

NHK's Emergency News Reports
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Emergency news broadcasting is NHK's mission

News can be broadcast as it is being made. This "real time" aspect of broadcasting is one of its greatest benefits, and a benefit that can be used with maximum effectiveness in emergency news reports. For it means that not only can news be broadcast of an actual or potential disaster, but people in places at risk can be instructed to evacuate to safety, or can be advised how to be ready to prevent disaster.

Under the Disaster Countermeasures Basic Act, which sets down the fundamentals for disaster prevention in Japan, NHK is the only broadcasting station designated as a national public institution. The mission of NHK's emergency news reports is therefore to help protect the life and property of people living in all parts of the country.

Thus, should a major earthquake occur or a powerful typhoon approach Japanese shores, regular programming is interrupted and emergency broadcasts substituted. Eight years ago, after the Great Hanshin-Awaji Earthquake of January 17, 1995, NHK ran emergency broadcasts on radio and TV for an unprecedented 26 hours continuously.

Emphasizing forecasting over news reports of injury and damage

NHK began television news broadcasts on February 1, 1953, and this year we are celebrating our fiftieth anniversary of TV broadcasting. Over these 50 years emergency news broadcasting has seen considerable development.

Reports of disasters on television are said to date from 1954, the year after TV broadcasting began, with the Toyamaru typhoon. The typhoon is named after the Toyamaru, a passenger ferry that plied the straits between Aomori prefecture and Hakodate in Hokkaido, and was sunk by high waves in the typhoon with the loss of close to 1,400 lives. TV cameras showed the hull of the ferry floating in calm seas after the typhoon had passed, as the news was given of Japan's greatest maritime catastrophe.

Before the coming of TV it was almost impossible to see moving images of events that occurred beyond one's sphere of activity. The pictures of the devastation left in the wake of the Toyamaru typhoon were the first scenes of a catastrophe to be shown on TV just as it had happened.

At that time, though, the news reports focused on casualties and damage in other words, the outcome of the disaster. It soon became clear that this in itself could do little to alleviate its damaging effects.

The Toyamaru tragedy occurred because the position of a typhoon and its likely course were not at that time broadcast with any precision, as they are now. The ferry left port because the clearing weather was mistakenly believed to indicate that the typhoon had passed. In fact, it was only the calm in the "eye" of the typhoon. To ensure that such a catastrophe should never happen again, emergency news broadcasting was revised to place emphasis on providing information to avoid disaster, rather than just reporting on casualties and damage.

Five years after the Toyamaru typhoon, when the 1959 Isewan typhoon struck Ise Bay, an official of the Meteorological Agency appeared for the first time on television to report the typhoon's course and strength and to issue typhoon-related warnings. Putting priority on forecasting rather than reporting on damage is a policy that continues to this day.

Ways to show what's invisible

The purpose of emergency news broadcasts is to reduce wherever possible the toll of death, injury and damage caused by disasters. To achieve this, NHK is ongoing in its efforts to present information in an ever more readily understandable way.

When destruction results from a typhoon or earthquake, TV pictures can be shown of damaged homes, collapsed bridges or landslides. It's much more difficult to turn a danger that is threatening damage into something that can be seen on TV. But to concentrate on forecasting information, some devices must be used of turning the invisible into something visible on the screen.

For current typhoon reports, images of cloud formations from weather satellites are processed using computer graphics to indicate the position of the typhoon and mark the area of gale-force winds around it, and onto this is plotted the course that the Meteorological Agency forecasts the typhoon to follow. On radar images, areas of heavy rainfall can be distinguished by color, and the images can be further processed to show areas where heavy precipitation is forecast. Furthermore, pictures from cameras installed by the Ministry of Land, Infrastructure and Transport to monitor water levels in major rivers all over the country are utilized to broadcast detailed information on swollen rivers and the likelihood of flooding.

Now, of course, broadcasts make use of these clear, well-designed visuals created with the help of computers. But up until about 10 years ago, when I was a reporter out on location, for typhoon information the TV camera was pointed at an outline of the Japanese islands drawn on a large whiteboard, which had a typhoon marker attached by magnet, and the surrounding area of gale-force winds drawn in with a pen.

By making the dangers of typhoons and torrential rainfall into something the eye can see, I believe viewers become more conscious of disaster prevention, and further their efforts to prepare for possible disasters. Forecasting is thus linked to prevention.

At one time typhoons were said to "take 1,000 souls with each gust," meaning that a major typhoon could result in casualties counted in the thousands. But in recent years such large numbers of victims have become very rare. Experts have pointed out that the fall in death tolls resulting from typhoons is due to the highly influential effect of these broadcasts.

Ever quicker

Another direction of NHK's ongoing efforts to improve emergency news broadcasts is in increasing speediness.

Ten years ago, in 1993, the South-West Hokkaido Offshore Earthquake measuring 7.8 on the Richter scale occurred beneath the sea bed of Hokkaido. Because this earthquake occurred in the relatively enclosed Sea of Japan it generated *tsunami* tidal waves, the largest of which were over 30 m high. 230 people lost their lives.

This earthquake hastened a major re-evaluation of emergency news broadcasts, because tidal wave warnings were not broadcast in time. At that time, it took the Meteorological Agency about seven minutes after the earthquake occurred to issue a tidal wave warning, and NHK broadcast the warning. But Okushiri Island, which suffered the largest number of casualties, was hit by the first major wave just five minutes after the earthquake.

To cut casualty figures from *tsunami* tidal waves, people living along coasts must escape to high ground or some other safe location before the waves arrive. Therefore *tsunami* warnings must be issued and broadcast as quickly as possible. Every second counts.

In consultation with the Meteorological Agency, NHK modified its system for providing news flashes on earthquakes and tidal waves.

At the time, it was taking around seven minutes from the time the earthquake occurred until the Meteorological Agency put out a *tsunami* warning, but now the Agency releases rushed information within about two minutes on the size of an earthquake and the area affected. If there's a danger of tidal waves, warnings are issued three minutes later.

For its part, NHK has developed a system whereby this earthquake and tidal wave information is shown almost simultaneously on TV screens as a superimposed message. In addition, we have seismic monitors of our own set up at 70 locations around the country, so we know when and where a major earthquake has occurred before the information comes from the Meteorological Agency, and can immediately prepare for a news flash.

Using state-of-the-art technology and boosting staff skills

In readiness for disasters that strike out of the blue whose timing, location and strength are impossible to forecast, NHK has been active in installing equipment and facilities that utilize state-of-the-art technology.

The NHK-developed "skip-back-recorder" makes a film recording that goes back about ten seconds from the moment the shaking of an earthquake is first sensed. After the Great Hanshin-Awaji Earthquake, this piece of film was broadcast around the world, capturing as it does the decisive moment when the earthquake struck. Skip-back recording equipment is now installed in NHK broadcasting centers throughout the country.

Remote-controlled cameras have also been set up in various locations to capture the scene at significant moments. Recently the use of cell phones with cameras has become widespread. We hope to create a system that can utilize such images for news flashes.

But all this affects more than just the news and technical departments. We need to heighten awareness of disaster prevention among all NHK staff, including our administrative and sales departments, and boost employees' skills to deal with emergencies.

At the time of the Great Hanshin-Awaji Earthquake many of our staff reported on the situation around their homes or on their commuting journeys. In the event of a major disaster, everyone throughout NHK supports the emergency news broadcasts. For that reason all employees, including administrative and sales staff, in our offices all over the country take part in annual earthquake drills or similar training.

To minimize the harmful effects of disasters

Japan has a greater number of natural disasters than most other countries. Although it has only 0.3% of the planet's land mass, around 10% of the planet's seismic energy is released in or around Japan. It also has 108 active volcanoes, representing about 10% of the world's total. Typhoons and seasonal rainstorms are regular events, so floods and landslides occur every year.

It is impossible to prevent earthquakes or volcanic eruptions, to stop typhoons in their tracks or moderate seasonal rains. But with effort we should be able to reduce the toll these disasters take in deaths, injuries and damage.

At NHK our objective is to provide speedy, accurate news reports that can be relied upon at times of crisis.