follow-up regulation to implement the Act and the above-mentioned Presidential Decree was also drafted by the Ministry of Science and Technology. The Regulation¹⁸ entered into force on 1 December 2005. It has 10 articles that provide additional procedural details on the registration of a space object and the launch license for a launch vehicle, including application forms, a specimen of registration, a specimen of a launch license, a sample of register, etc. Article 9¹⁹ of the Regulation stipulates the minimum amount of liability insurance coverage to be secured by an applicant for a launch license of a launch vehicle. The minimum amount is 40,000,000 SDR for a launch with a payload of less than 1 ton and 60,000,000 SDR for a launch with a payload of not less than 1 ton.²⁰

site and emergency assistance (Art 20), the establishment of security measures for space development project related to national security (Art 21), the procedure for data collection and survey (Art 22), the procedure for entrusting functions like safety judgment to government-funded research institutes (Art 23) and the procedure for levying negligence fine (Art 24).

¹⁸ See Regulation for Implementing the Space Development Promotion Act, Dec. 1, 2005, Regulation of the Ministry of Science and Technology No. 78 [hereinafter Regulation].

¹⁹ Unofficial translation by the author of Article 9 of the Regulation is as follows: Article 9 (Liability insurance)

1. The minimum amount of compensation covered by the liability insurance to be secured by a person who wants to be granted a launch license for a launch vehicle in accordance with Article 15, paragraph 2 of the Act is as follows:
 - (1) 40,000,000 unit (SDR) for a launch with a payload of less than 1 ton;
 - (2) 60,000,000 unit (SDR) for a launch with a payload of not less than 1 ton.
2. "Unit" in paragraph 1 (1) and (2) refers to the amount equivalent to a Special Drawing Right of the IMF.

Regulation, *supra* note 18, at art. 9.

²⁰ The minimum amount of insurance coverage is to be stipulated by the Regulation, taking into consideration the domestic and overseas insurance markets, under Article 15, paragraph 2 of the Act. See Regulation, *supra* note 18.

According to a legal expert having been involved in the legislation of the Act and its follow-up legislation, the respective minimum insurance amount, which was difficult to decide on, was calculated on the basis of insurance market data and other countries' examples. The expert was interviewed over the phone by the author in September 2006, but did not want to be identified.

Since new legislation on the liability for damage from a space accident is under consideration (*see infra* note 21), the fate of the present provision of the

Another follow-up legislation that will come into being in the future is an act on the liability for damage from a space accident. Article 14 of the Act provides that a person who launches a space object shall bear the liability for damage from a space accident caused by the space object and matters such as the scope and limit of liability shall be stipulated by a separate act. A draft²¹ is now under discussion informally among officials of the Ministries concerned and the National Assembly, scholars and experts.

II.5. RELATIONSHIP WITH OTHER LAWS RELATED TO SPACE ACTIVITIES

II.5.1. General Principle

Generally speaking, a new law has precedence over a previous one and a special law has precedence over a general one under the Korean legal system like under other legal systems. This general principle applies to the relationship between the Act and other existing or future laws related to space activities. However, the principle needs to be applied in harmony with a special provision in the Act which will be explained below.

II.5.2. Special Provision in the Act

Article 4 of the Act says that the Act applies to matters relating to the promotion of space development and the use and administration of space objects unless there are special provisions in other laws. It means that special provisions of other laws shall prevail over provisions of the Act in respect of matters relating the promotion of space development and the use and administration of space objects, which are the scope of application of the Act.

Concerns were raised over the appropriateness of Article 4 during the legislative process as briefly mentioned at Section

Regulation on the minimum amount of liability insurance needs to be seen in the future discussions on the new legislation.

²¹ A draft bill is expected to be submitted to the National Assembly in the form of a bill initiated by concerned members of the National Assembly sooner or later.

II.3. Criticism was centered on the fact that while the government intended to enact a new basic law on space development promotion, its status was placed below other laws at least in some respects. More specifically, two existing laws are possibly relevant here. One is the Act for the Promotion of Aerospace Industry Development. If a conflict arises between the Act for the Promotion of Aerospace Industry Development and the Act, the former will prevail over the latter in accordance with Article 4 of the Act. The problem is not likely to happen in practice, however, because it was understood that the Act for the Promotion of Aerospace Industry Development would continue to focus on the promotion and support of the aero-industry and the Act would focus on space development promotion and space objects.²²

The other law that is relevant is the Radio Wave Act. Article 44(1) of the Radio Wave Act says that the Minister of Information and Communication shall register a satellite launched by a Korean national with the United Nations in accordance with the Registration Convention.²³ Article 44(1) of the Radio

²² Article 4 of the Act and this understanding are said to be the product of a compromise reached between the Ministry of Commerce, Industry and Energy and the Ministry of Science and Technology with respect to the legislation of the Act. Act, *supra* note 1, at art. 4. See Record of the Subcommittee on Bills of the Science, Technology, Information and Telecommunications Committee, 2-7, 253rd Session of the National Assembly (Apr. 21, 2005). See also, The National Assembly of the Republic of Korea, <http://www.assembly.go.kr/index.jsp> (last visited Aug. 4, 2007).

²³ Unofficial translation by the author of Article 44 of the Radio Wave Act is as follows:

Article 44 (Registration of satellites with the United Nations)

- (1) The Minister of Information and Communication shall register a satellite launched by a Korean national with the United Nations in accordance with the 'Convention on Registration of Objects Launched into Outer Space.'
- (2) The Minister of Information and Communication can request the person who launched a satellite to submit data necessary for its registration.
- (3) When registration is made according to paragraph (1), the Minister of Information and Communication shall inform the Minister of Science and Technology of the result of the registration without delay.

Radio Wave Act is available at the website of the Ministry of Government Legislation, <http://www.moleg.go.kr/>.

Wave Act is a special provision in the sense of Article 4 of the Act and therefore prevails over Article 9 of the Act which addresses international registration of a space object. As a result, whereas all domestic registration of satellites shall be filed with the Minister of Science and Technology, international registration of satellites shall be handled by the Minister of Information and Communication, not by the Minister of Science and Technology, in accordance with Article 44(1) of the Radio Wave Act. This logical result coming from Article 4 of the Act is expressly confirmed by the proviso²⁴ of Article 9(1) of the Act. As seen at Section II.3., this complication was pointed out as a potential source of inefficiency and inconvenience during discussions in the legislative process of the Act. In this regard Article 4 of the Act which seems to be the result of a compromise to preserve the existing laws and division of work between Ministries concerned does not go well with the aim of efficient administration of space objects.

III. ANALYSIS OF MAJOR PROVISIONS OF THE ACT

Chapter II has shown that a considerable part of the Act is spared for domestic policy and organizational aspects to promote and support national space activities. They are provisions on national space program, national space committee, special agency for space development, utilization of satellite information, support for private space projects, inter-agency cooperation

The current provision is the result of a revision that was made on 31 May 2005 together with the legislation of the Act. The previous text before the revision was as follows:
Article 44 (Registration of satellites *etcetera*)

(1) The Minister of Information and Communication shall register a satellite *etcetera* launched by a Korean national with the United Nations in accordance with the "Convention on Registration of Objects Launched into Outer Space".

(2) The Minister of Information and Communication can request the person who launched a satellite *etcetera* to submit data necessary for its registration.

A key difference between the two texts is the deletion of *etcetera* from paragraphs (1) and (2) of the old text. The deletion of *etcetera* means that while registration of satellites with the UN continues to be done by the Minister of Information and Communication, registration of non-satellites is to be done by the Minister of Science and Technology.

²⁴ Act, *supra* note 1, at art. 9(1), "However, it does not apply to a satellite which is to be registered with the United Nations in accordance with Article 44, paragraph 1 of the Radio Wave Act."

for space development and others. They will not be dealt with in this paper, because they are not directly related to international space law.

Other parts of the Act with international space law implications are main issues of interest for this paper. They will be analyzed from the international space law perspective. Jurisdictional scope of the Act will be checked in respect of its compatibility with jurisdictional rules of international space law and general international law. And then provisions on authorization and supervision of space activities, registration of space objects, liability regime and others issues such as rescue of astronauts and accident investigation²⁵ will be reviewed one by one.

III.1. JURISDICTIONAL SCOPE

Generally speaking, state jurisdiction refers to the power of a state to take action in respect of persons, things or events. It can take the form of legislative, judicial or enforcement measure.²⁶ This Section will find out the scope of jurisdiction Korea is to exercise in relation to space or space-related activities under the Act. The jurisdictional scope of the Act will then be examined from the international space law perspective.

III.1.1. Jurisdictional Scope of the Act

Since the Act does not have a general provision on its jurisdictional scope, it cannot be defined in general terms. Each relevant provision of the Act needs to be analyzed. As jurisdictional scope matters particularly in areas where government regulation and control are conspicuous, analysis will focus on such provisions. They include provisions on registration of a space object, launch license for a launch vehicle, liability for damage and accident investigation, among others.

²⁵ These are major provisions of the Act with international space law implications. See Act, *supra* note 1.

²⁶ For jurisdiction in general, see OPPENHEIMER'S INTERNATIONAL LAW 456 (Robert Jennings and Arthur Watts, eds. 9th ed. 1996); PETER MALANCZUK, AKEHURST'S MODERN INTRODUCTION TO INTERNATIONAL LAW 109 (7th ed., 1997); MALCOM N. SHAW, INTERNATIONAL LAW 572 (5th ed., 2003).

First, provisions on registration of a space object²⁷ apply to a Korean national including a legal person who launches a space object in or outside Korea. They also apply to a non-Korean national in certain cases: when the person launches a space object in the territory of Korea or in the area or facility under the jurisdiction of Korea; and when the person launches a space object outside Korea by using a launch vehicle owned by the Korean government or a Korean national. The jurisdictional scope of provisions on registration is visualized in the following Table A.

TABLE A

Jurisdictional scope of provisions on registration of a space object

Person	Launching a space object other than a launch vehicle in Korea ²⁸	Launching a space object other than a launch vehicle outside Korea
Korean	Yes ²⁹	Yes
Non-Korean	Yes	Yes, if using a launch vehicle owned by the Korean government or a Korean.

Second, with respect to a launch license for a launch vehicle, Article 11 does not explicitly mention whether it applies only to a Korean national or also to a foreign national. According to Article 11(1), a person shall have a license when the person intends to launch a launch vehicle in the territory of Korea

²⁷ Provisions on registration, that is, Articles 8-10, apply only to a space object other than a launch vehicle according to Article 8(1). Act, *supra* note 1.

²⁸ "In Korea" here and in subsequent Tables refers to "in the territory of Korea or in the area or facility under the jurisdiction of Korea."

²⁹ "Yes" means that the activity of the person in question is stipulated to be within the jurisdictional scope of provisions on registration of a space object. The same applies to subsequent Tables.

or in the area or facility under the jurisdiction of Korea³⁰ or when the person intends to launch outside Korea a launch vehicle owned by the Korean government or a Korean national.³¹ Since there is nothing in Article 11 indicating that its application is limited to Korean nationals³², the Article should be deemed to be applicable to a Korean national as well as a foreign national. Table B summarizes the jurisdictional scope of Articles 11 to 13 on launch license for a launch vehicle.

TABLE B

Jurisdictional scope of provisions on launch license for a launch vehicle

Person	Launching a launch vehicle in Korea	Launching a launch vehicle outside Korea
Korean or non-Korean	Yes	Yes, if the launch vehicle is owned by the Korean government or a Korean.

Third, Article 14 on liability is applicable to a person who launched a space object in accordance with Article 8 (registration) or Article 11 (launch license), and therefore has the same scope of jurisdiction as the sum of Tables A and B. Article 15 on liability insurance is applicable to a person who intends to launch a launch vehicle, and therefore has the same scope of jurisdiction as Table B. Tables C and D show the jurisdictional scope of Articles 14 and 15 respectively.

³⁰ As a matter of fact, the person in this case can be a Korean national or a foreign national, because not only a Korean national but also a foreign national can launch a launch vehicle in Korea, unless restricted otherwise.

³¹ Once again, the person in this case can be also a Korean national or a foreign national, unless restricted otherwise. In most cases the person will be a Korean national, but there can be a theoretical case in which a foreign national rents and launches outside Korea a reusable launch vehicle owned by the Korean government or a Korean national.

³² If Article 11 is to be interpreted to be applicable to Korean nationals only, it should have clearly stated its scope of application to that sense, as in the case of Article 19. Article 19 on suspension and rectification of space development makes it clear that it is applicable to space development carried out by a Korean national. Act, *supra* note 1.

TABLE C

Jurisdictional scope of provision on liability

Person	Launching a space object other than a launch vehicle in Korea	Launching a launch vehicle in Korea	Launching a space object other than a launch vehicle outside Korea	Launching a launch vehicle outside Korea
Korean	Yes	Yes	Yes	Yes, if the launch vehicle is owned by the Korean government or a Korean.
Non-Korean	Yes	Yes	Yes, if using a launch vehicle owned by the Korean government or a Korean.	Yes, if the launch vehicle is owned by the Korean government or a Korean.

TABLE D

Jurisdictional scope of provision on liability insurance

Person	Launching a launch vehicle in Korea	Launching a launch vehicle outside Korea
Korean or non-Korean	Yes	Yes, if the launch vehicle is owned by the Korean government or a Korean.

Fourth, Article 16 on Space Accident Investigation Commission and its follow-up provision of the Presidential Decree for Implementing the Space Development Promotion Act need to be examined together. Article 14 of the Presidential Decree enumerates four categories of accidents to be investigated by the Space Accident Investigation Commission: (i) an accident caused by a space object registered in accordance with Article 8 of the Act; (ii) an accident caused by a launch vehicle licensed in accordance with Article 11 of the Act; (iii) an accident caused by a foreign space object in the territory of Korea or in the area or facility under the jurisdiction of Korea; (iv) an accident caused by a foreign space object and inflicting damage to property of Korea or to life or property of a Korean national.³³ In addition, Article 16(3) of the Act provides for persons whom the Commission may investigate in performing its function. They are (i) a person who made preliminary registration or registration for a space object, (ii) a person who was granted a launch license for a launch vehicle and (iii) other persons involved in a space object such as its manufacturer or function-tester. The jurisdictional scope of provisions on space accident investigation can be outlined in the following Tables E and F.

³³ Unofficial translation by the author of Article 14 of the Presidential Decree is as follows:

Article 14 (Object of space accident investigation) Space accidents which the Space Accident Investigation Commission has to investigate in accordance with Article 16(1) of the Act are as follows:

- (1) an accident caused by a space object for which preliminary registration or registration was made in accordance with Article 8 of the Act;
- (2) an accident caused by a launch vehicle for which a launch license was given in accordance with Article 11 of the Act;
- (3) an accident caused by a foreign space object which occurred in the territory of Korea or the area or facility under the jurisdiction of Korea;
- (4) an accident caused by a foreign space object which inflicted damage to property of Korea or to life or property of a Korean national including a legal person.

Presidential Decree, *supra* note 16, at art. 14.

TABLE E

Jurisdictional scope of provisions on space accident investigation in respect of accident

Accident	Occurring in Korea	Occurring outside Korea
Caused by a space object other than a launch vehicle registered with Korea or by a launch vehicle licensed by Korea	Yes	Yes
Caused by a foreign space object	Yes	Yes, if the accident inflicted damage to property of Korea or to life or property of a Korean.

TABLE F

Jurisdictional scope of provisions on space accident investigation in respect of person

Person	Launching a space object other than a launch vehicle in Korea	Launching a launch vehicle in Korea	Launching a space object other than a launch vehicle outside Korea	Launching a launch vehicle outside Korea	Manufacturer or function-tester
Korean	Yes	Yes	Yes	Yes, if the launch vehicle is owned by the Korean government or a	Yes

				Korean.	
Non-Korean	Yes	Yes	Yes, if using a launch vehicle owned by the Korean government or a Korean.	Yes, if the Launch vehicle is owned by the Korean government or a Korean.	Yes

Fifth, Article 19 is on suspension or rectification of space development³⁴ in cases of war or similar emergencies, or for reasons of public order or national security. The Article says that it applies to a Korean national. Table G is the jurisdictional scope of Article 19.

TABLE G

Jurisdictional scope of provision on suspension or rectification of space development in emergencies or for public order or national security

Person	Conducting space development
Korean	Yes
Non-Korean	No

³⁴ “Space development” is defined in Article 2 of the Act as “one of the following: (i) research and technology development activities related to design, production, launch, operation, etc. of space objects; (ii) use and exploration of outer space and activities to facilitate them.” Act, *supra* note 1, at art. 2. Roughly said, it comprises space activities as well as space-related activities in a broad sense.

III.1.2. OBSERVATION FROM INTERNATIONAL SPACE LAW PERSPECTIVE

III.1.2.1. International Space Law on Jurisdiction

The United Nations General Assembly, in its resolution 1721A(XVI) of 20 December 1961, commends to States for their guidance two principles: (a) International law applies to outer space and celestial bodies; (b) Outer space and celestial bodies are free for exploration and use by all States and are not subject to national appropriation.³⁵ These two propositions have been followed in later resolutions and treaties and are now considered as part of customary international space law. Putting together these two principles, it follows that rules of general international law on state jurisdiction are applicable in outer space including celestial bodies and therefore states can exercise extraterrestrial jurisdiction in respect of persons, things and events in outer space including celestial bodies in accordance with international law, to the extent that no state can claim national appropriation of outer space including celestial bodies. States may not exercise jurisdiction on the basis of territoriality in outer space including celestial bodies, because no state can appropriate any part of outer space including celestial bodies and have territory in outer space including celestial bodies. Jurisdiction based on other grounds such as nationality of a person or registration of a space object can be exercised in outer space including celestial bodies to the extent permissible under general international law.

The jurisdiction based on registration of a space object is stipulated expressly in the Outer Space Treaty. Article VIII of the Treaty provides that “A State Party to the Treaty on whose

³⁵ International Cooperation in the Peaceful Uses of Outer Space, Dec. 20, 1961, G.A. Res. 1721. Operative paragraph 1 of the resolution reads as follows:

The General Assembly, (...) Commends to States for their guidance in the exploration and use of outer space in the following principles: (a) International law, including the Charter of the United Nations, applies to outer space and celestial bodies; (b) Outer space and celestial bodies are free for exploration and use by all States in conformity with international law and are not subject to national appropriation;

registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body.”³⁶ In short, the state of registry can exercise jurisdiction over its registered space object and personnel thereof, in outer space or on a celestial body. As Article VIII does not say the registration-based jurisdiction as exclusive, jurisdiction based on nationality can be also exercised to the extent applicable.

In respect of jurisdiction over persons, things or events that are or happen in the areas other than outer space and celestial bodies, there is no doubt that rules of general international law on jurisdiction are applicable. States can exercise jurisdiction in those areas to the extent permissible under general international law.

III.1.2.2. Review of Jurisdictional Scope of the Act from International Space Law Perspective

Tables A to G introduced at Section III.1.1. will be reviewed from the international space law perspective on jurisdiction as explained above.

Table A is about the jurisdictional scope of provisions on registration of a space object other than a launch vehicle. There is no problem with the jurisdiction of Korea over the activity of a Korean national in or outside Korea and the activity of a non-Korean national in Korea. But Table A further indicates the jurisdiction of Korea over the activity of a non-Korean outside Korea if the activity is carried out by using a launch vehicle owned by the Korean government or a Korean. An example of such kind is a case in which launch service using a launch vehicle owned by the Korean government or a Korean national is provided to a foreign customer who launches a satellite outside Korea. The reason for Korea to try to stretch its jurisdiction to such a case seems to be that Korea may be held liable for damage caused by the payload in accordance with Article VII of the Outer Space Treaty, depending on the situation. But it may amount to excessive jurisdiction lacking a sufficient ground un-

³⁶ Outer Space Treaty, *supra* note 3.

der international law. Furthermore, Korea is not likely to have means of enforcing the provision, when the foreign national does not comply with the obligation to register the space object launched by a launch vehicle owned by the Korean government or a Korean national. Requiring the Korean launch service provider to conclude a launch service contract under which the foreign customer agrees to register the space object with the Korean government can alleviate problems. It can provide a practical solution, but does not cure the jurisdictional problem of Article 8(2) of the Act.

Table B concerns the jurisdictional scope of provisions on a launch license for a launch vehicle. Under Table B, a non-Korean national launching a launch vehicle outside Korea is required to have a launch license to be issued by the Korean government if the launch vehicle is owned by the Korean government or a Korean national. It has the same problem of excessive jurisdiction as Table A has. On the other hand, a Korean national who is launching a launch vehicle outside Korea does not fall under the jurisdictional scope of the Act, if the Korean does not use a launch vehicle owned by the Korean government or a Korean national. The jurisdictional scope in this specific case does not seem to be sufficient, considering Articles VI and VII of the Outer Space Treaty on state responsibility and liability. Korea's jurisdiction of granting a launch license here does not seem to be broad enough to cover all possible cases in which Korea may be held responsible or liable in accordance with Article VI or VII of the Outer Space Treaty, depending on the situation.

Table C shows the jurisdictional scope of the provision on liability. As Table C has the same scope of application as the sum of Tables A and B, it has the same problems in its jurisdictional scope as Tables A and B have.

Table D displays the jurisdictional scope of the provision on compulsory liability insurance. As Table D has the same scope of application as Table B, it has the same problems in its jurisdictional scope as Table B has.

Table E relates to the jurisdictional scope of space accident investigation provisions in respect of an accident. A space accident can take place in or outside Korea.³⁷ There is no problem with the jurisdiction of Korea over an accident that occurs in Korea or in its air space. In respect of an accident which occurs in the territory of another country, in the area or facility under its jurisdiction or in its air space, the exercise of jurisdiction by Korea will be difficult in practice due to territorial jurisdiction of the another country, even though the space object involved in the accident is registered with Korea and the persons involved in the accident are Korean nationals. In respect of an accident that occurs in the area outside of the jurisdiction of any country, in air space thereof or in outer space, Korea can exercise registration-based jurisdiction if the space object is registered with Korea. If not, Korea will have difficulties in exercising jurisdiction, since the state of registry will have registration-based jurisdiction. In addition, Korea may have chances of exercising jurisdiction over the accident on the basis of nationality of the persons involved in the accident. From these points of view, the jurisdictional scope of Table E is too broad and will not be not always supported by solid grounds for jurisdiction. In particular, jurisdiction over an accident caused by a foreign space object and inflicting damage to property of Korea or to life or property of a Korean national³⁸ is deemed to be an excessive one. It sounds like jurisdiction on the basis of the passive personality principle which is considered to be a dubious ground under international law.³⁹

Table F relates to the jurisdictional scope of space accident investigation provisions in respective of a person. No problem arises from the jurisdiction of investigation over a person who

³⁷ "In Korea" means "in the territory of Korea or in the area or facility under the jurisdiction of Korea."

³⁸ According to Article 14 of the Presidential Decree for Implementing the Space Development Promotion Act, the Space Accident Investigation Commission *has to* investigate the four categories of accidents enumerated in the Article including the one in question now. For the full text of the Article, *see supra* note 33.

³⁹ Concerning the passive personality principle in general, *see* SHAW, INTERNATIONAL LAW, *supra* note 26, at 589-591.

registers a space object with Korea or is granted a launch license for a launch vehicle by Korea, to the extent that jurisdiction for registration or licensing is based on legitimate grounds. Thus, Table F, being dependent on Tables A and B, has the same problems in the scope of jurisdiction as Tables A and B have. With respect to a manufacturer or a function-tester, another category of person to be subject to investigation, difficulties may be found for exercising jurisdiction over a manufacturer or a function-tester who is neither a Korean national nor in Korea.

Table G is about the provision on suspension or rectification of space development in emergencies or for public order or national security. The provision is applicable only to Korean nationals who are conducting space development. It has narrow scope of jurisdiction, compared with other provisions reviewed in the above. If suspension or rectification of space activity in question is necessary for military purposes in emergencies or for purposes of national security or public order, there is no reason Korea should not exercise jurisdiction of imposing suspension or rectification of the activity on non-Korean nationals on the basis of territoriality or registration of the space object involved. Jurisdictional scope of Article 19 in this regard is not sufficient in that Article 19 is applicable to Korean nationals only.

III.1.3. Conclusion

The analyses of relevant provisions of the Act have shown that their jurisdictional scope is generally within the range permissible under international space law rules on jurisdiction. There are a few provisions, however, which can be considered to have excessive scope of jurisdiction. On the other hand, there are other provisions whose jurisdictional scope is not broad enough to ensure their purpose.

Potential problems of excessive jurisdictional scope are found in the following cases:

- Where a non-Korean national who launches a space object other than a launch vehicle outside Korea by using a launch vehicle owned by the Korean government or a Korean national shall make preliminary registration and af-

ter-launch registration of the space object with the Korean government in accordance with Articles 8(2)②⁴⁰ and 8(5);

- Where a non-Korean national who launches outside Korea a launch vehicle owned by the Korean government or a Korean national shall have a license issued by the Korean government in accordance with Article 11(1)②⁴¹;
- Where the Space Accident Investigation Commission has to investigate an accident which occurs outside Korea and is caused by a foreign space object if the accident inflicts damage to property of Korea or to life or property of a Korean national in accordance with Article 14 of the Presidential Decree for Implementing the Space Development Promotion Act.

Jurisdictional scope is considered to be not broad enough in the following cases:

- Where a Korean national who launches a launch vehicle outside Korea shall have a launch license of the Korean government if the launch vehicle is owned by the Korean government or a Korean national under Article 11;
- Where suspension or rectification of space development in emergencies or for reasons of public order or national security is to be directed only toward Korean nationals under Article 19.

These problems in jurisdictional scope can be mitigated by various means such as special arrangement on registration of a space object between a launch service provider and its customer, agreement on registration of a space object between countries concerned, self-restraint in exercising jurisdiction or ad hoc exercise of jurisdiction in special circumstances. But problems in

⁴⁰ Since provisions of the Act on liability and space accident investigation are also applicable to such a non-Korean national, those provisions have the same potential problem of excessive jurisdictional scope in respect of such a non-Korean national. *See Act, supra* note 1.

⁴¹ Since provisions of the Act on liability, liability insurance and space accident investigation are also applicable to such a non-Korean national, those provisions have the same potential problem of excessive jurisdictional scope in respect of such a non-Korean national. *See Act, supra* note 1.

the provisions of the Act continue to exist, even though they could be avoided in practice.

III.2. AUTHORIZATION AND SUPERVISION

III.2.1. Authorization and Supervision System of the Act

There are several provisions in the Act that concern authorization and supervision of space or space-related activities. They are Article 11 (launch license for a launch vehicle), Article 12 (disqualification), Article 13 (revocation of a launch license and hearing), Article 19 (suspension and rectification), Article 26 (entrusting of authority) and Article 27 (penal regulations).

A person is required to have a launch license to be issued by the Minister of Science and Technology when the person intends to launch a launch vehicle in the territory of Korea or in the area or facility under the jurisdiction of Korea or when the person intends to launch outside Korea a launch vehicle owned by the Korean government or a Korean national.⁴² An application for a license needs to be accompanied by a launch plan that contains a safety analysis report, a payload operation plan and a plan on discharging the liability for damage. The Minister shall, in granting a license, take into consideration the appropriateness of the purpose of using the launch vehicle, the appropriateness of safety management of the launch vehicle, financial ability in case of a space accident and other technical matters related to launch and launch preparations. The Minister may entrust safety judgment on the launch to certain government-funded institutes. A person who launches a launch vehicle without a license shall be subject to imprisonment for a period not exceeding 5 years or to a fine not exceeding 50 million won.⁴³

There are provisions on supervision to be done after a launch license is granted. A change in what has been licensed needs another license except a minor change. A launch license may be revoked for various reasons: delay of launch for not less

⁴² As of November 2006, there has yet to be an application for a launch license.

⁴³ It is worth around US\$ 50,000, supposing that the exchange rate of the Korean won versus the US dollar is roughly 1000:1.

than one year, acquisition of a license through deceptive means, request from other Ministry due to national security reasons, safety problems of the launch vehicle or unauthorized change of what had been licensed. More generally, space development⁴⁴ of a Korean national may be subject to suspension or rectification in emergencies such as war or disturbances or for reasons of public order or national security.

III.2.2. OBSERVATION FROM INTERNATIONAL SPACE LAW PERSPECTIVE

III.2.2.1. International Space Law on Authorization and Supervision

Article VI of the Outer Space Treaty provides that states shall bear international responsibility for national activities in outer space and for assuring that national activities are carried out in conformity with the provisions of the Treaty. Article VI further says that activities of non-governmental entities in outer space shall require authorization and continuing supervision by the appropriate state.⁴⁵ In response, states regulate national activities in order to ensure their conformity with the provisions of the Treaty and the appropriate state needs to authorize and continuously supervise national activities.

Since the Outer Space Treaty does not provide definitions for ‘national activities’ and ‘the appropriate state’, it is not automatically clear which activities constitute national activities and which state is the appropriate state to authorize and

⁴⁴ The term “space development” is very broadly defined in Article 2 of the Act, thus including space or space-related activities in a strict as well as broad sense. See Act, *supra* note 1, at art. 2.

⁴⁵ The text of Article VI of the Outer Space Treaty reads as follows:

States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.

Outer Space Treaty, *supra* note 3, at art. VI.

supervise the activity. Those questions need interpretation of relevant provisions.

There is no internationally agreed interpretation of the term 'national activities'. Von der Dunk argues: "The most effective interpretation of private 'national activities' would make states internationally responsible precisely for those activities over which they can exercise legal control."⁴⁶ Therefore he interprets 'national activities of a state' as "activities falling within the jurisdiction of that state" and states that "national space legislation should be made applicable to all activities undertaken either from the territory of, and/or by nationals of, and/or with space objects registered by the state concerned."⁴⁷ This jurisdiction-based interpretation of national activities is said to enjoy wide support in literature, although not undisputed.⁴⁸

There are diverse opinions on the term 'the appropriate state and as to whether there should be one or several appropriate states. Those questions, however, do not seem to have practical importance. Even though a state is not the appropriate state in respect of an activity, the former state is not exempt from international responsibility for the activity under the first sentence of Article VI of the Outer Space Treaty, if the activity in question is its national activity. Under the circumstances that the Outer Space Treaty does not specify the appropriate state and there is no internationally accepted view on it, each state will try to regulate national activities and is entitled to regulate activities under its jurisdiction. The question on which state's jurisdiction will prevail depends on the priority of each jurisdiction or agreement between the states involved.⁴⁹

⁴⁶ See F. VON DER DUNK, PRIVATE ENTERPRISE AND PUBLIC INTEREST IN THE EUROPEAN "SPACESCAPE": TOWARDS HARMONIZED NATIONAL SPACE LEGISLATION FOR PRIVATE SPACE ACTIVITIES IN EUROPE 19 (International Institute of Air and Space Law, Faculty of Law, Leiden University, 1998).

⁴⁷ *Id.* at 50-51.

⁴⁸ See S. Reif, B. Schmidt-Tedd and K. Wannemacher, *Report of the 'Project 2001' Working Group on Privatisation*, in 'PROJECT 2001' – LEGAL FRAMEWORK FOR THE COMMERCIAL USE OF OUTER SPACE: RECOMMENDATIONS AND CONCLUSIONS TO DEVELOP THE PRESENT STATE OF THE LAW, PROCEEDINGS OF AN INTERNATIONAL COLLOQUIUM, COLOGNE 416 (K. Böckstiegel ed., 2002).

⁴⁹ Von der Dunk observes, "(...) the 'obligation' for the appropriate state to actually exercise its jurisdiction seems to be devoid of practical importance. The function of this

Article VI of the Outer Space Treaty does not specify any particular contents, timing, form or mode of authorization, and other provisions of the Treaty and other space treaties do not either. Hence, states have a wide range of discretion in granting authorization to national activities. But as the first sentence of Article VI of the Outer Space Treaty provides that states are responsible for ensuring that national activities are carried out in conformity with the provisions of the Outer Space treaty, states are obliged to have national activities be in conformity with various provisions of the Outer Space Treaty in authorizing and supervising national activities.

Article VI of the Outer Space Treaty does not say much about supervision, except for requiring supervision to be continuing. States have also discretion in interpreting and conducting continuing supervision of national activities.

III.2.2.2. Review of Authorization and Supervision System of the Act from International Space Law Perspective

The licensing system for a launch vehicle provided for in the Article 11 of the Act is a typical way of authorizing national activities. The competent authority issuing a license, requirements for being issued a launch license, disqualified persons and punishment for violators are clearly stated in relevant provisions. Considering the discretion accorded to states due to non-existence of specific details on authorization in the Outer Space Treaty, there is no problem in the licensing system of the Act in respect of a launch vehicle.

As seen at the previous section, national activities requiring authorization are not limited to launching of a launch vehicle. National activities are considered to comprise activities falling within the jurisdiction of the state, which includes all activities undertaken either from the territory of, and/or by nationals of, and/or with space objects registered by the state concerned. The

clause should probably be read more as presenting an exhortation. Relevant states should arrange for at least one of them to exercise jurisdiction by providing for (national) regulation in order to make the private activity in question subject to legal restraints." See VON DER DUNK, *supra* note 46, at 21.

licensing system of the Act does not cover the whole range of national activities of this interpretation, but deals with launch vehicles only. The Act leaves the launch and operation of a space object other than a launch vehicle outside of the licensing system. A space object other than a launch vehicle does not need a license, but needs preliminary registration and after-launch registration with the Ministry of Science and Technology. Registration may amount to a kind of control, but falls short of authorization. A person who makes preliminary registration and after-launch registration is required to report a launch plan and relevant information to the Minister of Science and Technology in accordance with Article 8 of the Act, but the Minister has no power to approve, change or prohibit the activities related to the launch or operation of the space object concerned.⁵⁰ Furthermore, items that need to be reported for registration of a space object do not include safety aspect of its launch and operation that is one of the key elements of the authorization system.

Regarding the continuing supervision of national activities, the Act introduces various systems such as requiring a new license for a change of licensed items, revocation of a license and suspension and rectification of activities. However, the problem is again that the supervision system does not cover the entire scope of national activities.

III.2.3. CONCLUSION

The Act has a system of authorization and supervision for a launch vehicle, but lacks it in respect of a space object other than a launch vehicle. In other words, the launch and operation of a satellite that are considered as Korean national activities in the meaning of Article VI of the Outer Space Treaty can go ahead without authorization and supervision of the Korean government. This situation does not match the provisions of Article VI of the Outer Space Treaty. Nor is it in the interests of the

⁵⁰ Under Article 8(4) of the Act, the Minister of Science and Technology may demand rectification or supplementation of the launch plan of the space object, but only in limited cases where the ability to discharge the liability for damage is considered not sufficient. *See Act, supra* note 1, at art. 8(4).

Korean government, because the Korean government shall be responsible for national activities over which it has no legal means of control under the Act. The authorization and supervision system needs to be expanded to cover activities related to a space object other than a launch vehicle.

III.3. REGISTRATION

III.3.1. Registration System of the Act

Provisions of the Act related to registration of space objects are Article 8 (domestic registration of a space object), Article 9 (international registration of a space object), Article 10 (administration of registry) and Article 29 (negligence fine).

The registration system of the Act is unique in that Article 8 adopts a two-step approach, which consists of preliminary registration and after-launch registration. Preliminary registration shall be filed with the Minister of Science and Technology by a person who intends to launch a space object other than a launch vehicle, not later than 180 days before the anticipated date of launch. The person who has filed preliminary registration shall register the space object with the Minister of Science and Technology within 90 days after its entry into satellite orbit.⁵¹

Space objects that need to be registered under the Act are limited to objects other than launch vehicles.⁵² Article 8(1) of the Act excludes launch vehicles from space objects to be registered.⁵³ As a result, satellites do not need to be licensed but reg-

⁵¹ Since the entry into force of the Act, there have been three cases of preliminary registration and two cases of after-launch registration as of November 2006. All of them are for satellites. Three cases of preliminary registration are for KOMPSAT-2, KOREASAT-5 and Hannuri-1. KOMPSAT-2 is a multi-purpose remote-sensing satellite launched on July 28, 2006. KOREASAT-5 is a communications and broadcasting satellite launched on August 22, 2006. Hannuri-1 was a small scientific experimental satellite made by a university team, but its launch failed, making its after-launch registration unnecessary. KOMPSAT-2 and KOREASAT-5 were registered with the Ministry of Science and Technology after their successful launch.

⁵² In fact, space objects other than launch vehicles will be satellites for the time being, considering the present level of Korea's space activities and technology.

⁵³ As explained in Section II.3., the first draft text of July 2004 by the Ministry of Science and Technology did not exclude launch vehicles from space objects to be registered, but the government bill submitted to the National Assembly in December 2004 did exclude. Many parts of the first draft had been changed during the process of consul-

istered, while launch vehicles need to be licensed but are not to be registered.

Cases requiring preliminary registration and after-launch registration are when a Korean national intends to launch a space object in or outside Korea, when a non-Korean national does in Korea or in the area or facility under Korea's jurisdiction and when a non-Korean national does outside Korea by using a launch vehicle owned by the Korean government or a Korean national.

Article 8(3) enumerates items to be included in a launch plan to be submitted when filing preliminary registration: the purpose of the space object to be registered, its owner, life expectancy, place and anticipated date of launch, basic trajectory, provider and specifications of the launch vehicle to be used, matters related to the discharge of liability in case of a space accident, manufacturer and manufacturing date and number of the space object, etc. If the Minister of Science and Technology, after reviewing the launch plan, finds the ability to discharge the liability for damage in case of a space accident to be insufficient, the Minister may demand rectification or supplementation under Article 8(4). Article 8(5) provides that a change happening after preliminary registration and after-launch registration shall be reported to the Minister of Science and Technology within 15 days after the knowledge of the change.

An exception in registration is provided in the proviso of Article 8(5), which says that the registration obligation does not apply to a space object registered with a foreign state upon agreement with the government of the launching state in accordance with the Registration Convention.

tations inside the government, and the exclusion of launch vehicles was one of the changes that happened. Contents of intra-governmental consultations and discussions were not made public and the reason for the exclusion of launch vehicles is unknown.

This author suspects that registration requirement for a launch vehicle was stricken out due to the consideration of reducing government control and regulation on the private sector. Registration would have been perceived as a kind of control, though less strong than license. Thus, requirements of both registration and license for a launch vehicle would have been viewed as unnecessary double burden for the private sector. So the Act ultimately came to adopt a system in which launch vehicles are subjected to stronger control of license and satellites are subjected to less strong control of registration, neither being subjected to double burden of both kinds of control.

Violation of the obligations of preliminary registration, after-launch registration or report of changes will result in a negligence fine⁵⁴ in accordance with Article 29(1) and (2).

Article 10 requires the Minister of Science and Technology to maintain registries for preliminary registration and after-launch registration. Article 9 is about international registration of a space object that has been registered domestically. Paragraph 1 of Article 9 requires the Minister of Science and Technology to register space objects with the United Nations via the Minister of Foreign Affairs and Trade, except satellites to be registered with the United Nations by the Minister of Information and Communication in accordance with Article 44(1) of the Radio Wave Act.⁵⁵

III.3.2. OBSERVATION FROM INTERNATIONAL SPACE LAW PERSPECTIVE

III.3.2.1. International Space Law on Registration

The registration of space objects is important for the orderly administration of space activities. The Outer Space Treaty mentions the registration of space objects indirectly in Article VIII, by providing that the state of registry shall retain jurisdiction and control over the object and any personnel thereof while in

⁵⁴ The maximum amount of the fine is 10 million won (approximately US\$ 10,000) in case of non-registration and 5 million won (approximately US\$ 5,000) in case of non-report of changes.

⁵⁵ As a result of the provisions of Article 9(1) of the Act and Article 44(1) of the Radio Wave Act, two types of space objects are left for the Minister of Science and Technology to register with UN. First, space objects which are neither launch vehicles nor satellites are those. However, considering the present level of Korea's space capabilities, there will be very few space objects of such kind at least in the near future. See Act, *supra* note 1, at art. 9(1); and Radio Wave Act, *supra* note 23.

Second, satellites which are launched by non-Korean nationals and domestically registered with the Minister of Science and Technology in accordance with Article 8(2) of the Act are also left for the Minister to register with UN. This is because Article 44(1) of the Radio Wave Act says that the Minister of Information and Communication shall register a satellite launched by a Korean national with the United Nations in accordance with the Registration Convention. Radio Wave Act, *supra* note 23. Thus, Article 44(1) of the Radio Wave Act covers satellites launched by Koreans only, excluding satellites launched by non-Koreans in Korea. For the text of Article 44 of the Radio Wave Act, see *supra* note 23.

outer space. A separate document, the Registration Convention was produced for providing details on registration.

Article II of the Registration Convention requires a launching state to register a space object launched into earth orbit or beyond by entering the object in its registry. The term 'space object' is meant to include "component parts of a space object as well as its launch vehicle and parts thereof" under Article I(b). The launching state is required to maintain a registry and inform the United Nations of the establishment of the registry. Where there are two or more launching states, they shall jointly determine which state to register the object. The contents of the registry are to be determined by the state of registry.⁵⁶

Article IV of the Registration Convention provides that the state of registry shall furnish to the United Nations, as soon as practicable, information concerning each space object carried on its registry. It includes the name of launching state or states, designator or registration number of the space object, date and location of launch, basic orbital parameters and general function of the space object. The state of registry is required to notify the United Nations of space objects which have been registered but are no longer in earth orbit, to the greatest extent feasible and as soon as possible.

III.3.2.2. Review of Registration System of the Act from International Space Law Perspective

The first question could be asked about whether the registration system of the Act has the proper scope of application in respect of what kinds of space objects to be registered. The obligation of domestic registration applies only to a space object other than a launch vehicle under Article 8(1) and (5) of the Act. A launch vehicle is not the object of registration. Therefore, the Korean government is not likely to register with the United Nations a launch vehicle which is not domestically registered with it, because according to Article 9 of the Act the Minister of Sci-

⁵⁶ Article I(c) of the Registration Convention provides that "The term 'State of registry' means a launching State on whose registry a space object is carried in accordance with article II." Registration Convention, *supra* note 3, at art. I(c).

ence and Technology is to register a space object with the United Nations when the space object is registered with the Minister in accordance with Article 8(5) of the Act.⁵⁷ As a result, a launch vehicle will neither be registered with the Korean government, nor with the United Nations, even though the launch vehicle is launched or licensed by the Korean government and Korea is its launching state. By contrast, Article II(1) of the Registration Convention requires a launching state to register a space object launched into earth orbit or beyond, which is meant to include component parts of a space object as well as its launch vehicle and parts thereof under Article I(b). In this regard, the registration system of the Act which totally excludes a launch vehicle from registration is not in agreement with the Registration Convention. Major space-faring countries are observed to register at least some of their launch vehicles, even though their respective practices of registration are not identical and consistent in all cases.⁵⁸

The second point is related to the concept of launching state. It is the launching state that shall register a space object launched into Earth orbit or beyond under Article II(1) of the Registration Convention. The term “launching state” is defined in Article I(a) of the Registration Convention as a state which launches or procures the launching of a space object or a state from whose territory or facility a space object is launched. Strictly speaking, only launching states can and shall register space objects. In comparison, Article 8 of the Act requires registration in case (i) a Korean national launches a space object in or outside Korea, (ii) a non-Korean national launches a space

⁵⁷ It may be possible for the Korean government to register launch vehicles with the United Nations regardless of the provisions of Article 9 of the Act, because it can have discretion to do so and has sufficient information on the launch vehicles licensed by it. But such a move, if it happens, would not be a matter of law, but a matter of fact.

⁵⁸ There are many entries of launch vehicles or their parts in the “United Nations Register of Space Objects Launched into Outer Space” which is the register maintained by the United Nations receiving notifications on registration of space objects from UN member countries in accordance with the Registration Convention. See United Nations Office for Outer Space Affairs, *U.N. Register of Space Objects Launched into Outer Space*, www.unoosa.org/oosa/en/SORegister/docsstatidx.html (last visited Aug. 6, 2007). On the practice of registration of space objects by European Space Agency member states, see Yoon Lee, *Registration of space objects: ESA member states' practice*, 22(1) SPACE POL'Y 42 (2006).

object in the territory of Korea or in the area or facility under the jurisdiction of Korea, and (iii) a non-Korean national launches a space object outside Korea by using a launch vehicle owned by the Korean government or a Korean national. When comparing the definition of launching state of the Registration Convention and the cases requiring registration under the Act, it is clear that the two are not identical. This means that there can be cases in which registration is required by the Act even when Korea is not a launching state. In reverse, there can be cases in which registration is not required by the Act when Korea is a launching state. The provision on registration of the Act is not in total agreement with the Registration Convention in this regard. But the potential problem is diluted by the proviso of Article 8(5) of the Act, because the obligation of registration is not applicable to a “space object registered with a foreign state on agreement with the government of the launching state in accordance with the Registration Convention.”⁵⁹

Other features of the registration system of the Act such as the two-step approach of preliminary registration and after-launch registration, provisions on the timing of registration and documents to be submitted for registration seem to be mostly domestic aspects of registration which are under the discretion of the state concerned.

III.3.3. Conclusion

The Act has three articles fully devoted to registration and one article on negligence fine. They provide substantive and procedural details related to registration. Considerable weight is given to registration by the Act. Registration seems to be considered not just as a procedural necessity, but also as a means of control and supervision over a space object other than a launch vehicle by legislators of the Act.

As seen in the preceding sections, a space object other than a launch vehicle is not subject to authorization of the Korean

⁵⁹ It is not perfectly clear from the wording of the provision whether “a foreign state” and “the launching state” is one and the same state or not. But the two would be identical in most cases. Act, *supra* note 1, at art. 8(5).

government, while a launch vehicle stays outside of the registration system. The two-step approach of preliminary registration and after-launch registration can be viewed as a prudent system which is useful for the government to exercise a kind of control and supervision over activities during the stage between preliminary registration and launch. In fact, Article 8(4) says that the Minister of Science and Technology, after reviewing the launch plan submitted for preliminary registration, may demand rectification or supplementation if the Minister considers the financial ability for liability to be insufficient.

The exclusion of a launch vehicle from the registration system is a problem which needs to be addressed.

III.4. LIABILITY

III.4.1. LIABILITY SYSTEM OF THE ACT

Article 14 of the Act concerns liability. It provides that “A person who has launched a space object⁶⁰ in accordance with Article 8 or 11 shall bear the liability for damage from a space accident caused by the space object. Matters such as the scope and limit of liability shall be stipulated by a separate Act.” There is no definition or explanation on damage and its scope in the Act. A space accident is defined as “an occurrence of damage to life, body or property due to crash, collision or explosion of a space object or other situation” in Article 2(d). There is no further elaboration on how this liability system relates to relevant rules of space treaties which hold a launching state internationally liable for damage caused by its space object. What is clear from Article 14 of the Act is that a person launching a space object is liable for damage caused by the space object.

Article 15 which is applicable only to a launch vehicle introduces mandatory liability insurance to be secured by an applicant for a launch vehicle license against the possibility of a space accident. The minimum amount of compensation to be covered by the insurance is to be stipulated by a Regulation of

⁶⁰ A space object here includes a launch vehicle. Act, *supra* note 1, at art. 14.

the Ministry of Science and Technology, taking into account domestic and overseas insurance markets.

A financial ability to pay compensation for damage from a space accident is an item to be submitted to the government by a person who files preliminary registration for a space object other than a launch vehicle under article 8(3). The Minister of Science and Technology can demand rectification or supplementation by the person if the Minister considers his or her financial ability insufficient.

III.4.2. OBSERVATION FROM INTERNATIONAL SPACE LAW PERSPECTIVE

III.4.2.1. International Space Law on Liability

Article VII of the Outer Space Treaty and provisions of the Liability Convention are main sources of rules of international space law on liability for damage caused by a space object. Under Article VII of the Outer Space Treaty, a launching state of a space object is internationally liable for damage to another state or to its natural or juridical persons by the space object. A launching state is defined as a state that launches or procures the launching of a space object or a state from whose territory or facility a space object is launched.⁶¹ If a state comes under one of the four categories of the definition of a launching state, it becomes a launching state and is held liable for damage caused by the space object in question. Since there is no universally accepted interpretation on the four categories, however, it is not always clear which state is liable as a launching state.

Article I of the Liability Convention defines damage as “loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations.” Mental and psychological injuries are considered to be included in “other impairment of health”, but it is generally

⁶¹ See Outer Space Treaty, *supra* note 3, at art. VII, and Liability Convention, *supra* note 3, at art. I(c).

doubtful whether indirect damage such as loss of income could be claimed under the Liability Convention.⁶²

Article VII of the Liability Convention makes clear that the provisions of the Convention are not applicable between a launching state and its nationals or foreign nationals participating in the operation of the space object.

Under the Liability Convention, only states⁶³ can present a claim for compensation for damage to a launching state. Individuals are not allowed to pursue a claim directly, but through states. A claim for compensation for damage shall be directed through diplomatic channels.

Article XI of the Liability Convention is about its relationship with the local remedy rule. It does not require the prior exhaustion of any local remedies for the presentation of a claim for compensation for damage to a launching state. It also says that nothing in the Convention shall prevent a state, or natural or juridical person from pursuing a claim in the courts or administrative tribunals or agencies of a launching state. Thus, there are two ways a claim can be pursued. One is a claim presented internationally by a state to a launching state in accordance with the Liability Convention, and the other is a claim pursued locally in the courts or other media of a launching state. But a state is not entitled to present a claim under the Liability Convention in respect of the same damage for which a claim is being pursued locally in a launching state.

III.4.2.2. Review of Liability System of the Act from International Space Law Perspective

Whereas Article VII of the Outer Space Treaty and provisions of the Liability Convention provide that a launching state

⁶² See F. von der Dunk, *Public Space Law and Private Enterprise: The Fitness of International Space Law Instruments for Private Space Activities*, in PROCEEDINGS OF THE PROJECT 2001 – WORKSHOP ON LEGAL ISSUES OF PRIVATIZING SPACE ACTIVITIES 27-28 (1999).

⁶³ They are: (i) a state which suffers damage, or whose natural or juridical persons suffer damage; (ii) a state in whose territory a natural or juridical person sustained damage, if the state of nationality has not presented a claim; and (iii) a state whose permanent residents sustained damage, if neither of the first two states has presented a claim. See Liability Convention, *supra* note 3, at art. VIII.

is internationally liable for damage caused by its space object to another state or to its natural or juridical persons, Article 14 of the Act says that a person having launched a space object shall bear the liability for damage from a space accident caused by the space object. The liability system of the Act seems to deviate from that of international space law in this regard. The question here is whether and how Article 14 of the Act can be interpreted as being compatible with the liability rules of international space law. Even though the Act does not provide any clue to this question, a basic guideline would be that the Act should be interpreted, to the extent possible, as not being in violation of liability rules of international space law under which a state, not an individual, is internationally liable for damage caused by its space object.⁶⁴ From this point of view, the following observations can be made on the liability system of the Act:

First, whatever Article 14 of the Act says, there is no change at all with the principle that Korea is internationally liable for damage to another state or to its natural or juridical persons caused by a space object for which Korea is a launching state in the sense of Article VII of the Outer Space Treaty and Article I(c) of the Liability Convention. As a state party to the Outer Space Treaty and the Liability Convention, Korea is internationally bound to their provisions regardless of its domestic law.

Second, accordingly, Article 14 of the Act which says a clearly different language from liability provisions of the Outer Space Treaty and the Liability Convention should be considered to have nothing to do with the liability internationally held for damage caused by a space object. International liability is one to be pressed on and borne by a state, not by an individual.

Third, if the above is correct, Article 14 of the Act is deemed to be a provision on the liability held domestically or locally for damage caused by a space object.

⁶⁴ Article 6(1) of the Constitution of Korea, unofficially translated by the author, provides that "Treaties concluded and promulgated in accordance with the Constitution and generally accepted rules of international law shall have the same effect as domestic laws of the Republic of Korea." KOREA CONST. art 6(1). As a matter of principle under general international law, Korea cannot evade its international obligation for reasons of its domestic law in case of a conflict between domestic law and international law.

Fourth, there are two cases in which Article 14 of the Act is of use. One is when a local remedy is pursued in the courts or other forum of Korea by a foreign government or individual. The other is when a Korean national brings a lawsuit against the Korean government or another Korean national. Article VII of the Outer Space Treaty and provisions of the Liability Convention do not apply to these two cases for which Article 14 of the Act is applicable.

Fifth, if the intention of drafters and legislators of Article 14 of the Act was to indemnify the Korean government against the liability caused by private space activities, the Article does not serve the purpose at all. There is no provision on indemnification for the government in the Act.

III.4.3. CONCLUSION

It has been shown that the liability provision of the Act is not an appropriate one in implementing the liability regime of international space law. It is also a problem that the Act does not have indemnification or reimbursement provision for the government against possible loss caused by private activities.

It is not likely that such inappropriateness and deficiency is the intention of the Korean government and legislators. Article 14 of the Act needs to be revised or supplemented in such a way as to reflect relevant provisions of the Outer Space Treaty and the Liability Convention and be equipped with a provision to protect the government against financial burden that might be caused by private activities.

III.5. OTHER PROVISIONS

III.5.1. Rescue and Return

There are two provisions on rescue and return in the Act. Article 22 of the Act is about the rescue and return of an astronaut aboard a foreign space object who is in the territory of Korea or on the adjacent seas due to emergency landing, distress or accident. The Korean government shall provide possible assistance and return the astronaut to the launching state, the state of registry or the international organization that is re-

sponsible for launching. Article 23 of the Act is about the return of a space object that crashes or makes an emergency landing in the territory of Korea. The Korean government shall return the space object to the launching state, the state of registry or the international organization that is responsible for launching.

These provisions are just incomplete repetition of relevant provisions of the Outer Space Treaty⁶⁵ and the Rescue Agreement. They are basically obligations of a state having a bearing on the government and produce no added value as provisions of national space law. In this sense they do not seem to be an indispensable part of national space law. As a state party to the Outer Space Treaty and the Rescue Agreement, Korea is bound to their provisions on rescue and return, regardless of corresponding provisions in the Act.

What is notable is that Articles 22 and 23 of the Act provide that (...) the government shall return astronauts or a foreign space object to the launching state, the state of registry or the international organization which is responsible for the launching of the space object. As to the question on which state astronauts and space objects should be returned to, provisions of the Outer Space Treaty and the Rescue Agreement are not identical. While Articles V and VIII of the Outer Space Treaty provide that astronauts and space objects shall be returned to the state of registry, Articles 4 and 5(3) of the Rescue Agreement require them to be returned to representatives of the launching authority which is defined in Article 6 as the state or international intergovernmental organization responsible for launching.⁶⁶ Articles 22 and 23 of the Act seem to be phrased as including both options of the two treaties: the state of registry and the state or international intergovernmental organization responsible for launching.

⁶⁵ See Outer Space Treaty, *supra* note 3, at arts. V & VIII.

⁶⁶ Bin Cheng says on the return of astronauts that "a State Party to both treaties can be faced with conflicting treaty obligations. The possibility of returning the astronauts to representatives of the launching authority instead of the launching authority itself, on the other hand, greatly facilitates the task of the territorial State." See BIN CHENG, *STUDIES IN INTERNATIONAL SPACE LAW* 278-9 (1997).

III.5.2. Accident Investigation

The Act and its follow-up regulation, Presidential Decree to Implement the Space Development Promotion Act have detailed provisions on space accident investigation. Article 16 of the Act provides for the establishment and composition of the Space Accident Investigation Commission under the authority of the Minister of Science and Technology. The Article also enumerates persons whom the Commission may investigate in performing its function.⁶⁷

The Presidential Decree has six articles on space accident investigation. Article 14 of the Decree specifies four categories of accidents to be investigated by the Commission.⁶⁸ Article 17 refers to missions of the Commission: finding out the cause of a space accident, collecting and analyzing data relating to a space accident, producing an investigation report on a space accident and other missions necessary for the investigation and analysis of a space accident. Articles 15, 16, 18 and 19 are respectively about the qualification of members of the Commission, its operation, its procedures and a separate Space Accident Investigation Commission to be established for a case related to national security.

There is no particular provision or rule on space accident investigation in space treaties. Thus, a state has discretion to regulate matters on space accident investigation in its national law to the extent that those regulations do not conflict with general rules of international space law and international law in general. Rules on state jurisdiction seem to be relevant, in particular. Article 26⁶⁹ of the Convention on International Civil

⁶⁷ They are: (i) a person who made preliminary registration or registration of a space object; (ii) a person who was granted a launch license for a launch vehicle; and (iii) other persons involved in a space object such as its manufacturer or function-tester. Act, *supra* note 1, at art. 16.

⁶⁸ See *supra* note 33.

⁶⁹ Convention on International Civil Aviation, art. 26, Dec. 7, 1944, 15 U.N.T.S. 295, T.I.A.S. 1591 [hereinafter Chicago Convention]. Article 26 (Investigation of accidents) of the Chicago Convention reads as follows:

In the event of an accident to an aircraft of a contracting State occurring in the territory of another contracting State, and involving death or serious injury, or indicating serious technical defect in the aircraft or air navigation facilities,

Aviation may be a good example for reference. Under the Article the state of the place of accident is to institute an inquiry in the event of an accident and the state of registry is to be given the opportunity to be present at the inquiry as observers.

As shown at Section III.1.2.2. on the jurisdictional scope of the Act, the scope of accidents subject to investigation envisaged by Article 14 of the Presidential Decree is so broad as to possibly include accidents which occur at places outside the jurisdiction of Korea. It makes problem if a space accident falling under the category of Article 14 occurs in the territory of another state, in particular. Article 16(3) of the Act enumerating persons to be subject to investigation may also give rise to difficulties in relation to the exercise of jurisdiction, as already studied in Section III.1.2.2.

In these regards, the provisions on space accident investigation of the Act and the Presidential Decree have gone far in its scope of investigation.

IV. CONCLUSION

IV.1. GENERAL VIEW OF THE ACT

The Act is a typical national space law and covers various aspects of space or space-related activities. Its provisions can be classified into several categories. One of them is the provisions related to domestic policy and organizational aspects of space development promotion. Another part is the provisions to establish a framework for regulating national space or space-related activities.

As shown by the number and volume of relevant provisions, domestic policy and organizational aspects of space development

the State in which the accident occurs will institute an inquiry into the circumstances of the accident, in accordance, so far as its law permit, with the procedure which may be recommended by the International Civil Aviation Organization. The State in which the aircraft is registered shall be given the opportunity to appoint observers to be present at the inquiry and the State holding the inquiry shall communicate the report and findings in the matter to that State.

Id.

promotion are given considerable weight in the Act. Such a stance of the Act seems to be reflecting the policy line of the Korean government to promote and develop its national space capacity.

Provisions on a regulatory framework are key elements for national space legislation. They comprise articles on license, registration, liability, insurance, accident investigation, punishment of violators and etc. They are based on international space law, especially space treaties to which Korea is a party.⁷⁰ Those provisions establish an overall framework for regulating activities, rather than provide detailed substantive rules in each area.

The following table categorizes provisions of the Act according to their contents:

Category	Contents	Articles
General	Purpose of the Act, Definitions, Relation with other laws, Tasks of the government, Confidentiality	Arts 1, 2, 3, 4, 25
Policy and organization for space development Promotion	National space program, National space organization, Utilization of satellite information, Support for private projects, Inter-agency cooperation, Data collection	Arts 5, 6, 7, 17, 18, 20, 21, 24, 26
Regulatory framework	Registration, Launch license, Liability, Insurance, Space accident investigation, Suspension and rectification, Punishment	Arts 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, 27, 28, 29
Others	Rescue and return	Arts 22, 23

⁷⁰ See *supra* note 3.

IV.2. ASSESSMENT FROM INTERNATIONAL SPACE LAW PERSPECTIVE

Provisions related to domestic space policy and organizational aspects were not subjects of analysis in this paper. Chapter III has analyzed provisions on a regulatory framework from the international space law perspective, because they are key provisions with international space law implications. Analysis of those provisions has shown that they have the following characteristics and problems, while following and reflecting rules of international space law.

First, the jurisdictional scope of provisions of the Act is in most cases within the limits generally accepted by rules on state jurisdiction of international space law and general international law. However, there are provisions which might lead to excessive jurisdiction if applied strictly. Articles 8(2)② and 11(1)② of the Act and Article 14 of the Presidential Decree for Implementing the Space Development Promotion Act are provisions having potential jurisdictional problems.

Second, the authorization system of the Act is focused on the launch activity of a launch vehicle. A launch license is required only for launching a launch vehicle. There is no authorization requirement for activities involving a space object other than a launch vehicle. Lack of authorization requirement for a space object other than a launch vehicle is not in step with Article VI of the Outer Space Treaty which requires authorization and continuing supervision of the activities of non-governmental entities in outer space by the appropriate State Party.

Third, the provisions of the Act on registration establish a distinctive system of registration of a space object. The two-step system of preliminary registration and after-launch registration is likely to be effective in checking activities involved. A problem is that registration is required only for a space object other than a launch vehicle under the Act. Total exclusion of launch vehicles from the registry is not in conformity with rules of space treaties and state practices on registration.

Fourth, the language of the liability provision, Article 14 of the Act is different from that of relevant provisions of the Outer Space Treaty and the Liability Convention. It has been argued

at Section III.4. that Article 14 of the Act should be viewed as a provision on the liability held domestically or locally for damage caused by a space object. In the same context, there is no indemnification provision for the government in the Act.

IV.3. PROPOSAL FOR IMPROVEMENT

Issues and questions raised in the above need to be addressed for the Act to better serve the purpose of the legislation.⁷¹ There may be various solutions to them. Here is suggested a proposal for dealing with them without making major changes to the current provisions of the Act. Technical changes that should follow as a result of the suggested proposal will not be discussed in this paper.

It would be too difficult to find out an optimal wording for each provision which could satisfy both international law rules on state jurisdiction and the need to secure Korea's jurisdiction to the maximum extent permissible. Furthermore, there is no perfectly agreed rule on state jurisdiction over space or space-related activities under international law. Therefore, it is recommendable to introduce a general provision to disown potential jurisdictional problems while keeping provisions in question of the Act as they are now. A provision that the jurisdiction of Korea under the Act is to be exercised in conformity with relevant provisions of space treaties to which Korea is a party and relevant rules of general international law will be an example of such a kind.

Regarding the authorization and supervision of space activities, it is understandable that the Act is concentrating on licensing of activities involving a launch vehicle, for such activities could entail the liability of Korea as a launching state if an accident occurs. Thus, leaving Article 11 on launch license for a launch vehicle as it is, an addition of a general provision purporting to place in principle all kinds of activities under the authorization and supervision of the Korean government would meet the requirement of Article VI of the Outer Space Treaty. A

⁷¹ About the purpose of the legislation, *see supra* Chapter I.

provision saying that space development⁷² is subject to the authorization and continuing supervision of the government to the extent necessary under domestic law and international law will be an example in this regard. Under this suggested provision, the Korean government can have discretion in the extent and mode of its authorization and supervision and prescribe details in its follow-up legislation such as the Presidential Decree or the Regulation of the Ministry of Science and Technology.

There is no reason or justification for the Act to totally and fundamentally exempt a launch vehicle from registration. Simply deleting the phrase “(a launch vehicle to be excluded in respect of this Article and Articles 9 and 10)” can solve the problem in Article 8(1) of the Act. By doing so, provisions on registration will be applicable to a launch vehicle.

In respect of liability and indemnification, a new provision needs to be installed separately from Article 14 of the Act. A provision that Korea is internationally liable for damage caused by its space object in accordance with relevant provisions of the Outer Space Treaty and the Liability Convention and in such a case a person who has launched the space object shall indemnify the Korean government against the claim will be an example. It can complement the current provision on liability of the Act in such a way as to make it compatible with relevant provisions of the Outer Space Treaty and the Liability Convention.

⁷² Article 2(a) of the Act defines space development as one of the following: (i) research and technology development activities related to design, production, launch, operation, etc. of space objects; or (ii) use and exploration of outer space and activities to facilitate them. *See Act, supra* note 1, at art. 2(a).

SPACE DEVELOPMENT PROMOTION ACT OF
THE REPUBLIC OF KOREA*

(Promulgated on 31 May 2005 and entered into force on 1 December 2005)

Article 1 (Purpose)

This Act is aimed at facilitating the peaceful use and scientific exploration of outer space and contributing to national security, the sound development of national economy and the improvement of people's living, by promoting space development in a systematic way and ensuring the efficient use and administration of space objects.

Article 2 (Definitions)

Definitions of terms used in this Act are as follows:

- (a) The term "space development" means one of the following:
 - (i) Research and technology development activities related to design, production, launch, operation, etc. of space objects;
 - (ii) Use and exploration of outer space and activities to facilitate them;
- (b) The term "space development project" means a project to promote space development or a project to pursue the development of education, technology, information, industry, etc. related to space development;
- (c) The term "space object" means an object designed and manufactured for use in outer space, including a launch vehicle, a satellite, a space ship and their components;
- (d) The term "space accident" means an occurrence of damage to life, body or property due to crash, collision or explosion of a space object or other situation;
- (e) The term "satellite information" means image, voice, sound or data acquired by using a satellite, or in-

* This English version is an unofficial translation by Yoon Lee.

formation made of their combination, including processed or applied information.

Article 3 (Tasks of the Government)

1. The Government shall observe treaties related to outer space which the Republic of Korea has concluded with other countries or international organizations and seek the peaceful use of outer space.

2. The Government shall formulate and carry out comprehensive policies for space development.

Article 4 (Relationship with Other Laws)

This Act applies to matters relating to the promotion of space development and the use and administration of space objects unless there are special provisions in other laws.

Article 5 (Establishment of Basic Program on Space Development Promotion)

1. The Government shall formulate a basic program on space development promotion (hereafter referred to as the “Basic Program”) containing the following items for the promotion of space development and the use and administration of space objects:

- (a) Matters relating to the goal and direction of space development policy;
- (b) Matters relating to the system and strategy for pursuing space development;
- (c) Matters relating to the plan for pursuing space development;
- (d) Matters relating to the expansion of the basis necessary for space development;
- (e) Matters relating to the funding and investment plan for space development;
- (f) Matters relating to the training of expert manpower for space development;
- (g) Matters relating to international cooperation to vitalize space development;
- (h) Matters relating to the promotion of space development projects;

- (i) Matters relating to the use and administration of space objects;
- (j) Matters relating to the utilization of outcomes of space development such as satellite information;
- (k) Other matters to be specified by a Presidential Decree relating to the promotion of space development and the use and administration of space objects.

2. The Government shall formulate the Basic Program every five years and establish it through deliberations by the National Space Committee as provided for in Article 6, paragraph 1. The same applies to a change of the Basic Program. However, it does not apply to a change of minor things to be specified by a Presidential Decree.

3. The Minister of Science and Technology shall make public the Basic Program established in accordance with paragraph 2, and formulate and carry out its implementing plan every year in consultation with heads of central administrative authorities concerned including the Director General of the National Intelligence Service (hereafter the Director General of the National Intelligence Service to be included in heads of central administrative authorities concerned). However, matters related to national security need not to be made public.

Article 6 (National Space Committee)

1. The National Space Committee (hereafter referred to as the "Committee") shall be established under the authority of the President in order to deliberate matters relating to space development such as the establishment of the Basic Program.

2. The Committee shall deliberate the following matters. However, deliberations of the Committee may be omitted in respect of (f), if the omission is necessary for reasons such as national security.

- (a) Matters relating to the Basic Program;
- (b) Matters relating to important policies of the Government related to the Basic Program and matters relating to the coordination of major tasks among central administrative authorities concerned including the National Intelligence Service (hereaf-

ter the National Intelligence Service to be included in central administrative authorities concerned);

- (c) Important matters relating to the designation and operation of the Special Agency for Space Development as provided for in Article 7;
- (d) Matters relating to the evaluation on the use and administration of a space development project;
- (e) Matters relating to a funding and investment plan for a space development project;
- (f) Matters relating to a launch license of a space object;
- (g) Matters relating to the rectification of space development as provided for in Article 19, paragraph 2;
- (h) Other matters referred to the Committee by its chairperson.

3. The Committee shall be composed of 15 or less members including the chairperson.

4. The Minister of Science and Technology shall be the chairperson of the Committee and the following persons shall be members of the Committee:

- (a) Heads of central administrative authorities concerned and officials of administrative authorities concerned to be specified by a Presidential Decree
- (b) Individuals with expertise and experiences in the field of space to be appointed by the President

5. The Working-level Committee on Space Development Promotion headed by the Vice-Minister of Science and Technology shall be established under the Committee in order to help the Committee carry out its tasks efficiently.

6. Matters necessary for the composition and operation of the Committee and the Working-level Committee on Space Development Promotion shall be stipulated by a Presidential Decree.

Article 7 (Designation of Special Agency for Space Development)

1. The Minister of Science and Technology may designate and support a special agency to pursue space development pro-

jects in a systematic and efficient way (hereafter referred to as the “Special Agency for Space Development”).

2. The Special Agency for Space Development shall carry out the following tasks:

- (a) Carrying out of space development projects in accordance with the Basic Program;
- (b) Carrying out of comprehensive tasks such as the development, launch and operation of space objects;
- (c) Other tasks related to space development project to be specified by a Presidential Decree.

3. Necessary matters relating to the criteria for designating the Special Agency for Space Development and relating to support for it shall be stipulated by a Presidential Decree.

Article 8 (Domestic Registration of a Space Object)

1. A national of the Republic of Korea including a legal person (hereafter a legal person to be included) shall file preliminary registration with the Minister of Science and Technology not later than 180 days before the anticipated date of launch, as shall be stipulated by a Presidential Decree, if the national intends to launch a space object other than a launch vehicle (a launch vehicle to be excluded in respect of this Article and Articles 9 and 10) in or outside the Republic of Korea.

2. Cases where a person who is not a Korean national shall file preliminary registration with the Minister of Science and Technology in accordance with paragraph 1 are as follows:

- (a) When the person intends to launch a space object in the territory of the Republic of Korea or in the area or facility under the jurisdiction of the Republic of Korea;
- (b) When the person intends to launch a space object outside the Republic of Korea by using a launch vehicle owned by the Government or a national of the Republic of Korea.

3. A person who wants to file preliminary registration in accordance with paragraphs 1 and 2 shall enclose a launch plan containing all of the following items:

- (a) Matters relating to the purpose of using the space object;
- (b) Matters relating to the owner of the space object or the holder of the right to use the space object;
- (c) Matters relating to the life expectancy and the duration of use of the space object;
- (d) Matters relating to the place and the anticipated date of launch;
- (e) Matters relating to the basic trajectory of the space object;
- (f) Matters relating to the provider of a launch vehicle to be used for launching the space object and its specifications and functions;
- (g) Matters relating to the discharge of liability for damage in case of a space accident;
- (h) Matters relating to the manufacturer, manufacturing number and date of the space object;
- (i) Other matters relating to the launch, use and administration of the space object, to be specified by a Presidential Decree.

4. If the Minister of Science and Technology, after having reviewed the launch plan provided for in paragraph 3, considers the ability to discharge the liability for damage provided for in Article 14 to be insufficient, the Minister may demand its rectification and supplementation.

5. A person who has filed preliminary registration of a space object in accordance with paragraphs 1 and 2 shall register it with the Minister of Science and Technology within 90 days after its entry into a satellite orbit, as shall be stipulated by a Presidential Decree. However, it does not apply to a space object which has been registered with a foreign country upon agreement with the foreign country to that effect in accordance with the 'Convention on Registration of Objects Launched into Outer Space.'

6. A person who has filed preliminary registration in accordance with paragraphs 1 and 2 or who has registered a space object in accordance with paragraph 5 shall notify the Minister of Science and Technology of a change, if any, in the contents of

items of paragraph 3 within 15 days after his knowledge of the change.

Article 9 (International Registration of a Space Object)

1. When a space object is registered in accordance with Article 8, paragraph 5, the Minister of Science and Technology shall register the space object with the United Nations via the Minister of Foreign Affairs and Trade in accordance with the 'Convention on Registration of Objects Launched into Outer Space.' However, it does not apply to a satellite which is to be registered with the United Nations in accordance with Article 44, paragraph 1 of the Radio Wave Act.

2. If there arises a change in the contents which have been registered with the United Nations in accordance with paragraph 1 due to reasons such as the completion of life span of a space object, the Minister of Science and Technology shall notify the United Nations of the change via the Minister of Foreign Affairs and Trade.

Article 10 (Administration of Registry)

The Minister of Science and Technology shall maintain and administer the preliminary registry and the registry for space objects, as shall be stipulated by a Regulation of the Ministry of Science and Technology.

Article 11 (Launch License for a Launch Vehicle)

1. A person who intends to launch a launch vehicle shall have a license of the Minister of Science and Technology in one of the following cases. The same applies when a person wants to change what has been licensed. However, in case of a change of minor nature to be specified by a Presidential Decree a person shall report it within 30 days after the date of the change.

- (a) When the person intends to launch a launch vehicle in the territory of the Republic of Korea or in the area or facility under the jurisdiction of the Republic of Korea;
- (b) When the person intends to launch outside the Republic of Korea a launch vehicle owned by the

Government or a national of the Republic of Korea.

2. A person who wants to be granted a license in accordance with paragraph 1 shall apply to the Minister of Science and Technology with a launch plan to be specified by a Presidential Decree including a safety analysis report, a payload operation plan and a plan on discharging the liability for damage.

3. The Minister of Science and Technology shall take into consideration the following in granting a license:

- (a) Appropriateness of the purpose of using a launch vehicle;
- (b) Appropriateness of safety management of a launch vehicle and etc to be used for the launch;
- (c) Financial ability such as liability insurance against a space accident;
- (d) Other matters necessary for the launch and launch preparations such as moving a launch vehicle, to be specified by a Regulation of the Ministry of Science and Technology.

4. The Minister of Science and Technology may attach necessary conditions in granting a license in accordance with paragraph 1.

Article 12 (Disqualification)

A person who falls under one of the following categories may not be granted a launch license provided for in Article 11:

- (a) An incompetent or a quasi-incompetent;
- (b) An insolvent whose rights have not been restored;
- (c) Where a person was in violation of this Act and sentenced to imprisonment, and less than two years have passed since the date of completed execution of the sentence (cases being regarded as completed execution of the sentence to be included) or the date of exemption from its execution;
- (d) A person who was in violation of this Act, sentenced to imprisonment with suspension of its

execution and is now during the suspension period;

- (e) A legal person whose representative is one of the above-mentioned four categories.

Article 13 (Revocation of a Launch License and Hearing)

1. The Minister of Science and Technology may revoke a launch license for a launch vehicle in one of the following cases:

- (a) Where the launch is delayed without justifiable reasons for not less than one year since the licensed anticipated date;
- (b) Where the license is obtained in a deceptive or other wrongful way;
- (c) Where a head of central administrative authorities concerned requests for the revocation of a license due to an anticipated serious threat to national security;
- (d) Where there is a problem in the safety of a launch vehicle such as leakage of fuel or a defect in the communication system before its launch;
- (e) Where a license for a change is not obtained in violation of the latter part of the provisions of Article 11, paragraph 1;
- (f) Where a licensee becomes to fall into one of the categories of Article 12; however, in respect of (e) of Article 12, this provision does not apply when the representative of a legal person in question is replaced within 3 months from the date of having been disqualified.

2. The Minister of Science and Technology shall hold a hearing when the Minister intends to revoke a launch license for a launch vehicle in accordance with paragraph 1. However, a hearing is not necessary in respect of (c) and (d) of paragraph 1.

Article 14 (Liability for Damage from Space Accident)

A person who has launched a space object in accordance with Article 8 or 11 shall bear the liability for damage from a space accident by the space object. Matters such as the scope and limit of liability shall be stipulated by a separate Act.

Article 15 (Liability Insurance)

1. A person who wants to be granted a launch license for a launch vehicle in accordance with Article 11 shall be insured against liability, considering the possibility of a space accident, etc.

2. The minimum amount of compensation covered by the insurance to be secured in accordance with paragraph 1 shall be stipulated by a Regulation of the Ministry of Science and Technology taking into consideration domestic and overseas insurance markets.

Article 16 (Composition of Space Accident Investigation Commission, etc.)

1. The Minister of Science and Technology may establish a Space Accident Investigation Commission under the authority of the Minister in order to investigate a space accident to be specified by a Presidential Decree.

2. The Space Accident Investigation Commission shall be composed of 5 to 11 members including its chairperson. Members of the Commission shall be appointed by the Minister of Science and Technology from relevant experts and the chairperson shall be chosen by the Minister from the members of the Commission. In respect of matters related to national security to be specified by a Presidential Decree, a separate Space Accident Investigation Commission may be established as shall be stipulated by a Presidential Decree.

3. The Space Accident Investigation Commission may investigate any of the following persons in order to perform its duties. A person who is the object of the investigation shall comply with it unless he has legitimate reasons not to do.

- (a) A person who filed preliminary registration or registered a space object in accordance with Article 8;
- (b) A person who was granted a license for a launch vehicle in accordance with Article 11;
- (c) Other persons involved in a space object such as its manufacturer or a person who tested its function.

4. The Space Accident Investigation Commission may request heads of central administrative authorities concerned to provide cooperation such as entry control of an accident area or other matters necessary for the investigation. When requested, heads of central administrative authorities concerned shall comply with such request, unless they have legitimate reasons not to do.

5. Necessary matters relating to the timing of the composition of the Space Accident Investigation Commission, qualifications of its members and its operation shall be stipulated by a Presidential Decree.

Article 17 (Utilization of Satellite Information)

1. The Minister of Science and Technology may contrive necessary measures such as the designation or establishment of an organization in charge in order to promote the spread and utilization of satellite information acquired by satellites developed under the Basic Program. In respect of geographic information acquired in accordance with the Act on the Establishment and Utilization of National Geographic Information System, the Minister of Science and Technology shall consult the Minister of Construction and Transportation.

2. The Minister of Science and Technology may provide financial support necessary to promote the spread and utilization of satellite information within the budgetary limit.

3. The Government shall make efforts for the privacy of an individual not to be infringed on in the utilization of satellite information.

Article 18 (Support for Private Space Development Projects)

1. The Minister of Science and Technology shall contrive supportive measures such as the supply of advanced space development manpower, tax incentive, financial support and priority procurement in order to vitalize space development projects of the private sector and induce the expansion of research and development investment of the private sector.

2. The Minister of Science and Technology may request heads of central administrative authorities concerned to cooperate for supportive measures provided for in paragraph 1.

Article 19 (Suspension and Rectification of Space Development)

1. If the Minister of National Defense requests the suspension of space development being carried out by a national of the Republic of Korea on account of a military operation in case of war, disturbances or similar kinds of emergencies, the Minister of Science and Technology shall order the national to suspend space development.

2. If a head of central administrative authorities concerned requests the rectification of space development being carried out by a national of the Republic of Korea on account of the maintenance of public order or national security, the Minister of Science and Technology may, after deliberations by the Committee, order the national to rectify space development.

Article 20 (Request for Assistance and Cooperation for Space Development)

1. The Minister of Science and Technology may request heads of central administrative authorities concerned or heads of local governments to provide assistance and cooperation in respect of the following matters, if the Minister considers it necessary for pursuing space development. When requested, heads of central administrative authorities concerned or heads of local governments shall comply with such request, unless they have legitimate reasons not to do.

- (a) Matters relating to the entry control of surrounding areas including territorial sea and air space in relation to domestic launch of a space object;
- (b) Matters relating to communication, firefighting, emergency rescue, safety management, etc.

2. When the Minister of Science and Technology makes a request for assistance and cooperation in accordance with paragraph 1, the Minister shall limit it to the minimum necessary for space development.

Article 21 (Pursuit of Space Development Project related to National Security)

1. When the Minister of Science and Technology pushes forward a space development project related to national security, the Minister shall consult heads of central administrative authorities concerned in advance.

2. Necessary matters relating to the establishment and implementation of security measures in relation to the space development project of paragraph 1 shall be stipulated by a Presidential Decree.

Article 22 (Rescue of Astronauts)

If astronauts aboard a foreign space object are in the territory of the Republic of Korea or on adjacent high seas due to emergency landing, distress or accident, the Government shall provide possible assistance and return astronauts to the state of launch, the state of registry or the international organization which is responsible for the launch of the space object concerned.

Article 23 (Return of a Space Object)

If a foreign space object crashes or makes an emergency landing in the territory of the Republic of Korea, the Government shall return it safely to the state of launch, the state of registry or the international organization which is responsible for the launch of the space object concerned.

Article 24 (Data Collection and Survey on Space Development, etc.)

1. The Minister of Science and Technology may collect data or conduct survey on space development and space industry in order to promote space development in a systematic way and carry out space development in an efficient way.

2. The Minister of Science and Technology may request administrative authorities concerned, research institutes, educational institutes and companies to provide data or opinions, if the Minister considers it necessary for domestic survey provided for in paragraph 1.

3. Necessary matters relating to contents, timing and procedure of data collection and survey provided for in paragraph 1 shall be stipulated by a Presidential Decree.

Article 25 (Obligation of Confidentiality)

A person who is or was engaged in work in accordance with this Act shall not leak a secret obtained during his work or use it for purposes other than for this Act.

Article 26 (Entrusting of Authority)

The Minister of Science and Technology may, in accordance with the provisions of a Presidential Decree, entrust the following tasks among the Minister's authorities provided for in this Act to a Government-funded research institute or a relevant special institute in the field of science and technology which has been established in accordance with the Act on the Establishment, Management and Promotion of Government-funded Research Institutes in the Field of Science and Technology:

- (a) Safety judgment in relation to granting a license or a license for a change in accordance with Article 11, paragraph 1;
- (b) Matters relating to data collection or survey on space development and space industry in accordance with Article 24.

Article 27 (Penal Regulations)

1. A person who launched a launch vehicle without a license (including a license for a change, if any) provided for in Article 11, paragraph 1 shall be subject to imprisonment for a period not exceeding 5 years or to a fine not exceeding won 50,000,000.

2. A person who falls under one of the following categories shall be subject to imprisonment for a period not exceeding 3 years or to a fine not exceeding won 30,000,000:

- (a) A person not observing a suspension or rectification order provided for in Article 19;
- (b) A person violating Article 25.

Article 28 (Dual Punishment)

Where a representative, an agent or an employee of a legal person, or an agent or an employee of an individual committed a violation provided for in Article 27 in relation to the work of the legal person or the individual, the legal person or the individual shall be also subject to a fine of the same Article, in addition to the punishment of the actor having committed the violation.

Article 29 (Negligence Fine)

1. A person who falls under one of the following categories shall be subject to a negligence fine not exceeding won 10,000,000;

- (a) A person who did not file preliminary registration of a space object in violation of Article 8, paragraph 1 or 2;
- (b) A person who did not register a space object in violation of Article 8, paragraph 5;
- (c) A person who did not report a change in violation of the proviso of Article 11, paragraph 1.

2. A person who falls under one of the following categories shall be subject to a negligence fine not exceeding won 5,000,000;

- (a) A person who did not notify a change within 15 days or did notify it falsely in violation of Article 8, paragraph 6;
- (b) A person who refused, obstructed or evaded an accident investigation provided for in Article 16, paragraph 3.

3. Negligence fines provided for in paragraphs 1 and 2 shall be levied and collected by the Minister of Science and Technology, as shall be stipulated by a Presidential Decree.

4. A person who objects to a negligence fine having been imposed in accordance with paragraph 3 may file an objection with the Minister of Science and Technology within 30 days from the date of having been informed of the imposition of the negligence fine.

5. When a person on whom a negligence fine had been imposed in accordance with paragraph 3 filed an objection in ac-

cordance with paragraph 4, the Minister of Science and Technology shall notify the court of jurisdiction of it without delay. The court of jurisdiction which is informed shall judge the case in accordance with the Act on Litigation Procedure for Non-contentious Cases.

6. When neither an objection is filed nor a negligence fine is paid within the period provided for in paragraph 4, the negligence fine will be collected, following the example of a disposition for the recovery of taxes in arrears.

Addenda

1. (Date of Entry into Force) This Act shall enter into force 6 months after of its promulgation.

2. (Interim Measures for Basic Program on Space Development Promotion) Until the basic program on space development promotion is established in accordance with Article 5, the mid-to long-term basic program on space development established through the deliberations of the National Committee on Science and Technology in accordance with the Framework Act on Science and Technology shall be regarded as the basic program on space development promotion.

3. (Interim Measures for Registration of Space Objects) Space objects which the Republic of Korea has registered with the United Nations at the time of the entry into force of this Act shall be regarded as having been registered in accordance with Article 8.