JAPAN

Figure Analysis – Displacement Related to Disasters

SUMMARY OF INTERNAL DISPLACEMENT IN 2019

Japan is one of the countries best prepared for disasters because it has to be. Located at the intersection of three tectonic plates and in the path of seasonal typhoons, it is prone to a range of hazards that can typically displace people, from earthquakes and flooding to volcanic eruptions. The potential for large-scale displacement and significant damage to homes and infrastructure exists because of the country's exposure to these hazards and its relatively high and dense urban population. Fortunately, the country is actively involved in disaster management and mitigation activities. For example, it makes sure to proactively respond to displacement with pre-emptive evacuations and the provision of shelters until people are able to safely return home.

Table 1. 2019 summary of internal displacement in Japan

Number of events that triggered displacements[1]	14
Total new displacements[2]	265,000
Estimated IDPs as of 31 December 2019[3]	88,200
Houses destroyed[4]	3,500
People pre-emptively evacuated before events[5]	N/A
People officially sheltered after events[6]	N/A

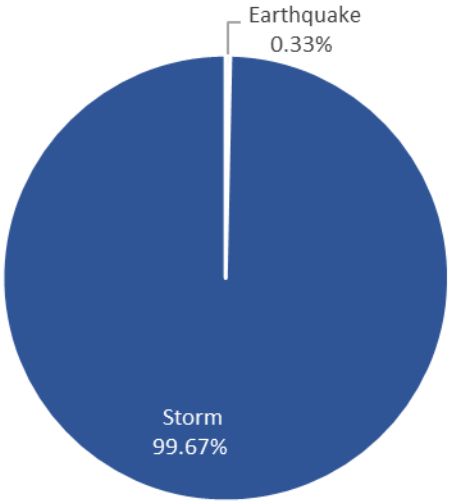
Notes

[1] *This corresponds to the number of disaster events that triggered displacement during 2019*
[2] *This corresponds to new instances of total internal displacement related to the disaster event during the year*
[3] *This corresponds to the total number of individuals living in a situation of internal displacement as of 31 December 2019 as a result of disasters*
[4] *This corresponds to the number of houses destroyed during the year*
[5] *This corresponds to the number of people that have been detected as pre-emptively evacuated before the disaster events*
[6] *This corresponds to the total number of people that have been sheltered following the disasters events*

New Displacement in 2019 by hazard type

Earthquakes and storms displaced more than 260,000 people in Japan in 2019. The largest disaster event was Typhoon Hagibis. Heavy rainfall, flooding and strong winds associated with the event forced more than 237,000 people to take refuge in temporary shelters in 30 out of the country's 47 prefectures between 12 October and 13 October. The number of people in shelters made up only 3 per cent of the almost 8 million people who were under orders or advised to evacuate during this period and indicates why the challenge of getting people to evacuate continues to be a concern for authorities and researchers. Another 26,000 people were displaced by storms throughout the year, mainly between the summer months and the June to September rainy season. About 900 people were forced from their homes as a result of earthquakes that struck the prefectures of Fukuoka, Hokkaido, Kumamoto and Yamagata.

Fig. 1. Distribution of new displacements by hazard types in Japan in 2019

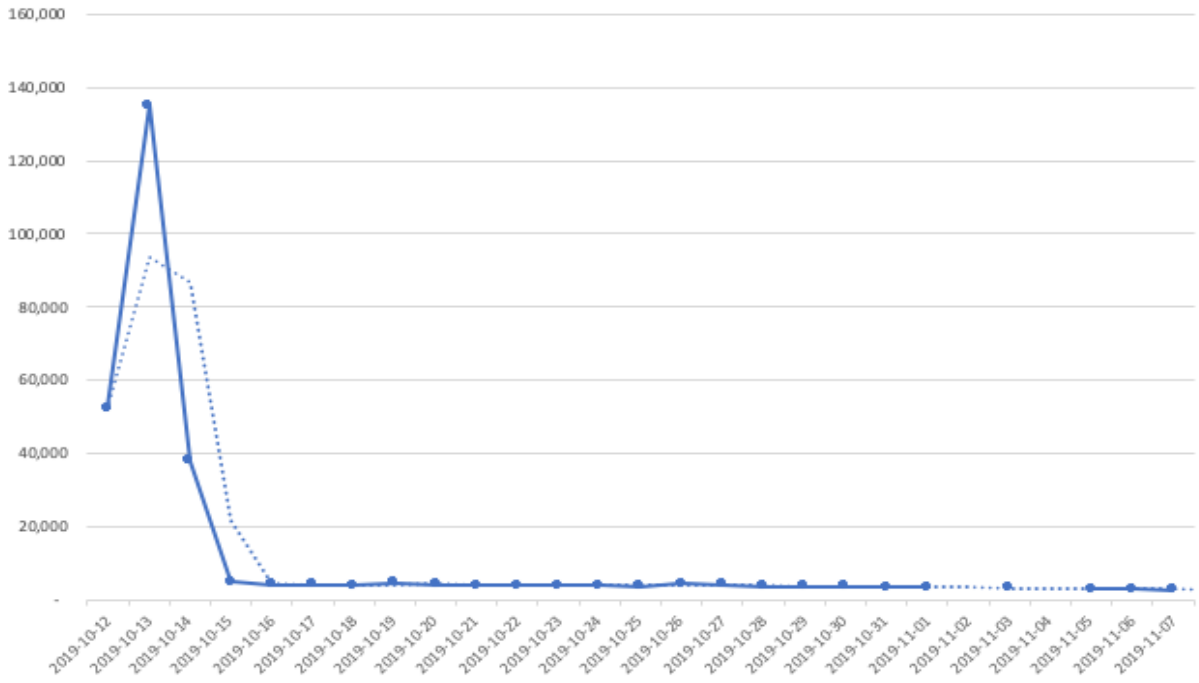


Duration of displacement

Japan is one of the few countries that systematically reports time series data for people temporarily evacuated to shelters following a disaster. Time series data for Typhoon Hagibis from Japan's Cabinet Office illustrates a typical trend when looking at displacement over time. The number of people temporarily sheltered throughout the country changed significantly in about a month. On 13 October, the numbers of those reported in shelters rose from about 52,000 people the previous day to 135,000 and then dropped off within one week to about 2,800 people on 7 November. As of 12 December, the Cabinet Office reported more than 3,000 destroyed homes and about 800 people still in shelters.

Official shelter reports of people displaced provide a window into the duration of displacement for short-term disasters. More complex or large-scale emergencies, however, reveal that displacement can be protracted. For example, as of 2019, an estimated 52,000 people were still displaced as a result of the Great East Japan Earthquake of 2011, which triggered a tsunami and led to the evacuations of residents around the Fukushima Daiichi nuclear plant.

Figure 2: Trend of people reported in temporary shelters in Japan as a result of Typhoon Hagibis.



DATA SOURCES AND METHODOLOGY

IDMC uses three main sources of displacement data for Japan: the media, the Fire and Disaster Management Agency (FDMA), and the Cabinet Office. The primary source for most large-scale disasters are the daily reports from the Cabinet Office. These contain figures on evacuation orders and advisories, the number of homes destroyed and the number of people in temporary shelters. The information is also disaggregated to the prefectural level. In cases where there are no situation reports issued by the Cabinet Office or where further information is required for verification and triangulation, IDMC uses FDMA and media reports.

- 15 disaster events were recorded with some form of displacement between January and December
- More than 130 individual facts were recorded for these events, including more than 118 for triangulation
- More than 96 of these facts referred to individual displacement (for example, evacuation or relocation), while around 36 of the facts referred to some form of housing destruction

Main caveats and monitoring challenges

Given Japan's number of hazard events, disaster-related displacement does not occur frequently. When it does, it is monitored by the Cabinet Office and the data is reliable, detailed and updated regularly. One main caveat is that while data on people displaced to official shelters is available, there

is a gap in terms of understanding how many people are displaced to non-shelter locations, such as hotels, or are staying with family and friends. During large-scale disaster events like Hagibis, for example, evacuation orders can reach millions of people. The actual number of people reported in shelters, however, is only a small percentage of that. Evacuation orders in Japan are not mandatory. IDMC's estimate is thus conservative at best because figures from shelters are used rather than evacuation orders. Only a small percentage of people ordered to evacuate comply, according to studies in Japan. Their reasons are complex and multifaceted. They range from practical challenges for the elderly and those with disabilities, to a lack of timely and accessible information and the perception and communication of disaster risk. Other reasons for people not complying include not knowing how to evacuate or believing that the ground elevation of their area is high enough to avoid flooding or storm surges. Government reports are normally issued for large-scale disasters and may not identify smaller-scale events that trigger displacement such as localized storms, landslides or earthquakes.

Our stock estimation in 2019: Providers of disaster displacement data tend not to include information about when, how and for how long people were displaced. One of the main gaps and challenges in accurately estimating the number of IDPs is the lack of measurement of return flows. Nor does data tend to be collected on people who have achieved durable solutions by integrating locally or resettling elsewhere in the country.

Our year-end estimate is based on time series data and housing destruction data for specific disaster events, as well as aggregated figures about the number of people displaced by disasters recorded by governments and other stakeholders. In addition to the people displaced by disasters in 2019, this figure includes cases from previous years where there was information on the number of people still displaced. (more information on - http://www.internal-displacement.org/sites/default/files/2020-GRID-methodology.pdf)

CONTEXT

While Japan has a low vulnerability (rank 173) to disasters, it is highly exposed (rank 9) compared with other countries. A number of factors contribute to this exposure. The country is subject to extreme climatic variations, such as seasonal rain fronts and typhoons, as well as heavy snowfall on the Sea of Japan side of the archipelago. Its topography is rugged, and there are many faults and steep inclines. Japan is also located on the "Ring of Fire," with its 83 active volcanoes that represent one-tenth of the world total. It is frequently struck by earthquakes, and its coastline is vulnerable to tsunamis. Between 2000 and 2018, disasters affected some 4.5 million people, killing more than 22,000 and causing almost $354 million in damages.

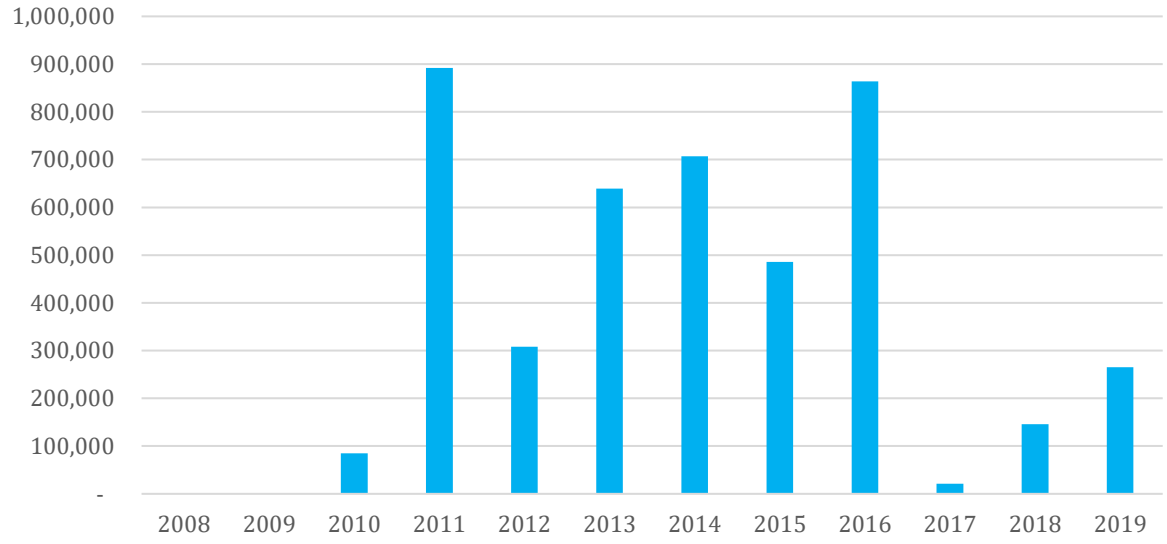
The Cabinet Office's Disaster Management Bureau has a mandate to coordinate policies and systems for all phases of disaster risk reduction. Being one of the most disaster-affected countries, Japan has taken an active role in international cooperation related to the issue, including hosting the World Conference on Natural Disaster Reduction in Yokohama in 1994, the World Conference on Disaster Reduction in Kobe in 2005 and the World Conference on Disaster Risk Reduction in Sendai in 2015.

Given its very high level of exposure to hazards, the country will have to continuously invest in further reducing disaster risk and respond more comprehensively to those displaced. This includes obtaining more comprehensive data on the movement of people during a disaster and for several months or even

years afterwards. Beyond pre-emptive evacuations, there is a lack of information on how long displacement lasts, when people return or where they resettle or integrate locally.

Trends analysis 2008-2019

Fig 3. Historical displacement trends in Japan



IDMC's global risk model estimates that an average of 148,000 people in Japan will be displaced by natural hazards annually. New displacements in 2019 almost double this number. Based on an assessment of IDMC's data over the last 10 years, the trend of new displacements is very different year-to-year. Part of this irregularity is a result of the availability of displacement data. It is also because of the sudden impacts of earthquakes, the increasing effects from flooding and major storm systems on communities, people's responses to evacuation orders, and their self-evacuations. IDMC changed its methodology in 2018 to only account for people in shelters in its displacement figures. It did so because this is evidence of actual movement and because of the challenges of using reports of evacuation orders. The two highest displacement years were partially the result of significant events that caused people to flee their homes: the Tohuku earthquake and subsequent tsunami in 2011; and various typhoons and the Kumamoto earthquakes in 2016.

For the full country profile on Japan please visit:
http://www.internal-displacement.org/countries/japan