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Harmonization of international space law and national space law Case study of Japanese space law

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1. Introduction

As Japanese Basic Space Law was enacted in 2008, article 35 of the law, and the decisions of the Diet in order to carry out all the duties and responsibilities in the international space laws, such as Space Treaty, Rescue Agreement, Liability Convention and Registration Convention, it is required to elaborate the new rules and regulations as Space Activities Law. Japanese government organized the Space Development Strategy Research Committee in the Prime Minister's Office and also established the Working Group to study legal matters for space activities. During the elaborating new rule and regulations it should make it sure not only to observe international treaties and also insure public safety but also expand the roles of industry, academia and government sectors and promote private sectors activities in space development and

utilization.

Accordingly, following issues shall be considered for the purpose of elaborating space activities law.

- 1) In Japan, space activities have been carried out directly or under supervised by the government, so there would be no necessity to elaborate national regulations and laws in order to follow the Article 6 of the Space Treaty. As the private sectors involvement in the space activities have been expanding and growing, it should be necessary to establish the rules and regulations for private sectors space activities.
- 2) The main purpose of the government role of assuring authorization and continuing supervision for non-government entities is to prevent any damage for life and the third parties' property and if happened, to make it sure to relieve victims. By elaborating space

activities law and under the government authorization and continuing supervision, it could be possible to relieve the victims suffered by the space activities through the third party liability system.

- 3) Through establishing rules for condition of government authorization of private sectors participating in space activities and the third party liability system and government compensation in the case of space damage, it would be possible for the private space entities predict and secure the future management of their activities. It would help space industries developments in Japan.
- 4) In order to harmonizing our interest with international interest through Establishing national space activities law, we could play more positive role in the world. For example space debris reduction policy and technology and also registration of upper part of rocket could be good coordination and harmonization with international trend in space activities.

2. Government authorization and supervision over space activities

1) Purpose of authorization and supervision

- (1) To make the government sure to follow international responsibility and duties of international space laws through authorize and supervise such activities done by private entities.
- (2) To prevent damage of live and third party property
- (3) To promote space development and utilization by private sectors based on rules and regulations adopted
- (4) To contribute national and international peace and security through space activities

2) Definition of space object

- (1) Artificial satellite (launched into outer space and beyond the earth orbit, including artificial object located on the celestial bodies) and launching locket
- (2) Rocket not intended to launch satellite (not missile, etc.) over 100km above land or water level; it is not defined as outer space above 100km altitude

3) Those to be authorized

- (1) In Japan (including all aircraft and ship with Japanese registration)
All natural and juridical person and other organizations

(2) In foreign countries, all natural person with Japanese nationality,

And juridical person and other organizations established by Japanese law

4) Activities to be authorized and supervised

(1) Launching space object

(2) Launching space object by foreign launcher by consignment

(3) Return of space object

(4) Management of satellite, including station keeping, house keeping, deorbit and reorbit)

(5) Management of launching/returning facilities

In relation with manned space activities, they should have government authorization before they launch the manned space object or by foreign launching services, and also related return and launching facilities, according to Article 6 of the Space Treaty. However, when the government authorizes these activities, it should have more consideration over the way to authorize and supervise for security of manned space object crew and passenger, structure, function and operator's technical capability and standard. It also requires having more examination of relation with air

regulation and law. Accordingly we should have elaborate new authorization standard for manned space activities.

3. Liability for damage caused by space activities

1) Purpose of liability system to pay compensation for damage to the third party by the space activities

(1) Prompt compensation for the victim by space damage

(2) Promote private sector's space activities

Liability to pay compensation should be concentrated on the launching service provider. This could protect the rocket parts makers and satellite operator who asked to launch from risk of lawsuit. It would be good for rocket part maker to supply and satellite operator to ask launching. It would be also good for launching service provider to have customer for launching in better competitive market.

Furthermore, in this liability system launching service provider must have third party legal liability insurance policy. If they could not cover compensation with this policy, the government shall compensate as far

as they could not cover. This system could provide more stable and safe management of the launching service business.

2) Definition of space damage

There are two kinds of space damage caused by space object defined before

- (1) Damage caused by its space object launching, return or any other fall on the surface of the earth or to the aircraft flight.
- (2) Damage caused by space object in orbit to other space object(person in the space object)

3) The third party legal liability in relation with space activities in Japan should protect victim who is usually no relation to space development and utilization. It is necessary for secure the victim's status to prompt compensation to introduce absolute liability in stead of fault.

As said before, for promoting development of space industries, liability at the stage of launching and return shall be concentrated to the launching service provider. In this case it is important to make it sure to pay compensation to the victim by obligatory contract of third party legal insurance policy for launching service provider. If this insurance policy could not cover compensation, the

government would cover the compensation to secure the victim. This government compensation could help stable management of the launching service provider.

In the case of satellite operator, it is quite small chance to compare with launching, to have serious damages caused by space object in outer space for third party liability. In Japan there are many small scale satellite operators in Japan and they could have rather big burden for their management, if they have obligation to have third party legal liability insurance policy. At the moment we will not introduce compulsory system in second type of space damage.

4. Registration, rescue and return and preservation

1) Registration of space object

- (1) To implement government duty under Registration Convention, government shall ask authorized natural, judicial person or any other organization to provide necessary information for smooth registration.
- (2) Japan has registered only artificial satellites. However considering improving safety in outer space and also international customs of space

object registration, we will register the upper part of launching rocket as well as satellite. We will have a measure to ask authorized launching service provider to provide information on the upper part of launching rocket.

(3) Satellite launched by joint countries

In the case of joint launching by several countries, the government shall coordinate to ask proper registration country. If authorized launching service provider will launch foreign satellite, and coordination is difficult, the government will ask authorized launching service provider to provide concerned satellite information for international registration based on Registration Convention.

2) Rescue and return

As far as to implement Agreement on the rescue and return, the government could manage according to internal arrangement among government offices and negotiation with concerned country if necessary.

3) Preservation of space environment

UN GA took decision in 2007 on Guide Line of Mitigation of Space Debris.

Also ISO has been discussing the

standard of space system for reduction of space debris. In ITU they recommend to remove the dead satellite in the GEO. In Europe and US, they provide authorize and supervise mitigation of space debris and avoid collision in their national regulations. In international society, organized efforts for preservation of space environment have been developed, and this could be strengthening to more responsibility for space active countries.

4) Measure to be taken in Space activity law

In Japanese space activities law (drafted), standards for authorization of launching and foreign entrusted launching provide control breaking out of space debris and ask satellite operator to reorbit the satellite when its function stopped in GEO. In the process of these standard for preservation of space environment we should take consideration of international standard. It is important for us to harmonize national law with international rule and regulations. On the other hand it would be necessary for us to develop more advanced technology and system for space development and utilization from the perspective of preservation

of space environment. The government role for strength international competition of space industries should support R/D of government research institutes for help universities and small space industries which are very difficult to adapt to strict control for preservation of space environment.

5. Conclusion

National space activities law could be more important than basic space law. It is necessary for government to regulate and control space activities in order to promote its space industries and expand player with more international competitive power in the market. But on the other hand it is also very important role for the government to play in harmonization of international interest and order to implement.

In the process of elaborating national law it is more and more important for us to strengthen harmonization of international and national interest through elaborating rules, regulations and standards.

Notes

1. Japanese Basic Space Law, enacted in 2008. Article 35 endorses to elaborate space activities law.
2. US the Commercial Space Launch Amendments Act of 2004
3. US Licensing of Private Land Remote-Sensing Space Systems; FinalRule
15 CTR. Part 960
4. Outer Space Act 1986 UK
5. Remote Sensing Act 2005 UK
6. Canada Radio Communication Act ,
Canada Radio Communication
Regulations
7. Australia Space Activities Amendment
Regulations(2004)