

The JITI Journal

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Welcome

The JITI Journal is a bimonthly publication of the Japan International Transport Institute, USA (JITI), in which JITI shares information on transportation developments in Japan and elsewhere, as well as recent JITI programs. As a supplement to our regular events, we hope that the Journal likewise serves as a resource for the transportation community.

In this issue, JITI aviation analyst Tatsuya Izumi writes an article on three ways that airports can minimize disruption to their operations after natural disasters. Additionally, JITI deputy representative Tetsu Shimizu gives us an overview of Kamakura city, as well as some of the interesting places there are to visit within the city.

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[JITI 2016 Self Driving Vehicle Seminar: The Future of Self Driving Vehicle Technology](#)



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On May 18th, JITI hosted a seminar at the Mayflower Hotel in which experts from various automobile manufacturers, enforcement agencies, and the transportation sector at large discussed self-driving technology and its recent advancements, including: potential strategies to best apply the technology in the public sector, as well as ways to maintain the safety and security of roads, and the broader issues of cyber security and the potentials of this technology. The speakers also participated in a panel discussion and Q&A session with the audience. [Click here](#) for an overview, presentation materials, and bios of the keynote speakers.

[JITI 2016 Drone Seminar: Strategies on Drone Application in the Transportation Sector](#)



On March 3rd, JITI hosted a seminar at the Ritz-Carlton Hotel in which experts from various drone manufacturers, enforcement agencies, and the transportation sector discussed future drone development, including potential strategies to maximize drone use, while maintaining the safety and security of national airspace. The speakers also participated in a panel discussion and Q&A session with the audience. [Click here](#) for an overview, presentation materials, and bios of the keynote speakers.

3 Ways for Airports to Minimize Disruption Caused by Natural Disasters

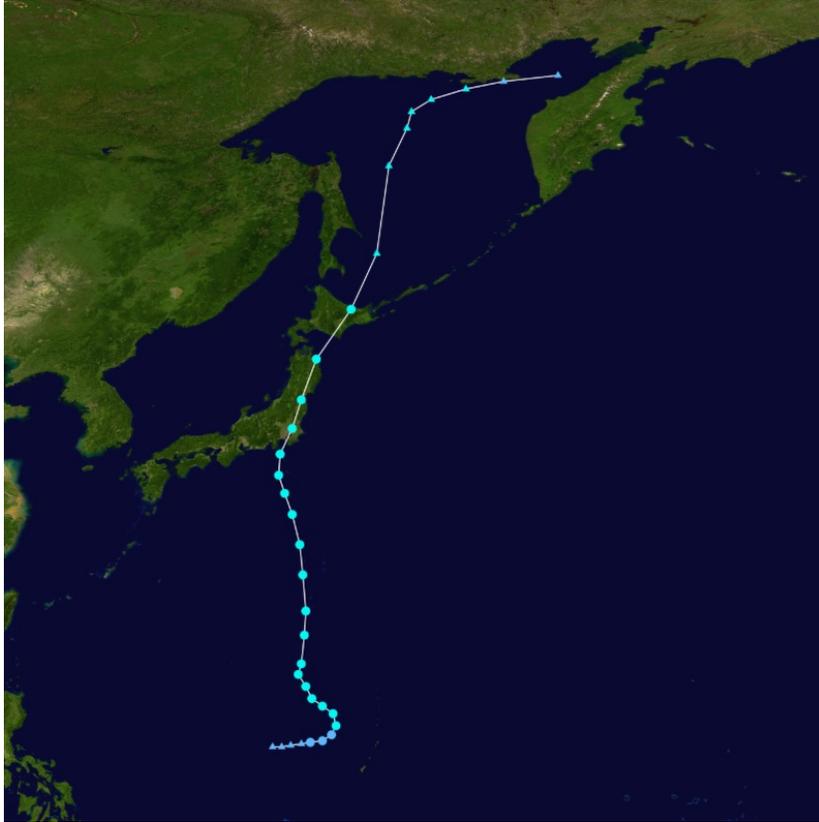
by Tatsuya Izumi

Aviation is more vulnerable to bad weather or an outage of operating systems than any other mode of transportation, which can cause multiple delays as well as cancelled flights. It's still fresh in our minds that "Snowzilla" caused more than 10,000 cancelled flights in the United States this January, and consecutive system outages for Southwest Airlines in July, and Delta Air Lines in August, caused several thousand delays and cancelled flights.

In these situations, passengers are caught in the gridlock and are forced to spend a long time in an unfamiliar place, with anxiety about when they will be able to get to their destinations. Even though the best case, for both airlines and passengers, is to avoid these situations, it's actually very difficult to do so. It's hard to predict with certainty when natural disasters will occur, and how much they will disrupt air traffic. Because Japan frequently experiences natural disasters such as typhoons, heavy snow, and earthquakes, industries and companies need to have prepared responses to alleviate the impact of said natural disasters.

I would like to use this article to discuss alleviation measures for situations caused by natural disasters, introducing the airport operator's response to passengers affected by the many cancelled flights at Narita International Airport due to Typhoon Mindulle this past August.

Typhoon Mindulle formed in the Pacific Ocean south of Japan on August 19th. Mindulle moved toward the north and, on August 22nd, made landfall on the southern part of Chiba prefecture, where Narita Airport is located. It passed through west of Narita Airport and recorded a wind speed of 126km/h. After this, it passed through the northern part of Honshu-island and Hokkaido to Okhotsk Sea, losing its strength. It vanished on the next day. Because Mindulle passed through an area several dozens of kilometers west of Narita airport while maintaining its strength, it brought strong winds and showers to the area.



The track of Mindulle(Source Wikipedia)

The strong winds forced air traffic controllers to evacuate the control towers, and the runways at Narita Airport were closed temporarily. This resulted in 176 cancelled flights in total, as well as 22 flights that were diverted to other airports. The consequence of this was that around 3,000 passengers were forced to stay in the terminal buildings overnight.

There were many passengers stranded in the terminals, and passengers from diverted aircraft that hadn't been able to land at Narita Airport during Mindulle arrived in bursts after the typhoon had passed through. This exacerbated the crowded conditions in the terminals. Adding to this, the number of passengers stranded in the terminals also increased because of disruption to the railway system, due to strong winds and track flooding.

In order to handle this hyper-crowded situation without confusion, Narita International Airport Corporation (NAA), which operates Narita Airport, had already prepared manuals on how to respond to natural disasters. This time using data gathered on Mindulle from the Japan Meteorological Agency (JMA), as well as weather observation and forecasting data providers, NAA estimated the impact and effect of the typhoon. They did this by comparing the information with similar cases that they had responded to in the past. NAA prepared and figured out the staff and supplies necessary for an adequate response one day before the typhoon touched down. They promoted the preparation response by utilizing a close sharing of information and cooperation with the relevant entities, for example airlines, immigration, customs, and quarantines offices. The actions that NAA utilized resulted in a minimization of the

confusion resulting from the typhoon. The response actions are as follows:

1. Collecting operational information, such as diverting flights, from the Air Traffic Control and airlines
2. Offering flight and airport operation information through an "Airport Information Delivery System"
3. Sharing information with the immigration office
4. Responding to irregular peak times, caused by delayed flight arrivals, at the immigration checkpoints by changing the shifts for immigration officers
5. Guiding passengers to alleviate the congestion in front of checkpoints
6. Arranging reserved buses for passengers going to the city center of Tokyo
7. Arranging to deploy more taxis in case of public transportation disruptions
8. Requesting that bus and railway companies extend operation hours
9. Strengthening passenger assistance by deploying more staff at certain points in the terminals to provide transportation access information; extending operation hours of passenger information counters
10. Distributing water bottles, snacks, sleeping bags and so on to passengers who were stranded in the terminals
11. Extending operating hours of shops and restaurants in the terminals
12. Opening the pay lounges- which contain chairs, couches, and tables- for free to accommodate elderly passengers and passengers with young children
13. Extending operating hours for the buses that connect the terminals
14. Pushing the airport operational curfew from 11 pm to 1:30 am

The listed actions can be classified into three groups. The first is cooperation with relevant entities. The second is helping passengers to their destinations or to a place where they can relax, such as a hotel or their home. The third group is actions that minimize the burden for passengers who are forced to stay in the terminal.

There is a diverse array of businesses in airport terminals. It is necessary to try and prevent each business from responding to a natural disaster in its own way, as this could cause further disruption and confusion. It is also necessary for each business to reach out to their customers proactively during the response process. The best way to achieve this is for the airport operators to provide accurate and, to some extent, controlled information to the businesses. It is very important for the airport operators to provide the same accurate information to every business in the airport, at the appropriate time, because airport operators provide the platform for the entities to run their businesses.

NAA provides unified and accurate information with its own original system, which prevents a disorderly response and unnecessary confusion.

Although airports have a huge infrastructure, they can quickly become overcrowded if there is an irregular concentration of passenger arrivals.

In overcrowded situations, people tend to feel uncomfortable and irritate which can, in turn, cause some unexpected incidents or situations. Railway systems, which have the largest capacity of transportation to and from Narita Airport, had suspended operation for multiple hours during the typhoon. This caused train disruptions, including significant delays and excessive crowding. NAA asked bus companies to extend their operation hours, along with preparing reserved bus services. NAA secured 15 reserved buses, which were able to get around 700 passengers to Tokyo before dawn. NAA also asked several taxi companies to increase the number of cabs in the airport for passengers who wanted to go to their homes or to one of the hotels

around the airport. NAA secured 136 cabs in total and sent all passengers who requested one to their destinations before dawn. This transportation information was provided to passengers who needed it by staff members, who were located all over the terminals.

In order to alleviate the hunger and thirst of passengers who were forced to spend the night in the terminals, NAA distributed a bottle of water and a package of crackers to each passenger. They also extended the business hour of the shops and restaurants in the terminals. NAA distributed sleeping bags as minimum bedding for each passenger, so that they were able to sleep on the floor of the terminals. Because elderly people and children may have found it difficult to sleep on a hard floor, pay lounges that were equipped with couches were opened, and staff guided passengers to the lounges. This course of action also helped the situation by preventing trouble between passengers that may have been caused by infants crying etc.



From left, clockwise: a bottle of water, a pad for the floor, a sleeping bag, a package of crackers.

The way NAA responded shows the importance of following the above mentioned three points: accurately providing the appropriate information to responders, reducing the number of passengers who are forced to spend the night at the airport, and minimizing the difficulty for passengers who had no choice but to spend the night in the terminals. These measures help prevent unfortunate situations and confusion in airport operations, and are the quickest ways back to normal operation. This incident at Narita also shows the importance of the role of the airport operator to restore the situation to normal, or as close to normal as possible, while working with the entities in the airport.

The NAA's response to the disruption caused by the typhoon is a great example of how to use these three methods of response to keep confusion to a minimum during an uncontrollable event.

The Ancient City of Kamakura

by Tetsu Shimizu

Do you know of Kamakura, a city located about one hour by train to the southwest of Tokyo? This article will introduce several famous sightseeing spots in Kamakura.

Kamakura, located in Kanagawa Prefecture, is surrounded by mountains on its east, north, and west sides and faces Sagami Bay on its south. The shogunate was in Kamakura from the end of the 12th century to the mid-14th century. This era is called the Kamakura Period. Kamakura had an important role in politics, military affairs, diplomacy, culture, etc. in Japan during this time. Trade with the Sung and Yuan dynasties of China prospered, and various aspects of Chinese culture such as Buddhism (Zen), Zen-style architecture, and Buddhist statues were imported.

Kamakura declined temporarily after the Kamakura Period ended in 1333; however, the revival of temples and shrines was seen in the 17th century. In the late 17th century, townspeople in Edo (the old name of Tokyo), who enjoyed visiting historic spots were interested in the scenery of Enoshima Island, which stuck out into Sagami Bay, and Kamakura became a popular sightseeing spot. Nowadays, Kamakura is one of the most popular sightseeing places in Japan, which has approximately 20 million tourists visiting every year.

Tsurugaoka Hachimangu Shrine was originally founded in 1063. In 1180 Yoritomo Minamoto, who was the first Shogun of the Kamakura Shogunate, relocated the shrine to the present site, which is the north end of Wakamiya-Oji Main Street. The town of Kamakura was constructed along this street. Visitors can see the town of Kamakura, backed by the Sagami Bay from the stairs to the Hongu (Main Shrine) building at Tsurugaoka Hachimangu Shrine. Various traditional rituals are held in Tsurugaoka Hachimangu Shrine throughout the year. For example, Yabusame, a ritual in which a person shoots arrows at square targets about 1.8 feet across while riding a galloping horse, is held during the annual festival in September, and many people visit to see it every year.



Kotokuin Temple is a temple which is mainly known for the Great Buddha, known as Kamakura Daibutsu. This Great Buddha is about 37 feet (about 44 feet including the base) in height, and about 267,000 pounds in weight. It is considered the symbol of Kamakura, and is designated as a national treasure. Visitors can look around inside of the Great Buddha, as it is hollow.



Hasedera Temple is an ancient temple which is thought to have been founded before the Kamakura Period. The main image of Hasedera Temple is a Juichimen Kannon (Eleven-faced Kannon) statue about 30 feet tall, which is said to be one of the tallest wooden statues of Kannon in Japan. Hasedera Temple offers the opportunity for Shakyo (hand-copying of a sutra) to the public.

Zeniarai Benzaiten Ugafukujinja Shrine is said to be founded in 1185, following a revelation in Yoritomo Minamoto's dream. The waters of a spring in the cave next to the Main Shrine are called Zeniarai Mizu (Water for Washing Money) and are said to be able to multiply the money washed in them. A lot of visitors wash their coins and bills in the waters.

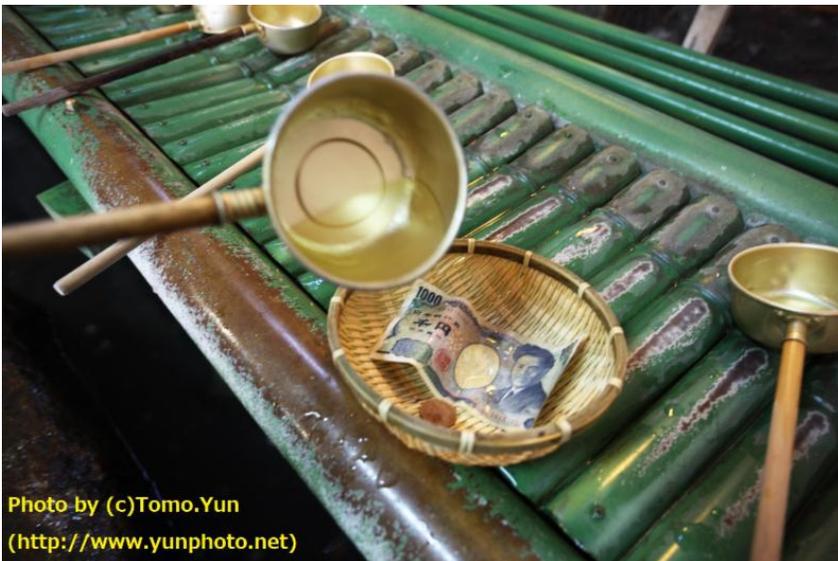


Photo by (c)Tomo.Yun
(<http://www.yunphoto.net>)

Hokokuji Temple is famous for its forest of thick-stemmed bamboo. You can enjoy macha green tea (powdered green tea) in the garden, which is in the bamboo forest. The temple holds a morning Sunday Zazen (meditation in Zen Buddhism) gatherings, which is open to the public every week.



There are also many sightseeing spots to visit in Kamakura beyond the spots introduced above. If you have a chance to visit Tokyo, why don't you extend your journey to Kamakura?

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Please follow the Japan International Transport Institute Twitter feed at [@JITIUSA](https://twitter.com/JITIUSA). We look forward to providing you with the most up to date information on our organization and events.

Thank you for reading the JITI Journal. Until the next issue, whatever your mode, travel safely!

The JITI Team