

THE JAPANESE LEGAL FRAMEWORK: THIRD PARTY LIABILITY RESULTING FROM NASDA LAUNCH ACTIVITIES

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1. Abstract

On the eve of a new millennium, the National Space Development Agency of Japan ("NASDA") is on the verge of activating a new H-IIA launch vehicle. This Japan-developed H-IIA launch vehicle will reach international levels both technically and economically. As a result, NASDA plans to launch various satellites, including not only its own but also other satellites upon request from either the public or private sectors, taking into account both the effective use of its R&D results and the importance of contributing to the international community.

Considering this development, it seemed essential to take legislative action to implement a system as comprehensive as the relevant legal framework already established in the U.S. and Europe concerning third party liability in cases of accidents arising from launching activities. It appeared necessary to ensure the protection of potential victims so that NASDA could carry out its launch activities without any apprehension.

In this light, the Government of Japan submitted a bill to the preceding Diet during the 142nd session which obligates NASDA to enter into third party liability insurance contracts and entitles NASDA to enter into special arrangements by which NASDA shall assume all liability for damages owed by anyone related to the launch in certain cases. This bill was passed unanimously both in the House of Councilors on April 24 and in the House of Representatives on May 28, 1998. The bill was then promulgated as "the Law Partially Amending the NASDA Law" (*Law No.87*) on June 3, 1998 and entered into force on the same day.

In this paper, I will provide both background information with respect to this amended NASDA law as well as an outline of its implications.

2. The making of this new bill

(1) The motivation behind this legislation

As a core organization implementing the Japanese space development program since its establishment in 1969, NASDA has been playing an essential role in terms of contributing to the promotion of space development and utilization in Japan by conducting in an integrated, systematic and effective manner the development, launching and tracking of artificial satellites and rockets for the launching of artificial satellites, exclusively for peaceful purposes¹.

Considering the demand on launch services provided by NASDA is foreseen to increase in the near future with the rapid growth of satellite demands in several areas such as telecommunication satellites, remote sensing satellites and various pay-roads pertaining to the International Space Station, NASDA is now proceeding with the development of the H-IIA launch vehicle² with the aim of reaching international levels both technically and economically.

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¹ Article 1, NASDA Law, enacted on June 23, 1969 (*Law No. 50*).

² The H-IIA rocket is designed to meet the various mission demands of the 21st century with lower costs (targeting 8.5 billion yen) and a high degree of reliability, using the technology of the H-II launch vehicle. The H-IIA in its standard configuration is capable of launching a two-ton class payload into geosynchronous orbit (GEO), in the same manner as the H-II rocket. It can launch a three-ton class payload into GEO with the configuration augmented by a large liquid rocket booster. Growth potential to up to a four-ton class payload launching into GEO is also considered in the design. The vehicle for the two-ton class will be launched from Tanegashima space center in

Since NASDA is responsible for increasing launch capability for all the nation, it is very meaningful, from the viewpoint of promoting space development and utilization, that it can carry out launching activity in an efficient manner, not only for its own purposes but also for others using H-IIA.

In looking at the U.S. and Europe, who committed to space development earlier and have been in the commercial phase of launching satellites since the 1980s, there is already an established corresponding legal framework consisting of obligating commercial launch service providers to obtain mandatory liability insurance and allowing for indemnification by public organizations for damage exceeding the insurance coverage so that they can prepare for third party liability arising from a launching accident³.

In view of the above, the Government of Japan decided to take necessary legislative action equivalent to that already taken in the U.S. and Europe in order to promote the steady implementation of NASDA launch activities and to provide reliable protection for potential victims. As a result of this legislative action, it is compulsory for NASDA to obtain third party liability insurance when performing launches, and NASDA is also bound to undertake responsibility for all third party liability claims which arise from NASDA launches which are performed upon the request of others.

On the grounds that N-I, N-II and H-I launch vehicles⁴, which are predecessors of H-II, were

2000.

³ - Sec. 70112, 70113, U.S. Commercial Space Launch Act (49 USCS@70101).

- Sec. 308, which was added in 1979 to the National Aeronautics and Space Act of 1958 (93 Stat. 348).

- Articles 3.8, 4.1, of a declaration by Certain European Governments relating to the Ariane Launcher Production Phase, enacted on 1980 and reportedly updated in 1990.

⁴ The development of an N-I rocket capable of launching 130kg payload into GEO, based on the U.S. Delta rocket, which was used in launching the first Japanese geostationary satellite, "Kiku-2". N-II and H-I, capable of launching 350kg and 550kg payloads to GEO respectively and developed after N-I, were used to successfully launch a great number of satellites. In 1994, Japan launched H-II, a large, high-performance launch vehicle

developed by NASDA under the *U.S.-Japan Space Agreement* concluded on July 31, 1969 and its amendments followed, which permitted the U.S. industry to provide the Japanese Government or Japanese industry unclassified technology and equipment up to the level of the Thor-Delta vehicle systems, exclusive of reentry and related technology, for the development of these Japanese launch vehicles and communications and other satellites for peaceful applications, NASDA was prohibited from launching foreign satellites using any launch vehicles and satellites manufactured by use of such technology or equipment unless otherwise mutually agreed upon between the U.S. and Japanese governments⁵.

On the contrary, since H-II was developed using only Japanese technology, without any technology transfer from the U.S., any restrictions under the agreement mentioned above were not applicable to this launch vehicle. H-II, capable of four-ton payloads to the GTO, quickly reached international levels with respect to launch capability and reliability, but was not accepted in the international launch services market because of its extremely expensive cost, which was almost double comparable foreign launch vehicles such as Ariane, Delta and Atlas.

However, H-IIA, a successor of H-II, will attain a cost acceptable in the international launch services market while maintaining the launch capability and reliability of H-II. In addition, although NASDA was restricted in the past to, practically speaking, only two launches annually under an agreement with a fishermen's cooperative association which limited the launch period at the Tanegashima Space Center to a total of only 90 days, 45 days respectively in summer and winter, this restriction was mitigated when the Government of Japan and the fishermen's cooperative association reached an agreement in June 1997 and, thus, NASDA can now

capable of launching two-ton payloads to GEO, measuring up to international standards.

⁵ - Prof. Masafumi Miyazawa, Shizuoka Univ. and Masahiko Sato, NASDA; "Historical Review of Space Technology Transfer from the United States to Japan in the Space Applications Area" (IAA-96-IAA.3.2.07).

- Prof. John M. Logsdon; "U.S.-Japanese Space Relations - The Early Years"; March 1996 prepared for NASDA (through CSP Japan).

perform launches during 190 days annually. This means NASDA can at maximum launch eight H-IIA launch vehicles annually with cutting down preparation period at the launch pad from 90 days to 20 days.

As a result of the above, with respect to H-IIA, NASDA will finally be able to perform launches not only for NASDA itself, but also for others including domestic and foreign commercial customers. According to the National Space Development Plan of 1997, it was decided that NASDA will launch satellites upon request of private sectors using H-IIA. In fact, NASDA is now planning to launch more than 20 commercial satellites from the year 2000 upon consignment from the Rocket System Corporation, based on orders to provide launch services to Hughes Space and Communications International, Inc. and Space Systems/Loral, Inc.⁶. In reality, it was this kind of order that was the most important factor in motivating the Government of Japan to take legislative action and attain the passage of the new bill.

Taking into account the objectives of efficiently utilizing R&D results generated by NASDA and positively contributing to the global community, in order to proceed with launches of H-IIA in a progressive manner, it is important to have H-IIA used as much as possible by a wide variety of customers, including domestic and foreign entities. In the international launch services market, the essential factors by which customers select a launch services provider are not only price and technical reliability, but also the availability of indemnity by the public sector with regard to third party liability. For Japan, therefore, it was not enough to simply reduce the cost and maintain the reliability of H-IIA; Japan was urged to take the necessary steps to achieve a public

indemnity system equivalent to such systems currently existing at the international level, and to take such steps in a relatively transparent manner; that is, by means of legislation.

This legislative action does not directly relate to the *Convention on International Liability for Damage Caused by Space Objects* ("the Liability Convention"), which entered into force on September 1, 1972, and to which Japan acceded on June 20, 1983, and therefore this is not a domestic measure by the Japanese Government to implement the Liability Convention, as mentioned in detail later.

(2) Legislation process

Considering the circumstances above, the Science and Technology Agency ("STA") and NASDA together began an internal study by consulting with legal authorities in Japan on several fields of relevant law such as civil, commercial, administrative, international and civil procedure law. In September 1997, STA organized a special task force (which I joined as part of its crew) to start drafting the bill. At this stage, STA determined that, considering the provisions to be stipulated in the bill directly related to NASDA activities described in the existing NASDA Law, the form of the new law should be as an amendment to the NASDA Law, which was originally enacted in 1969 and was never amended in substance. After the draft bill was reviewed and passed by the Cabinet Legislation Bureau, which reviews all bills proposed by the Government, STA began an official inter-Ministries/Agencies consultation from February 24, 1998. Upon obtaining consensus among all the Ministries and Agencies of the Japanese government and receiving approval at the Vice-Ministers conference on March 16, the bill was finalized at a Cabinet meeting the next day.

Around the same time, the Space Activities Committee (hereinafter called "SAC") also decided to support and authorize the bill on March 11, 1998. The bill was subsequently submitted to the House of Councilors on March 24, where it was discussed by the Education and Science Committee and passed unanimously by that Committee both on April 23 and at its plenary session next day. On May 12, the bill was submitted to the House of Representatives, where it was discussed by the Science and Technology Committee on May 20 and 22 and passed

⁶ Rocket System Corporation (RSC) was established as a stock company, which provides launch services using H-II and TR-1A, by 73 companies, including space-related companies, insurance companies and banks, etc. in 1990. RSC is now preparing for providing launch services to HSCI and SS/L using H-IIA, based on launch service agreements entered into with HSCI and SS/L respectively on November 1996. RSC is currently under procurement for more than 20 H-IIA for these U.S. companies upon a technology transfer agreement with NASDA which permits RSC to use intellectual rights contained in H-IIA owned by NASDA.

unanimously by that Committee on May 22, as well as at the plenary session of the House on May 28. On May 22, the Committee adopted unanimously a supplementary resolution which requested the Government to proceed positively with launching activities, as requested by others, in view of promoting active use of R&D results and encouraging positive contribution to the international community. Finally, the bill was promulgated as the "Law Partially Amending the NASDA Law" (*Law No. 87*) and became effective as of June 3, 1998.

3. Outline of the Law

(1) Mandatory insurance coverage

(a) Main provision and its background

Article 24-2, Paragraph 1, of the amended NASDA Law sets forth that "NASDA shall not launch any artificial satellites and launch vehicles for launching satellites (hereinafter referred to as "Artificial Satellites, Etc.") until and unless it has entered into an insurance contract by which it can secure such amount as is necessary to compensate for damages incurred by others as a result of the launch of the Artificial Satellites, Etc." The purpose of this mandatory insurance is to protect potential victims and to smoothly carry out NASDA launching activities.

Japan has two types of laws providing mandatory insurance:

- (1) laws under which indigenous insurance originates and obligates implementing entities to obtain insurance, such as laws providing mandatory third party liability insurance concerning automobile, nuclear and oil pollution; and,
- (2) laws through which the competent Ministers shall be entitled to oblige implementing entities to obtain third party liability insurance available in the existing commercial insurance market, such as the law concerning public transportation undertakings.

The amended NASDA Law does not create any new insurance that adds to the various indigenous insurance of (1) above, but obliges entities to purchase liability insurance available in the existing commercial insurance market, typical of the type of law in (2) above.

Since Japan's accession to the Liability Convention in 1983, NASDA has been purchasing third party liability insurance in the amount of 20 billion yen (approx. 150 million dollars) when launching the N-II, H-I and H-II, etc. At that time, STA, as a competent Ministry, instructed NASDA to obtain third party liability insurance in the amount of 20 billion yen in order for NASDA to indemnify the Japanese Government in case the Government was held absolutely liable to a non-launching state to pay compensation for third party damages caused by NASDA launching activities pursuant to Article 4 of the Liability Convention. Although this instruction was merely an administrative guide and did not have any legal force, it did have actual effect.

(b) Point 1: Parties to the insurance contracts

Article 24-2, Paragraph 1 shall apply to any launch performed by NASDA, whether upon consignment by others or not. In the case of a consigned launch, the insurance contract may be entered into by a person or entity which has consigned the launch of the Artificial Satellites, Etc. for and on behalf of NASDA as set forth in Article 24-2, Paragraph 3. When NASDA enters into special arrangements as set forth in Article 24-3, Paragraph 1, however, the insurance contract shall be entered into by the consignor for and on behalf of NASDA in accordance with Article 24-3, Paragraph 3. This provision intends to maintain a fair balance of responsibility between NASDA and the consignor, because NASDA shall assume all liability beyond insurance coverage, even when a consignor or its related entities shall be liable for the same damages. In either case, because a consignor enters into the insurance contract for and on behalf of NASDA and can thereby secure the amount that is necessary for NASDA to compensate for damages sustained by others, such insurance contract is regarded as an insurance contract which is entered into for and on behalf of others and is thus legally allowed pursuant

to Article 647 of the Commercial Law Act in Japan⁷. Although only NASDA is legally required to be insured, in practice, any persons and entities related to the consigned launch will be added as insured parties in terms of insurance costs because they could also be liable under tort law for third party damages due to a launch accident in accordance with provisions such as Article 709 of the Civil Code⁸ and Article 3 of the Product Liability Law⁹ in Japan, among others.

(c) Point 2: Amounts insured

Article 24-2, Paragraph 2 sets forth that "the amount secured under the insurance contract shall be determined by the competent Ministers, in order for such amount to be appropriate from the viewpoint of the protection of victims and the maintenance of the sound financial condition of NASDA, taking into account the amount that insurers can underwrite and other factors." The "other factors" stated here refer to examples or precedents of amounts actually insured for third party liability caused by launching activities in foreign nations and actual damage caused by launch accidents which have occurred around the world. For reference purposes, in Japan, the amount secured under mandatory insurance based on the Nuclear Liability Law is currently 30 billion yen, and such amount is determined by measures similar to those used under the NASDA law. In addition, the maximum amount which will be underwritten in the world insurance market is now reportedly beyond the 500 million dollar third party liability insurance underwritten for the U.S. Space Shuttle. Further, foreign examples or precedents on similar insurance include 164 millions dollar for Delta and Atlas, according to the *Insurance Determination Requirement* issued by the Office of Commercial

⁷ A contract of insurance may be effected for the benefit of another person. In such case the person effecting the insurance is bound to pay the premium to the insurer. (Commercial Code; Chapter X; Article 647)

⁸ A person who violates intentionally or negligently the right of another is bound to made compensation for damage arising therefrom. (Civil Code; Chapter V; Article 709)

⁹ The manufacturer, etc. shall, when an injury to life, body, or property of another caused by defect on the delivered goods which were manufactured, processed, or imported, or which have the representation of name, etc. under item (2) or (3) of paragraph 2 of the preceding Article, be liable for damages caused thereby. Provided that, this shall not apply when the said product itself is damaged. (Product Liability Law; Article 3)

Space Transportation (OCST) of the U.S. Federal Aviation Administration (FAA), and 400 million French francs for Ariane, as provided in Article 3.8 of the *Declaration by Certain European Governments relating to the Ariane Launcher Production Phase* ("Ariane Declaration"). As for actual launch accidents causing third party damages, we can only find one, which took place in China due to the launch failure of the Long March 3B on February 15, 1996, wherein physical and property damages reportedly totaled approximately two million dollars. Taking into consideration all the factors mentioned above, although the competent Ministers have not yet determined the insurance amount for H-IIA¹⁰, in my view, it will likely be around 20 billion yen which is the same as the current amount for H-II. Similar laws providing mandatory insurance are seen in the *Commercial Space Launch Act* of the U.S. ("CSLA"), the Ariane Declaration, other domestic space laws of England and the Netherlands, and so forth. Moreover, the *National Aeronautical and Space Act* ("NAS Act") has a relevant provision which obligates STS customers to obtain third party liability insurance policies. Up until now, NASDA, as an STS customer, has purchased such insurance worth 500 million dollars in accordance with the relevant provision of the launch services agreements, based on Article 308 of the NAS Act. Since this amended NASDA Law shall not be applicable to any launch activities consigned by NASDA to foreign entities and carried out in a foreign territory, NASDA continues to abide by the legal framework of the foreign country in such cases.

(d) Point 3: Penalties

If NASDA launches Artificial Satellites, Etc. without entering into an insurance contract, in breach of Article 24-2, Paragraph 1, the NASDA executive who commits such violation shall be subject to an administrative fine not exceeding 200,000 yen in accordance with Article 43 of the amended NASDA Law. In the case of a consigned launch, if the consignor does not enter into an

¹⁰ On September 9, 1998, in accordance with Article 24-2, Paragraph 2, the Minister of Science and Technology, Transportation and Postal Telecommunication, who are the competent Ministers supervising NASDA, announced the amount secured under the liability insurance contract for launching TR-1A sounding rockets shall be 5 billion yen. (See "Kampo" issued on September 9, 1998, No. 2463).

insurance contract for and on behalf of NASDA, such NASDA executive shall also be subject to the fine above. NASDA is therefore required to ensure that the consignor has definitely entered into an insurance contract by means of an agreement concluded with the consignor regarding the consigned launch.

(2) Special Arrangements for Consigned Launches

(a) Main provision and its background

Article 24-3, Paragraph 1 sets forth the following:

In the event that NASDA enters into an agreement with a consignor with respect to a consigned launch, NASDA may, upon the approvals of the competent Ministers, enter into the following special arrangements with respect to its liability for compensation for damages caused by the consigned launch incurred by any persons or entities other than those related to the consigned launch:

- (i) If NASDA is held liable for compensation for damages caused by the consigned launch incurred by any persons or entities other than those related to the consigned launch, and any of those related to the consigned launch are also liable for compensation for such damages, NASDA shall assume all of the liabilities for compensation for damages owed by those related to the consigned launch; and
- (ii) In the preceding Item, if such damages are caused by a willful misconduct of any of those related to the consigned launch, NASDA shall have the right to have such person reimburse the damages already paid by NASDA.

Since the question of whether the amount of mandatory insurance obtained by a consignor when entering into special arrangements shall be determined by the competent Ministers to be sufficient in view of protecting potential victims and maintaining the sound financial condition of NASDA, such special arrangements are in general

scarcely exercised. However, in the worst-case scenario where an accident is caused by launch activities which are generally considered to be ultra hazardous, liability for damage compensation could possibly entail a huge amount of money beyond the insurance coverage. With this in mind, such special arrangements are very meaningful and essential for those who consign launching services or manufacture launch vehicles or satellites to be used for consigned launches.

(b) Point 1: Right of recourse

Even if NASDA pays all liability beyond insurance coverage in accordance with the special arrangements, NASDA shall have the right of recourse to any persons or entities related to a consigned launch who caused such damages by their willful misconduct. According to the commonly accepted theory pertaining to Japanese Civil Law, a waiver of liability which resulted from willful misconduct shall violate public order and standards of decency and not be allowed. Similarly, according to the CSLA, the U.S. government shall not pay for damages caused by a willful misconduct of a licensee, and under the NAS Act, NASA indemnification may be limited to claims resulting from causes other than willful misconduct of the customer.

(c) Point 2: Governmental approval

NASDA may enter into special arrangements only when the competent Ministers give approvals on a case-by-case basis from the viewpoint of maintaining the sound financial conditions of NASDA. While it is legally justified as "non-genuine joint and several liability" that NASDA assumes not only its own liability but the liability properly assumed by related entities, NASDA is not allowed to assume all liability and indemnify all related entities in view of the maintenance of its sound conditions of finance under the existing NASDA Law, notwithstanding pending amendments. Therefore, the amended NASDA Law entitles NASDA to assume all liability provided NASDA obtains approvals from the competent Ministers. These approvals are indispensable because they shall be preconditions for NASDA to secure an increased budget from the national treasury when a worst-case scenario accident occurs, its liability is not covered by insurance policy, and NASDA is unable to pay by means of the funds already appropriated to it by the government.

(d) Point 3: The legal basis for NASDA liability

Even if NASDA enters into a special arrangement by which NASDA shall assume all liabilities for compensation for third party damages, such cannot apply when NASDA is not held liable for damage compensation resulting from a consigned launch executed by any persons or entities other than those related to the consigned launch. This is one of the major points provided by the amended NASDA Law, and is also one of the points different from the CSLA, NAS Act or Ariane Declaration. On the contrary, these foreign legal frameworks do not require any tort liability on the part of the US government, NASA or the French government respectively, instead stipulating that whether indemnifying parties are held liable or not, they shall or may be responsible for the payment of any damages caused by launching activities. This means in theory that the amended NASDA Law is to be more strictly applied in cases where the Government of Japan uses funds from the national treasury upon incurring such liability.

Notwithstanding the preceding paragraph, the NASDA in effect assumes all liability in any case that actually occurs because the amended NASDA Law in fact intended that the special arrangements shall have the same legal effect in substance as the foreign legal framework above, as exemplified by the following reasons:

- (i) Even if NASDA launches a satellite and launch vehicle owned by others upon consignment, such launch shall be carried out under exclusive control of NASDA including the command of destruction by NASDA. Therefore, because NASDA shall solely have the ability of foreseeing third party damages and of avoiding such results, NASDA shall always be liable for third party damages. When NASDA and related entities are jointly or severally liable for such damages, the legal relationship among those parties is normally considered as "non-genuine joint and several liability" and NASDA becomes obligated to pay for all liability to all potential victims.

- (ii) Since NASDA is a public organization subject to the State Liability Law, victims can make claims more easily than usual against NASDA by proving either the existence of negligence of NASDA employees in accordance with Article 1 or the existence of defects in establishing or controlling public construction in accordance with Article 2 of such law¹¹. It is significant that Article 2 does not require the proof of the existence of negligence as a pre-requisite to a claim. This means that this Article is regarded as a strict liability provision. In addition, "public construction" is construed by many judicial precedents in Japan to include not only any real or movable property owned by NASDA but also that which is owned by others and has been under the control of NASDA, such as satellites or launching vehicles owned by others and provided for consigned launches by NASDA. "Defects in establishing or controlling public construction" are construed by the judicial precedents as a lack of safety normally furnished, and victims can accordingly easily make claims against NASDA based on the defects in establishing or controlling

¹¹ When a public official who is in a position to exercise the public powers of the State or of a public organization has, in the course of performing his duties, illegally inflicted losses upon another person either intentionally or negligently, the State or the public body concerned shall be liable to compensate such losses.

2. If, in the case mentioned in the preceding paragraph, the government official involved was intentional or guilty of gross negligence, the State or the public body concerned shall have the right to obtain reimbursement from such official. (Law Concerning State Liability for Compensation; Article 1)

When defects in establishing or controlling roads, rivers and other public constructions have caused losses on another person, the State or the public organization concerned shall be liable to compensate such losses.

2. If, in the case mentioned in the preceding paragraph, there is some other person who is to be responsible for the cause of such losses, the State or the public organization concerned shall have the right to obtain reimbursement from such person. (Law Concerning State Liability for Compensation; Article 2)

satellites or launch vehicles owned by others, or any property owned by NASDA.

- (iii) Since NASDA is operated according to NASDA Law under the supervision of the competent Ministries using a national budget, and because its launch activity must be implemented pursuant to a National Space Development Plan determined by the Prime Minister, it can surely obtain any necessary funds from the national treasury for compensation for third party damages beyond liability insurance coverage and the funds already appropriated to NASDA. Therefore, in practice, compensation by NASDA with regard to special arrangements may be unlimited.

4. Major points of the amended NASDA

Law

(1) Economic channeling

The amended NASDA Law does not refer to any requisite for an originating tort or any principle on legal concentration of liability. This is similar to the CSLA, NAS Act and the Ariane Declaration. On the other hand, the Japanese Nuclear Compensation Law, for example, which provides for absolute liability, adopted the notion of so-called "legal channeling", concentrating third party liability on entities who undertake nuclear business. This approach was not taken by the amended NASDA Law, which instead adopts a notion of "economic channeling". Such notion was originally adopted by the U.S. *Price-Anderson Act* with regard to nuclear compensation. Although these two notions are different from each other legally, their effects are substantially the same in the case of NASDA launching activity.

(2) Requisite for tort liability

As mentioned above, under Article 2 of the State Liability Law in Japan, the requirement for finding NASDA tort liability for third party damages is the existence of defects in establishing or controlling public construction. This means that in

such cases NASDA shall be held strictly liable without any necessity of proving negligence.

Likewise, in the U.S., the CSLA and the NAS Act themselves do not have any provisions concerning requisites for tort liability, and the liability of any entity causing damages is judged on a case-by-case basis under the valid tort laws in the competent governing U.S. state. Therefore, the US government or NASA must pay for the part of third party damages which is not covered by insurance policy only if the competent court decides that the entity which caused the damages is to be held liable under tort law. *The Restatement of the Law, Second, Torts*, issued by the American Law Institute in 1977, provides in its Article 519 that strict liability is likely to be applied to third party damages caused by launching activities in the U.S. as follows:

- (i) one who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm.
- (ii) this strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.

Therefore, it would be very difficult for any entities causing damage to be exempted from tort liability and thus the US government or NASA will almost surely pay any damage compensation beyond insurance coverage on behalf of entities causing damage.

Furthermore, in Europe, Article 4.1 of the Ariane Declaration only says that "in the event of proceedings being instituted by the victims of damages caused by Ariane launches, the French Government shall be responsible for the payment of any damages that may be awarded." It also does not refer to any requirement for the tort liability of the entity causing damages; thus, Article 1384 of the French Civil Code as well as an accumulation of judicial precedents on the same provision, which established the theory that one is liable for damages caused by property in his/her custody irrespective of negligence, will likely be applied to Ariane launches.

(3) Application of the State Liability Law to NASDA

The Constitution of Japan, enacted in 1946, stipulates in Article 17 that there shall be state liability for compensation for victims damaged by virtue of an illegal act of a public (or civil) servant. Subsequent to the enactment of the Constitution, the specific requisite of such provision was provided in the State Liability Law enacted in 1947.

Article 1 of this law renders liability for damages caused by a public official in exercising public powers and Article 2 stipulates liability for damages arising out of any defect in the establishing or controlling of public construction. As mentioned above, while Article 1 is based on the principle of fault or negligent liability, Article 2 entails a kind of strict liability which requires only the proof of defect but not of negligence.

The question here is whether this law is applicable to NASDA or not. It is well known that NASDA is one of eighty-eight Special Corporations in Japan (as of February 1997) established under the law. Specifically, NASDA was established under a particular law (the NASDA Law), operates with a national budget and implements various activities, under the supervision of the government, in accordance with a basic plan for space development which is stipulated by the Prime Minister after resolution by the Space Activities Commission (the National Space Development Plan). Although NASDA is not a government in itself, it corresponds to a "public organization" as defined within the State Liability Law. NASDA, therefore, is subject to this law and its employees are regarded as "public official" as stated in Article 1 for the purposes of the State Liability Law.

Article 1 is applied to cases where an act done by a public official was performed as an exercise of public powers of a public organization. Based on judicial precedents, the "exercise of public powers" means any action by government or public organizations other than purely commercial activities and any action establishing or controlling public construction as covered by Article 2. Any launch activity implemented by NASDA corresponds to the exercise of public powers because such activity is not

regarded as a purely commercial activity at this time due to the following:

- such activity shall be provided in the National Space Development Plan regardless of whether the NASDA launch is upon consignment by others or not;
- any launch activity is an intrinsic activity originally provided in Article 22 of the NASDA Law; and,
- launch fees charged to a consignor by NASDA shall be limited to actual expenses in the case of a consigned launch.

According to the above, NASDA shall be liable in accordance with Article 1 for damages to others arising out of illegal acts caused by negligence or willful misconduct of NASDA employees in carrying out the launch activity, unless Article 2 is not applied.

Next, the requirement for application of Article 2 is the existence of defects in establishing or controlling public constructions. "Public construction" means any physical property to be provided broadly for the public interest, including real and movable property, and which is owned, leased or temporary housed by NASDA. Therefore, both facilities and equipment used for launch activities as well as satellites and launch vehicles used for consigned launches by NASDA are regarded as "public constructions". In addition, when satellites owned by satellite manufacturers or operator and launch vehicles owned by a consignor are actually in the custody of NASDA for launching, even without any legal right of custody or lease on them, they are regarded as "public constructions" according to judicial precedents. Second, "defects in establishing or controlling public constructions" mean the lack of properly furnished safety, and thus, according to the judicial precedents, there is no need to prove negligence on the part of the State or the public organizations. Therefore, it shall surely be judged that there is a lack of properly furnished safety upon any

launch failure and NASDA shall surely be liable for third party damages caused by any NASDA launch.

(4) Relationship with the Liability Convention

The amended NASDA Law is not directly related to the Liability Convention, but is intended to deal with domestic actions in order to complement the Convention. Since the Convention only applies to state liability between launching states and states sustaining damages, the Convention has nothing to do with the amended NASDA Law which provides for civil liability between launch performers and potential victims.

5. Moving towards the next stage

The amended NASDA Law represents legislative action during an era when private companies are unable to perform launches on their own due to the lack of sufficient launch capabilities and therefore have no choice but to consign launches to NASDA. Conversely, NASDA is expected to provide both large scale launch facilities and launch technology owned by NASDA as public infrastructure.

In the future, however, once launching activities can be performed by private companies independently and become purely private activities, NASDA will no longer be requested to perform launches on behalf of others and thus NASDA indemnification based on the special arrangements provided by the amended NASDA Law will be inapplicable because the NASDA Law will be applied only to NASDA activities.

In following the lead of the CSLA, in order to give any public indemnification to purely private activities, it shall be necessary to establish systems of safety and mission review as well as licensing for launches, provided there is a general national consensus. When the US amended the CSLA in 1988 to add the provision of governmental indemnification, during a time when U.S. commercial launch service providers had just become able to take orders from domestic and foreign customers, the US government easily obtained national consensus regarding governmental indemnification, etc. mainly because the commercial launch service providers feared the dominance of Ariane, which was already

secured against third party liability risks under the Ariane Declaration (which was originally made by European countries in 1980 modeled on Article 308 of the 1979 NAS Act)¹².

I personally believe that we need to consider the following points and take necessary legislative action again when purely private launching activity is realized in Japan:

- (a) to assure authorization and continuing supervision by the Government of Japan in accordance with Article 6 of the Outer Space Treaty which entered into force on October 10, 1967;
- (b) to conform fault liability currently provided in the Civil Code applicable to private launch performers with absolute liability provided in the Liability Convention which entered into force on September 1, 1972, in order for the Government to have private launch performers reimburse damages already paid by the Government for its absolute liability in accordance with the Liability Convention from the viewpoint of national finances;
- (c) to oblige the private launch performers to enter into third party insurance contracts for reasonable amounts as required by the government, including to bring the MPL concept into Japan ;
- (d) to have the Government indemnify private launch performers and their related entities in case damages are not covered by insurance coverage to the extent that national consensus can be obtained;
- (e) to establish national systems on safety review and mission review by the Government as a requisite for Governmental indemnification; and,

¹² Statement of Edward A. Frankle, General counsel of NASA, before the Subcommittee on Space and Aeronautics Committee on Science, U.S. House of Representatives. October 30, 1997, P5-6.

- (f) to harmonize foreign, domestic and regional legal frameworks concerning performance of private space activities, etc.