

Measures for Dealing with the Effects of the Great East Japan Earthquake on International Transportation, Tourism and Logistics

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Reconstruction

The impact of the Great East Japan Earthquake on international transportation, tourism and logistics seems to persist. The travel restrictions put in place by many countries led to Japan's tourism industry facing harsher conditions than ever before. People in the industry are making strenuous efforts to publicize the safety of Japan as a travel destination through travel agencies and media in those countries and via the Internet, and by inviting overseas tourists to popular sightseeing spots in Japan. However, these event-centric activities are likely to come to an end after only a short while. Rather, we need to ensure the continuity of these activities by establishing medium- to long-term programs.

To quickly and efficiently recover the transport network that was severely affected by this massive earthquake, programs that use wide-area transport infrastructure are essential. These programs should encompass infrastructure for all means of transportation, i.e., land, sea and air routes, and should be established in association with industrial recovery programs.

Exports from Japan are still facing a very difficult situation with, for example, consignees refusing to accept goods without a certificate stating that they are free of radioactive contamination. Furthermore, several countries have begun to request the issuance of official inspection certificates stating that goods have been checked and found to be radiation free. In the short term, we will be able to meet the requests of these countries by issuing certificates. However, from the medium- to long-term perspective, we need to implement more drastic measures such as using IT (information technology) to promote the visibility of logistics and creating a system capable of automatically issuing the necessary certificates.

If top priority is to be given to the earliest possible recovery of international transportation, tourism and logistics, we should invite both domestic and overseas private-sector companies to make the best use of PPP (Public Private Partnership) schemes. Through taking bold action towards deregulation, we need to introduce a program that uses both overseas funding and private-sector funds.

I Effects of the Great East Japan Earthquake

1 Effects on international air travel and international tourism

(1) While restrictions on travel to Japan are gradually being eased, prospects for the recovery of demand by travelers to Japan still remain uncertain

Immediately after the occurrence of the Great East Japan Earthquake, the governments of many countries around the world issued travel advisories regarding visits to Japan. Taiwan and Hong Kong, for example, took a strict line in issuing travel advisories for all of Japan and advised their citizens to refrain from traveling not only to the disaster-stricken areas but also to the Kanto region and northward including Tokyo. In addition, China, South Korea and other countries took a similar line although the content of the advisories varied.

As a result of the measures adopted by many countries, it has become practically impossible for their citizens to travel to Japan. In addition, the fear felt by people who might otherwise travel to Japan as tourists has led to a significant decline in the number of inbound travelers. As of August 2011, statistics released by the Japan National Tourism Organization (JNTO) show that the number of overseas visitors to Japan in March 2011 was down 50.3 percent on a year-on-year basis, and down 62.5 percent in April. In real terms, the number of overseas visitors to Japan fell by 850,000, relative to the year before, in the two months of March and April alone. This means that demand corresponding to about

10 percent of the annual number of visitors in the previous year (based on JNTO's provisional yearly estimate of 8,611,175 travelers) was lost.

Starting in mid-April, travel restrictions imposed by other countries gradually began to be relaxed. For example, on April 20, Taiwan lifted its "refrain from traveling" advisory and replaced it with "travel with care" for travel to Kanto and parts of Hokkaido. On June 10, Hong Kong lifted its travel restrictions, with the exception of the disaster-hit areas and the areas within a radius of 80 km from the Tokyo Electric Power Company's Fukushima No. 1 nuclear power station. Because of these changes, tours to Japan have gradually started to resume, and the fall in demand has started to level off.

(2) Japanese outbound travelers and rapid response by airlines

In addition to the drop in numbers of overseas visitors to Japan, the number of Japanese outbound travelers also fell significantly after the earthquake. For the country as a whole, the number was down 9 percent in March on a year-on-year basis and down 8 percent in April. If we look at individual regions, we find that the Tokyo metropolitan area experienced a particularly significant fall, with Narita International Airport recording a 29-percent drop in March in its Japanese users relative to the year before and a 26-percent drop in April. The number of Japanese outbound travelers from the four disaster-hit prefectures (Iwate, Miyagi, Fukushima and Ibaraki) constitutes only about 2 percent of the national total. Therefore, the fall in the number of Japanese travelers after the disaster cannot be attributed to these areas, but rather to a decline in consumers' desire to purchase in other areas,

Table 1. Advisories for visits to and stays in Japan by other countries

Name of country (in order of number of travelers)	Inbound travelers in 2010 (unit: million)	Visitor information		
		Subject areas	Advisories by the government	Date of release
South Korea	2.44	Ibaraki, Miyagi and inland areas of Iwate	Advising "be cautious"	June 16
		Fukushima, parts of Miyagi and coastal areas of Iwate	Advising "be highly cautious"	June 16
		Areas within a radius of 30 km from the Fukushima No. 1 nuclear power station	Travel restrictions	June 16
China	1.41	Disaster-stricken areas suffering serious damage such as Fukushima	Advising "refrain from traveling"	April 29
Taiwan	1.27	Fukushima	Advising "refrain from traveling"	June 13
United States	0.72	Areas within a radius of 80 km from the Fukushima No. 1 nuclear power station	Advising "refrain from traveling"	June 9
Hong Kong	0.51	Ibaraki, Fukushima, Miyagi and Iwate	Advising "adjust travel plans/avoid non-essential travel"	June 10
		Areas within a radius of 80 km from the Fukushima No. 1 nuclear power station	Advising "avoid all travel"	June 10
Total inbound travelers	8.61			

Source: Compiled based on materials published by the Japan National Tourism Organization (JNTO) and the governments of the relevant countries.

and to the considerable effect of the overall feeling of “jishuku,” or voluntary restraint.

Nevertheless, the number of Japanese heading overseas from Narita during the May holiday week was down only about 10 percent compared to the previous year. In addition, a survey conducted by Japan Tourism Marketing Co., a private-sector research company, during the May holiday week, found that consumer sentiment had recovered relative to that immediately after the earthquake. All of these indications point to a gradual recovery in demand.

Even so, in response to the rapid drop in demand, since April, airlines have been moving toward smaller aircraft, taking large 400- to 500-passenger jets out of service and shifting to medium- and small-sized planes capable of carrying up to 300 passengers. In addition, a temporary downsizing plan was realized by cutting and canceling flights. Reflecting this situation, the actual number of passenger arrivals and departures at/from Narita was down an unprecedented 13 percent relative to the same period during the previous year. Although there appears to be some movement towards recovery, as of April 21, the rules governing landing slots (the “use it or lose it” rule: unused landing slots must be returned for reassignment) have been relaxed to create an environment in which it is easier for the airlines to cut and cancel flights. As such, it is thought that it will be some time before a full-fledged recovery is seen.

(3) Effects on international tourism

The effects of the disaster on the tourism industry have spread nationwide, with bankruptcies among hotels and ryokan (traditional inns) starting to become a problem. Not only have areas close to the disaster, in the east, been affected, but those in the west have been affected as well. For the industry, it has been difficult to overcome the issues of “Japanese tourists staying at home as a result of ‘jishuku’ (self-restraint)” and “overseas tourists staying away as a result of Japan’s damaged reputation.” Some overseas travel agencies that organize tours to Japan have been attempting to stimulate demand by organizing campaigns such as “half-price for couples” and “children travel free,” while others are offering cut-rate packages. Nevertheless, there is the impression that the private sector has exhausted its ideas for stimulating demand. In China, on the other hand, many tourists are abandoning their plans to travel to Japan and are instead heading to Europe. Travel agencies in Taiwan are pointing out that the number of tourists to Japan is decreasing as they instead choose to visit Southeast Asian countries. Regardless of the country, there seems to be a trend for tourists to avoid Japan.

The Japanese government has urged the people of Japan to move away from their extreme self-restraint and instead to begin consuming again. However, the sense of unease that has spread throughout the Japanese population has not yet been dispelled. Particularly, the problem

of radioactive contamination from the nuclear accident has had a major impact on domestic travel by families with infants and children.

If this drop in demand persists, Japanese tourist resources (hotels, leisure facilities, etc.) are likely to become unsustainable. We fear, moreover, that if this situation persists, it will not be possible to invest in updating existing facilities or in building new ones, leading to Japan’s tourism resources being uncompetitive compared to those of other countries. This situation might weaken the status of Japan as an international travel destination, especially when compared to our neighbors and other Asian countries.

2 Effects on international logistics

(1) Effects of the nuclear accident

The Great East Japan Earthquake has also had an adverse effect on Japan’s trade. The main issue affecting international trade is not so much the drop in output as a result of the disaster and the consequent effect on international trade, but rather the contamination resulting from the nuclear accident. The website of the Japan External Trade Organization (JETRO) is updated daily with information on the regulations (travel restrictions, import limitations, etc.) imposed by other countries regarding radioactive contamination. As explained below, their responses are becoming increasingly severe.

For example, the European Union (EU), Singapore, South Korea, Malaysia and Thailand all officially require that foodstuffs imported from Japan be inspected and carry a certificate stating the absence of radioactive contamination. In addition, importers in countries other than these are tending to frown on Japanese products that do not carry such certification. As such, exports still face a very difficult situation. As a result, the trade deficit in May was the second highest ever, at 853.7 billion yen, leading to the uncertainty of future prospects.

(2) Effects on air cargo

According to the “Preliminary Report on the Volume of Cargo Handled by Narita and Haneda Airports” issued by Tokyo Customs, the amount of air cargo being handled in the metropolitan area has been decreasing year on year. In June of this year, the combined total amount of cargo handled by Narita and Haneda was 172,000 tons (down 8.1 percent from the same month in 2010), while the total for the first half of the year was 1,002,000 tons (down 7.1 percent from the same period in 2010). Furthermore, Narita has suffered major losses, with the total amount of cargo handled in June being 160,920 tons (down 13.1 percent from the same month in 2010). The month of June was the eighth consecutive month of decline, with exports down 14.9 percent and imports down 11.3 percent. When we look at the first half of the year, we again see a major decline, with the total being

934,179 tons (down 12.0 percent from the same period in 2010), exports down 13.7 percent and imports down 10.5 percent.

The Great East Japan Earthquake affected many fields including materials (silicon, chemicals, electronics-related components and materials), intermediate products (semiconductors, semiconductor manufacturing equipment) and final products (cars, home electrical appliances/consumer electronics). Among these companies, not a few companies hold a considerable share of the world market, such that supply chains including those for automobiles, electrical appliances and PCs were severed, greatly affecting the production of these products.

Between April 8 and April 15, the Ministry of Economy, Trade and Industry conducted its “Emergency Survey on Actual Status of Industries after the Great East Japan Earthquake.” The findings revealed that while some companies had failed to find alternative sources for their raw materials, parts or components (whitening agents for cosmetics, rubber-based products, semiconductors, electronic components), 80 percent (18 companies) of the 22 processing companies surveyed and 60 percent (20 companies) of the 33 materials companies surveyed had been able to find alternative sources (Figure 1). As alternative suppliers, processing companies found 17 domestic and 7 overseas suppliers, while materials companies found 15 domestic and 12 overseas suppliers (with both types of companies giving multiple responses). This result gives rise to the concern that between one-third and one-half of these companies have turned to overseas suppliers to find alternatives. It is uncertain whether, in the future, these companies will return to suppliers in the disaster-stricken areas where recovery efforts are now being made.

Among materials and products, semiconductors and electronics are often transported by air. Interviews with air forwarders revealed that because of the damage suffered by the car electronics industry, exports by this industry plummeted in March and April. The disruption of the supply chain and the switching of suppliers could well have a major effect on the sustainability of industries in Japan.

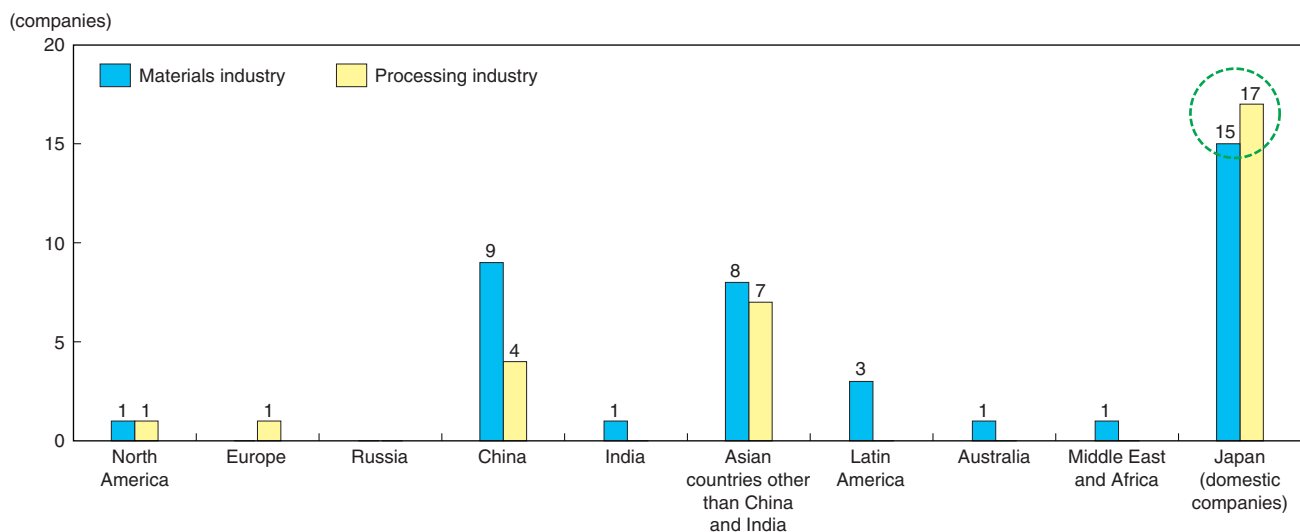
(3) Effects on international shipping

Looking back at the changes in distribution caused by the Hanshin-Awaji Earthquake, which occurred in 1995, it was marine transportation that was affected the most.

Before the occurrence of the 1995 earthquake, the Port of Kobe was one of the biggest international hub ports in the East Asia region. After the earthquake, however, this traffic was diverted to alternative ports such as Busan in South Korea, Tokyo and Yokohama. Subsequently, not all traffic actually returned to Kobe. It has been said that this diversion led to a declined importance of the Port of Kobe as an international hub port. However, the direct cause of such decline was the reduced number of vessels visiting Kobe due to the drop in the amount of cargo being handled in the Kansai region caused by deindustrialization. From the mid-1990s, when the declining trend in the amount of cargo being handled in the Kansai region became apparent, shipping companies considered skipping ports in the Kansai region but were actually unable to take such action. The Hanshin-Awaji Earthquake gave these shipping companies a final push.

In the wake of the Great East Japan Earthquake, foreign vessels have also been skipping ports in the disaster-stricken areas. For example, Germany’s Hapag-Lloyd

Figure 1. Alternative suppliers



Notes: 1) The survey period was between April 8 and 15, 2011, and the number of surveyed companies was 80 (55 in the manufacturing industry, 25 in the retail and service industries). 2) Among 55 manufacturers (33 materials companies and 22 processing companies), 15 materials companies and 17 processing companies found alternative suppliers in Japan, while 12 materials companies and 7 processing companies found alternative suppliers overseas (multiple responses for country and region).

Source: Ministry of Economy, Trade and Industry, “Emergency Survey on Actual Status of Industries after the Great East Japan Earthquake,” April 2011.

shipping company had scheduled ports of call at Tokyo, Yokohama, Nagoya and Kobe. However, immediately after the earthquake, the company skipped these ports other than Kobe. (As of the end of June, the company's ships resumed calling at Tokyo, Yokohama and Nagoya.) In addition, immediately after the earthquake, many ships skipped ports east of Tokyo and Yokohama. According to the Ports and Harbors Bureau of Japan's Ministry of Land, Infrastructure, Transport and Tourism, if we include schedule changes, as of May 15, no fewer than 42 vessels on international container routes linking North America, Europe, China, etc. have stopped calling at Tokyo and Yokohama after the Great East Japan Earthquake¹.

Subsequently, however, several shipping companies have resumed their use of eastern ports including Tokyo and Yokohama. At the end of May, a Panama-registered vessel docked at Sendai Shiogama port, making it the first foreign vessel to call since the earthquake. It is thought that this can be attributed not only to the repair of the damaged port facilities, but also to the efforts of the local governments and related bodies to address concerns over the nuclear accident that many shipping companies had by proving safety through publishing the results of their tests of radiation levels.

When we look at this situation, it seems very likely that the influence of the Great East Japan Earthquake on international shipping will only be temporary. In particular, although a shift to overseas ports was seen after the Hanshin-Awaji Earthquake, we cannot definitely say that a similar shift has so far occurred on anything like the scale this time as was seen in the 1995 earthquake. The primary reason for this projection is that the regions served by the ports of Tokyo and Yokohama are Japan's biggest markets. Regarding local ports, mainly among the ports on the Japan Sea, moves of shifting to Busan have been almost completed. However, overseas shipping companies are still somewhat apprehensive about the contamination caused by the nuclear accident. Actually, as of July 2011, some vessels still skip eastern ports.

Furthermore, the majority of the containers that were stacked and awaiting shipment at Sendai Shiogama port were swept away by the tsunami. Several thousand remained, but their contents (cargoes/products) were damaged, making them worthless. While most shippers were able to recover the loss of the containers through marine insurance, there remains the problem of disposing of the damaged containers and their contents. Although the shipper is the owner of the containers, some entity must arrange for disposal of the damaged contents. Normally, the owner of the freight is responsible for any cost of abandonment. However, because an insurance claim has been made, it is not clear who is responsible for disposal. In addition to the damage caused directly by the earthquake, there is now a new problem of dealing with the damaged cargo.

(4) Alternative distribution route through Niigata port

In May 2011, the amount of container traffic handled by Niigata port was up 50 percent on a year-on-year basis. In fact, the port handled record amounts every month for three consecutive months. In particular, shippers who had been using other ports shifted their operations to Niigata, thus leading to a rapid increase in the amount of container traffic. Imported products include miscellaneous daily necessities and sundry items as well as building materials such as insulation, while exports of automotive parts (tires) and fabric for clothing have increased. At an interview with distributors, it was said that Niigata was chosen as an alternative to the disaster-hit Sendai and Hachinohe ports.

Niigata is connected to the Aizu region, Koriyama and Iwaki via the Ban-etsu expressway, and to Shiroishi, south of Sendai, via National Route 113. According to distributors who are based in Niigata, the flow of goods has changed since the earthquake, with the predominant route being "nearby countries (South Korea, China, etc.) or domestic Japan Sea ports—Niigata port—Miyagi or Fukushima." By both the Ban-etsu expressway and National Route 113, Sendai is about 3 hours from Niigata.

In response to the rapid increase in container traffic, Niigata port has been introducing measures in rapid succession, including the partial use of the quay extension, the enlargement of the container yard (increased from 23.5 ha to 27.4 ha as of May 20 with further extensions scheduled), more efficient cargo handling operations, the use of new cargo handling equipment and review of the lines of truck traffic flow.

II Outlook for International Transportation, Tourism and Logistics

1 International transportation and prospects for inbound travelers

Japan is now seeing a resumption of visits by tourists from various countries and a recovery in the number of foreign tourists visiting Japan. To forecast future trends in the number of visiting tourists, we must focus on two points, namely (1) the differences in the recovery of demand depending on destinations within Japan and (2) the nationalities of the tourists.

Regarding the destinations as indicated in Item (1), the authors believe that Hokkaido and Kansai will recover first, with full recovery in the Kanto region coming some time later. In both of the first two regions, which are distant from the stricken areas, tourism-related businesses and local governments have conducted tours to Japan that were designed for overseas travel agencies

and media. Because of these efforts, people in other countries are beginning to recognize that there is no particular problem in treating Japan as a tourist destination (Table 2). In addition, there are areas to which charter flights have already resumed. From the perspective of creating travel products, the situation is starting to return to normal. In the Kanto region, on the other hand, there remains the fear of the spread of radioactive material as well as a concern over the supply of electric power. As of mid-May, overseas travel agencies have pointed out that “in a normal year, trips to Tokyo would be our biggest sellers, but this year (2011), we have found that trips to Hokkaido and Kansai are popular.” We assume that the distribution of visitors to tourist destinations this year will be different from that in a normal year.

Regarding the nationalities as indicated in Item (2), it is believed that tourists from Taiwan and Hong Kong will return first, followed by those from South Korea and China. To ensure the recovery of tours to Japan, we must be able to forecast the trends in the number of visitors from the above regions (China, South Korea, Taiwan and Hong Kong), who normally constitute 60 percent of all visitors to Japan. The rate at which the number of tourists from these four regions will recover will depend

on the difference in overseas travel experience and the difference in Japan travel experience. Considering the former, in China, a large part of the population has little or no experience traveling overseas and, from the viewpoint of safety, members of this group are unlikely to select a destination about which they are even the slightest bit doubtful. For this reason, people in the industry believe that it will take some time for the number of Chinese tourists to recover, with any improvement unlikely before either the National Day holiday in October or the 2012 Chinese New Year holidays (at the end of January).

When we look at the difference in the Japan travel experience, we find that compared to other regions, the proportion of repeat visitors to Japan from Hong Kong and Taiwan is high. According to a survey by the Japan National Tourism Organization (JNTO), around 70 to 80 percent of the tourists from these regions are repeat visitors. Many of these travelers are therefore very familiar with Japan. Even as far as the March earthquake is concerned, they have proven to be much more understanding of the situation than have travelers from other regions. Furthermore, repeat tourists from Hong Kong and Taiwan are highly sensitive to the costs of tours. As such, the sales of Japan tours at below market values

Table 2. Actions of travel agencies to stimulate recovery of the demand for tours to Japan

Approaches	Background, purposes and specific activities
Publicizing the safety of Japan to overseas travel agencies and media	<ul style="list-style-type: none"> To recover the demand for tours to Japan, foreign travelers must first recognize Japan as a safe destination, and Japan must be a candidate destination. For this purpose, it is necessary to publicize the safety of Japan to overseas travel agencies and media that serve as information sources for foreign travelers so that they can provide accurate information to travelers in their own countries. ANA Sales Co., Ltd. and Nippon Travel Agency Co., Ltd. are adopting an approach of publicizing the safety of Japan by using methods such as holding seminars in China for China's travel agencies and media and inviting them to Japan to enable them to see the current status for themselves.
Using the Internet to send information on Japan's daily life	<ul style="list-style-type: none"> After the earthquake, news about Japan reported in other countries was mostly related to the disaster-stricken areas. As such, travelers who live overseas have had only limited opportunities to know the situations in other areas of Japan on which the disaster had no influence. To alleviate travelers' concerns over Japan and tours to Japan, it is important to provide information concerning Japan's daily life that has not been affected by the disaster. JTB Corp. opened a blog site to show Japan's daily life, where a Japanese employee sequentially introduces Japan's daily lifestyles. This site contains information in English and other languages, and carries information published by international organizations, information on accommodations and tourist facilities and opinions of visitors to Japan.
Starting the sales of Japan travel products designed for Chinese tourists	<ul style="list-style-type: none"> With the number of Chinese tourists to Japan in 2010 being about 1.4 million, China ranked next to Korea in terms of number of tourists to Japan. In consideration of high economic growth, large population and an increasing desire to travel abroad, the potential for making tours to Japan is high in China. As part of the efforts to recover the demand for tours to Japan, activities aimed at increasing the number of Chinese travelers are very important. In the past, because the Chinese government did not allow foreign companies to conduct outbound travel business designed for Chinese, Japanese travel agencies could not directly advertise and sell Japan travel products to Chinese travelers. In the autumn of 2010, the Chinese government started to accept applications for approving outbound travel businesses operated by joint ventures in which foreign companies have a stake. In May 2011, JTB New Century International Tours Co., Ltd., in which JTB Corp. has a stake, received approval as the first Japanese-affiliated company. JTB Corp. intends to send 10,000 Chinese tourists to Japan during the first year. As its first step, JTB Corp. plans to start the sales of Japan travel products by targeting potential tourists during China's National Day holidays in October.
Developing new, wide-area sightseeing routes designed for foreign travelers	<ul style="list-style-type: none"> “Golden routes (Tokyo, Mt. Fuji, Kyoto and Osaka)” are the most popular destinations in Japan tours. Many foreign tourists including Chinese tourists visit these destinations on their first visit to Japan. After the earthquake, however, the popularity of the golden routes has declined, and instead increased interest is shown in west Japan. In response, in west Japan, tourism organizations in five regions (Chubu, Kansai, Chugoku, Shikoku and Kyushu) got together and launched the “West Japan Wide-Area Tourism Urgent Promotion Conference.” They are now jointly developing “platinum routes” (new, wide-area sightseeing routes) to increase the number of foreign visitors and are studying how best to promote the combined efforts of all these five regions to publicize west Japan to other countries. The approaches being taken by west Japan as well as any progress in developing new, wide-area sightseeing routes that appeal to foreign travelers to Japan are expected to lead to the recovery and stimulation of the demand for tours to Japan.

have been stimulating recovery of the demand. Given all these factors, the number of Hong Kong and Taiwanese tourists is expected to recover before that of tourists from other regions.

2 Prospects for global logistics

As of the summer of 2011, the impact of the Great East Japan Earthquake on marine transportation has not been as great as that caused by the Hanshin-Awaji quake. Nevertheless, we cannot be optimistic about whether the global logistics environment surrounding Japan, in particular the marine and air freight networks, will return to the levels existing prior to the earthquake. A major risk involves shipping companies and forwarders excluding the Japanese market from their main routes.

Obviously, distribution stems from a need to move goods. If such needs disappear for some reason, the need to provide sea or air distribution routes also disappears, ultimately compromising the logistics network. From the viewpoint of global logistics, the effects of the Great East Japan Earthquake are characterized by an increase in the demand for imported products for reconstruction but a plunge in the quantity of exports. According to “Trade Statistics of Japan,” published by the Ministry of Finance, the value of exports in April 2011 was down 12.4 percent on a year-on-year basis. If we look more closely, however, we find that the values of some exports have barely changed, while those of others have fallen significantly. The latter includes cars, computers such as PCs and foodstuffs (Figure 2). If the volume of exports centering on these products remains depressed, it is very likely that the distribution businesses handling exports will also experience difficulties.

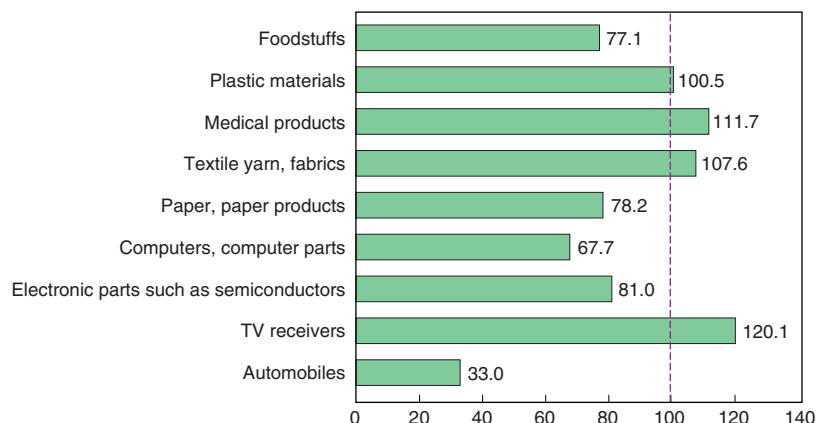
If Japan’s distribution business is to recover at least to the level existing before the earthquake, not only do we have to rebuild the ports and distribution facilities such as warehouses, but we also have to restore the demand for distribution through promoting manufacturing and economic activities. Currently, automakers and other

manufacturers are rushing to rebuild their Tohoku factories to reestablish the supply chain. Because production is scheduled to resume at the beginning of fall, distribution volumes will be restored to a substantial extent. However, some of parts suppliers for these manufacturers have already been shifted to overseas suppliers. Therefore, it will be difficult to completely restore the distribution volumes that existed before the disaster. One of the most important issues that we face is to rehabilitate the stricken areas by establishing new industries. While the stricken areas present difficult conditions in all aspects of cost, power and transportation infrastructure, we must set strategic goals to at least restore the transportation infrastructure.

Furthermore, it is difficult to stop the moves of companies that shifted to overseas suppliers or that plan to further shift to overseas suppliers in the future. With the globalization of the economy, it is easy for companies to operate across borders. In this era, it is extremely difficult to confine the operations of the manufacturing industry within Japan. While we have to accept the shrinking of the manufacturing industry within the country to a certain extent, we must develop new industries to fill the void and must change the industrial structure itself. To do this, probably the only option left open to us is to create tertiary industry markets.

In this case, the amount of cargo originating from and destined for Tohoku (Japan as a whole) will fall below current levels, and Japan will enter into an era of tough competition with its neighbors. Faced with this situation, if we have a hub function that consolidates shipments from other Asian countries, we could have prevented the fall in the quantities of freight being handled by Japan’s ports and airports and could have maintained air and marine routes. This is the strategy being adopted by Singapore, Hong Kong and South Korea (Incheon, Busan). Unfortunately, as they exist now, Japan’s ports and airports, especially those in major metropolitan areas having large demand, simply do not have the physical space needed to operate as a hub.

Figure 2. Value of exports by principal commodity in April 2011 (the value in the same month in 2010 is regarded as 100)



Source: Trade Statistics of Japan published by the Ministry of Finance.

At a hub airport, many flights have to arrive and take off within a specific period of time. A hub port needs mechanisms that allow both very large ships from America and Europe and smaller vessels running shorter distances to arrive efficiently. Unfortunately, however, currently, the facilities of the airports and ports in Japan's major metropolitan areas are individually and separately managed and operated. Such individual and separate operations make it impossible for them to be used as hub airports or ports. Given this situation, the fact is that we have to take a somewhat pessimistic outlook.

III Measures for International Transportation, Tourism and Logistics towards Reconstruction

The damage that the Great East Japan Earthquake inflicted on the international transportation, tourism and distribution fields was not limited to direct damage. The reputation of these industries was also seriously affected. In addition, the radioactive contamination caused by the nuclear accident led to a highly unpredictable situation. In order to attain the earliest possible recovery against this backdrop, we have to adopt bold measures by leveraging the power of the private sector as well as that of overseas entities without being confined by current systems and frameworks. If we do not strive to step beyond existing systems and frameworks, we will not be able to find our way out of the current situation. To achieve this, we propose the following four measures.

- (1) Ongoing promotions to attract overseas visitors
- (2) Use of wide-area transport networks to reconstruct both the transport infrastructure and industry
- (3) Creating a visibility platform for international logistics
- (4) Pursuing deregulation to enable access to overseas and private-sector funding

1 Ongoing promotions to attract overseas visitors

Measures taken by the stricken areas and other areas in Japan that are affected by the adverse reputation have met with some success. In Japan, events have been held in Tokyo to support the disaster-hit areas, while efforts to publicize the safety of Japanese goods and products have been made overseas. These efforts have begun to meet with success, albeit modest. However, the effect of individual events can only go so far. Therefore, these efforts need to be ongoing. We must continue with such measures at least until the issue of the nuclear accident has been resolved and future prospects become clearer.

Many celebrity-based charity events aimed at providing support to Japan have been held, notably in South Korea, Hong Kong and Taiwan. In addition, although there are no official figures, charity events organized by local volunteers have been held all around the world. Among all these efforts, visits by international dignitaries such as Crown Prince Frederik of Denmark, China's Premier Wen Jiabao and Indonesian President Susilo Bambang Yudhoyono have done much to restore the reputation of the stricken areas. Notably, China's Premier Wen Jiabao and South Korea's President Lee Myung-bak did much by being seen eating Fukushima-grown cherries, cucumbers and cherry tomatoes.

As described above, the challenge here is to avoid the effect of these events coming to an end. We cannot forget that people's memories of the earthquake will fade with time, and that it will take time to recover and rebuild. For this purpose, we need a program of ongoing events for attracting people to Japan, in particular to the disaster-hit areas. As part of these efforts, we should continue to adopt the approach toward holding international-level events in Japan, in particular in the disaster-stricken areas. In early June 2011, it was announced that the 2012 Annual Meetings of the International Monetary Fund (IMF) and the World Bank Group would be held in Tokyo, Japan, in October 2012. This event will have a very beneficial effect.

The meetings will be attended by ministers and presidents of the central banks of 187 member countries, or around 20,000 people in total. Toward the goal of publicizing Japan's recovery to other countries during these meetings in October 2012, efforts should be made to create a program for holding international conferences in Japan, especially in the disaster-hit areas. To promote these efforts, accurate information on Japan as well as on the stricken areas should be provided through as many public and private-sector organizations as possible such as the United Nations World Tourism Organization (UNWTO), the International Organization for Standardization (ISO), the United Nations (UN), the World Customs Organization (WCO) and the International Maritime Organization (IMO). For example, information such as that on the availability of conference rooms and access (means of transportation is fully available) should be provided to the world through their representative offices in Japan to encourage the holding of meetings in Japan. Because these international organizations are generally operated separately, there is no government agency or entity that deals with the activities of all these organizations. Therefore, we should work together with related bodies such as international convention bureaus to gather information from sources as wide as possible so as to ensure the holding of events in a continuous and effective manner. Among these organizations, the ISO is made up of more than 200 technical committees, with subcommittees under each of the technical committees, and working groups (WG) under each subcommittee. At the WG

level, there are between 4,000 and 5,000 groups. Small-scale international conferences are frequently held at the ISO WG level. We believe that it would be beneficial if we could facilitate the holding of some of these international conferences in Japan and even in the disaster-hit areas so as to increase the number of overseas visitors.

We should use these opportunities to directly make known accurate information on Japan and improve the image that people have toward tours to Japan, which could lead to stimulating the recovery of demand for such tours. Once those who have been to Japan spread the word about the situation here, people will come to understand that Japan, in particular the disaster-hit areas, is a safe destination.

2 Use of wide-area transport networks to reconstruct both the transport infrastructure and industry

Due to the damage suffered by the transportation infrastructure including roads, airports and railways, distribution was temporarily disrupted. In Tohoku, however, in addition to the Tohoku Expressway, there are three other expressways (the Kamaishi-Akita, Sakata and Iwaki-Niigata routes), which were used as backup routes to carry goods to eastern Tohoku via ports along the Japan Sea (Niigata, Yamagata, Sakata, Akita, etc.). As regards airports, Yamagata Airport, which is nearby the severely damaged Sendai Airport, was used as a backup route between Sendai and Tokyo by increasing the number of temporary flights. In the past, spending on the transportation infrastructure has been criticized as being wasteful public work projects but, ironically, it proved extremely useful after the disaster. In a sense, the availability of backup routes proved the redundancy of Japan's wide-area transportation networks.

These routes are not normally used. Users, transport companies and logistics companies took it upon themselves to devise all of these alternative routes. It is not a fact that during normal times, the government paid attention to the need for the redundancy of wide-area transportation networks, and after the disaster, guided private-sector users to use these alternative routes. If backup routes were to be prepared at the government level, it would have been possible to use alternative routes more quickly and efficiently. This situation underlines the importance of the redundancy of wide-area transportation networks in emergencies.

Based on the lessons we learned, in organizing large-scale disaster preparedness programs in the future, it would be important to make it easy to devise routes that connect Japan with overseas from all directions, namely the Pacific Ocean, the Japan Sea, the north and south, by taking advantage of Japan's geographical layout, i.e., the fact that the country is surrounded by the sea. In the case of the Great East Japan Earthquake, those prefectures with coastlines, namely, Niigata, Akita, Yamagata and

Aomori, took an active part in recovery efforts, which proves the merits of Japan's geographical conditions in that the country is surrounded by the sea. In addition, backup routes using Tohoku Expressways proved to be extremely useful, as mentioned above.

In the same way as with these backup routes, we can draw on air, land and sea options for transportation and distribution routes. In the past, regional airports and ports have been branded wasteful public work projects. However, in addition to road and maritime transport, air routes to/from Yamagata Airport, Hanamaki Airport and Fukushima Airport were all used to help deal with the disaster. Far from being useless, what would have happened if these facilities did not exist? This is another lesson that we must not forget and that we must incorporate into any program with built-in redundancy for dealing with disasters.

A much more serious problem stems from the fact that some companies have taken this disaster as their prompt for considering moving their manufacturing functions overseas. The trend of yen appreciation has now been continuing for almost three years, since the collapse of Lehman Brothers. Some voices in industry have been saying that manufacturing in Japan has already passed the point where it can be cost-competitive. Those companies that are still manufacturing in Japan may also take this opportunity to move their operations overseas. If such moves actually occur, the hollowing out of industry and deterioration of the employment situation will be unavoidable. With the switching of supply sources (Japan passing) and the hollowing out of industry, the real crisis is yet to come.

To avert this crisis and stem an outflow of businesses overseas, instead aiming to encourage businesses to stay in Japan, we need to simultaneously promote the recovery of transportation infrastructure and the development of new industries. Immediately before Japan's period of high economic growth, the New Industrial City Construction Promotion Law of 1962 and the Law for the Promotion of Development of Special Areas for Industrial Development of 1964, which were intended to stimulate industrial development, led to strong industrial development with the simultaneous construction of airports and ports. At that time, the mainstream sector was heavy industries, which are based on basic resources. However, any growth in the future will undoubtedly be in the areas of tertiary industry such as information and communications, content, tourism, medical and health care, welfare, and education. In order to compensate for the ongoing outflow of industry to some extent and create more employment opportunities at home, we need not only policies focusing on hardware but also those stressing software (special economic zones) that are intended to promote the development and clustering of these new industries.

As a modern version of new industrial cities and special areas for industrial development, the areas where

industrial agglomeration is promoted in conjunction with the development of transportation infrastructure should be designated as special economic zones. In these zones, efforts should be made to establish a mechanism that attracts people, goods and investment from both within the country and abroad.

3 Creating a visibility platform for international logistics

One of the most pressing issues facing international logistics is our response to import restrictions imposed by other countries related to radioactive contamination. While, in the short term, we can meet the requests of other countries by issuing certificates, we need to think about Japan's medium- to long-term program as a fundamental solution. As one possible solution, we would like to propose the use of IT (information technology) to establish a system for monitoring cargo that is disaster resistant and can also help restore Japan's reputation.

Currently, there are cases in which goods originating in Japan were subjected to radiation testing overseas and parts of cargos were prevented from being unloaded. These cases occurred because it was not known whether the goods originated in contaminated areas or whether their route took them through such areas. By issuing a certificate assuring the safety of the goods and establishing a means of providing traceability to guarantee the route taken by the goods, we would be able to provide an assurance of safety to any country's government.

For the past several years, the Japanese government has conducted field tests on the use of IT to visualize the flow of goods and improve its efficiency, and has supported the introduction of a pilot system in industry. By attaching IC tags to goods in an attempt to achieve real-time monitoring of freight through information networks, the government aims to establish a platform for visualizing international logistics, thereby enhancing traceability.

The benefits of applying IT are that the physical operations such as the issuing of shipping and cargo handling instructions that was done manually in the past can be automated. Significantly, thanks to the support of IT, not only do logistics become more efficient, but also constant monitoring means that the security of the goods in transit is greatly enhanced.

Given that transportation involves so many different means including aviation, shipping, terminals, trucks and rail, in addition to the transport operators of each type, their agencies and subcontractors are also involved in international logistics (international multimodal transport). In the logistics area where such a wide variety of carriers is involved, the achievement of visualization was considered quite remote. Nevertheless, major shipping companies are already promoting the introduction of container-level movement management using a global network. In the case of land transport, trucks are

equipped with ETC (electronic toll collection system) and GPS (global positioning system), while a truck driver has a mobile device that can accurately convey his or her route to the center. IC tags that are attached to goods and these devices including ETC, GPS and mobile devices can all be networked, enabling the realization of a much greater degree of security.

The visibility of packages being shipped by international express carriers (couriers) is already very good in that they can be tracked, while packages can be stopped at any time at the request of the authorities. By extending this system to general cargo, we believe that it will be possible to improve the security of cargo while speeding up related procedures.

In much the same way, a single window system for international logistics (system whereby a single application covers all international logistics procedures, import/export permits, quarantine, customs clearance, arrival at/departure from a port, etc.) not only provides a much greater degree of security for cargo but also speeds up related procedures. This system could be a useful tool for restoring Japan's logistics that have suffered greatly from a damaged reputation. If the Japanese government promotes the introduction of this system, certifies the safety of goods in transit covered by the system and provides a means of transmitting such information electronically to overseas ports and airports, damage to Japan's reputation could quickly be averted.

The Japanese government is currently working with international organizations to promote the development of a "single window system," a "visibility platform for international logistics" and a "platform for visualizing container-level movement." These systems should be promptly put to practical use so as to promote greater security and efficiency for international logistics. Even if only visualization is possible, we could first set out to purge the harmful rumors about Japan in countries around the world by showing evidence obtained through visualization. By using such cargo monitoring technology to maintain Japan's position as a leader in logistics systems during normal times, it will become possible to give a certain sense of confidence to these systems in international society, which can eventually bring about the effect of providing evidence against groundless rumors.

4 Pursuing deregulation to enable access to overseas and private-sector funding

Not only is the degree of damage from the disaster immense, but reconstruction financed by the government's budget alone will likely be impossible, making it necessary to make use of the strength of the private sector. This will involve the establishment of a Public Private Partnership (PPP). Another important point is that when we look for sources of funding, organizations that can assist in the recovery and reconstruction are not limited to the private sector within Japan. Projects that

have adopted a private capital approach began with the Public Finance Initiative (PFI) in the UK during the Thatcher government era, and then spread throughout Europe to become commonplace. Moreover, European companies have adopted a strategy of developing infrastructure in other countries, and participated in the operations of infrastructure in Asian countries in widely diverse areas such as power, water and transportation.

Furthermore, South Korea has long been highly reliant on private funds to finance infrastructure development and operations. The country has already reached a point where it can now compete with Japan in terms of levels of technology and service. In China, also, which in 2010 became the world's second-largest economy, the degree of infrastructure exports is again at a level that can compete with Japan. Although there are both advantages and disadvantages to PPPs and PFIs, one important point to remember is that if Japan's recovery is faced with an insurmountable impasse, we should consider opening the door to companies from other countries. In particular, for countries that made an offer to work together with the Japanese government on Japan's recovery and reconstruction projects, we should consider the implementation of a scheme that enables the use of government funding of those countries and private-sector expertise in construction and operations to assist with the recovery and reconstruction.

Along the devastated coastal areas are many examples of transport infrastructure that will require rebuilding, including roads, railways and bridges, for which the prospect of recovery is far from certain. Much of such infrastructure is known to have few users and operates in the red. While it is recognized as being vital for maintaining the local lifestyle, the limited amount of financial resources means that such infrastructure must be assigned a lower priority. If, for example, we look at the Sanriku Railway website, we can sense a strong desire to strive toward recovery. However, the company has so far only managed to re-open about one-third of all of its lines, and has a carrying capacity of only one-tenth of that which existed before the earthquake. While the company has organized events to help raise funds and introduced measures such as nationwide mail-order sales of tickets that can be used once the damage to the company's network has been repaired, the fact remains that these measures are far from acquiring the expected cost (more than 10 billion yen) to rebuild the network.

Some countries, including neighboring countries such as South Korea and China, have offered to assist with Japan's post-earthquake reconstruction. We need to consider whether to accept overseas funding and have the actual construction done by private enterprises from those countries. With regard to railway construction, there remains some political tension with China, which might give rise to security problems. As such, it seems

difficult to accept assistance from China. Most importantly, however, we need to take the point of view of the victims and humbly contemplate what we should do (how best to accept this international goodwill). In the past, Japan has promoted the development of infrastructure in other countries through its official development assistance (ODA) programs. Now, however, we believe that Japan should open its doors to allow other countries to undertake infrastructure projects in Japan.

Together with the establishment of the Reconstruction Agency, the establishment of a special zone initiative has been proposed from all quarters. The aim of creating special zones is to overcome barriers that were insurmountable within the conventional institutional and customary framework. If speeding up recovery is to be given top priority, we should take advantage of these zones to introduce new schemes that would not be possible under existing systems and framework. Much of the world's transport infrastructure is already being built and managed by the private sector. We should open the door wide to the willingness and ability of the private sector (both domestic and overseas) in order to push the country's recovery efforts along. To this end, we not only have to moderate the development and management systems of Japan's international transportation and logistics infrastructure, but also need to boldly move ahead with deregulation.

Note:

1. The Ports and Harbors Bureau of Japan's Ministry of Land, Infrastructure, Transport and Tourism, "The Impact of the Great East Japan Earthquake on Industrial and Logistics Functions—Material 1-4, the 43rd meeting of the Port and Harbor Subcommittee of the Council for Transport Policy," May 23, 2011.
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