Reconstruction following the Great East Japan Earthquake

The Great East Japan Earthquake that struck northeastern Japan on March 11, 2011 caused considerable damage to six of the Nippon Paper Group’s production bases. On March 12, 2011, the Nippon Paper Group established the Emergency Committee. Led by the president, the Committee coordinated efforts to confirm the safety of employees and to ensure that the Group continued to fulfill its responsibilities regarding the supply of products and services. On March 17, 2011, Nippon Paper Industries set up the Disaster Recovery Division. With the support of a great many people, the company was able to pursue reconstruction. Operations then recommenced in full at Ishinomaki Mill, the hardest hit of the three production bases on August 30, 2012. In this section, we provide an overview of the reconstruction process.

For employees

- Provided evacuation support and guidance at the time of the earthquake disaster
- Delivered a wide range of emergency and relief supplies
- Implemented a variety of measures including initiatives aimed at strengthening natural disaster response capabilities

For disaster-hit areas

- Working hand-in-hand as a member of the local community to bring about the reconstruction of affected areas
  - Pledged early reconstruction of the Ishinomaki Mill
  - Removed earthquake debris, using wood waste as fuel
  - Supplied electric power to Tohoku Electric Power Co., Inc. and Tokyo Electric Power Co., Inc.
  - Leased land for use as temporary housing

Supporting reconstruction as a corporate group

- Contributed a total of ¥100 million to local municipalities in Ishinomaki, Iwanuma, and Iwaki cities
- Supplied essential daily items and 360,000 disposable diapers
- Implemented a bus service for volunteer workers.

For customers

- Reported on available supplies and supply methods
- Secured alternative production arrangements
- Implemented various measures including the emergency import of newspaper paper from Group companies in the U.S.

The status of damage incurred by the Nippon Paper Group

<table>
<thead>
<tr>
<th>Personal loss and suffering</th>
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<tr>
<td>Three mills and one branch (total aggregate workforce: 1,409 employees) incurred damage as a result of the earthquake and subsequent tsunami. The safety of all employees, who were on duty at the time, was confirmed. It is with a deep sense of sorrow and regret that we report six employees lost their lives outside working hours. Sadly, four employees lost their lives to the disaster. Regrettably, eight employees from related companies not included in the Group’s scope of consolidation, as well as major partner companies, lost their lives.</td>
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<th>Property damage</th>
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<td>While the Nippon Paper Group was forced to suspend operations at six mills as a result of the earthquake and subsequent tsunami, all production facilities resumed operating in accordance with plans. Brief details are presented as follows.</td>
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- Nippon Paper Industries Co., Ltd.
  - Nakoso Mill: May 2011
  - Iwanuma Mill: May 2011
  - Ishinomaki Mill: August 2012
  - Akita Mill: March 2011

- Nippon Daishowa
  - Paperboard Co., Ltd.
  - Ichinoseki Mill: March 2011

- Kitakami Paper Co., Ltd.
  - Related and Partner Companies
  - Daishowa Uniboard Co., Ltd.
  - Miyagi Mill: April 2011
On March 12, 2011, the day after the earthquake struck Japan, the Emergency Committee was established within the head office of Nippon Paper Group, Inc. At the same time, the president of the Company declared a state of emergency. Thereafter, the Disaster Recovery Division was set up within Nippon Paper Industries on March 17, 2011 as a part of comprehensive efforts to ensure the resumption of operations at damaged mills. I assumed the position of general manager of the Division determined to do my utmost until smiles returned to the faces all employees involved in operations at each of the damaged mills.

During a visit to the Ishinomaki Mill to inspect damage on March 26, 2011, Yoshio Haga, president of Nippon Paper Group, Inc., reconfirmed the Company’s intention to reconstruct the Mill bringing cries of joy and relief to the Mill’s many employees as well as government agencies, local residents and shopkeepers anxious about the future. I was struck with a strong sense of responsibility recognizing that the Mill’s reconstruction would lead directly to the region’s recovery.

First, reconstruction required the removal of soil, sludge, and rubble. Despite the tireless efforts of employees and support from related companies as well as personnel dispatched from other mills, the process took four months. Working in unison while building on the collective strengths of various personnel from companies throughout the Group, successful efforts were made to lift the pace of reconstruction with each passing day. Buoyed by these endeavors, Paper Machine 8 was brought back into service six months after the earthquake disaster.

A further six months later, the mainstay Paper Machine 6 resumed operations in March 2012. We were greatly encouraged by local residents who commented that the water vapor rising from the stacks of the Mill was a source of immense hope, helping to lift spirits and drive forward the region’s recovery.

In June 2012, the Disaster Recovery Division was disbanded and I assumed the position of Ishinomaki Mill general manager. Two months later at the end of August 2012, the Mill completed its full recovery according to plans. Looking ahead, we will cooperate with the city and prefecture to implement wide-ranging tsunami countermeasures including the construction of coastal levees and elevating roadways. We will continue to help promote recovery and reconstruction including the removal of rubble and supply of electric power.

Learning from this recent disaster, we have focused on putting in place enhanced natural disaster countermeasures and reviewed our natural disaster manual. We will continue to strengthen our endeavors to build a mill that is resilient to natural disaster.

In addition, we will promote the effective use of new construction materials made from granulated boiler ash and pursue the application of materials sourced from the Tohoku region and Japan. Through these and other measures, we will strive to ensure mill operations that boast increased cost competitiveness and efficiency.
The path to reconstructing the Ishinomaki Mill

Reconstruction following the Great East Japan Earthquake

**Reconstruction timeline**

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<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
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<tr>
<td>March 12 Established the Emergency Committee (Nippon Paper Group, Inc.)</td>
<td>Commenced the removal of rubble and debris from mill sites</td>
<td>Commenced receipt of wood-based debris</td>
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<tr>
<td>March 14 Commenced the receipt of emergency and relief supplies</td>
<td>Boilers online, supplying power to Tohoku Electric Power Co., Inc.</td>
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<td>March 19 Opened vacant Company housing facilities</td>
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The post-quake period

March 2011 — Period for securing a platform that allows local residents to lead stable lives

The Ishinomaki Mill was completely submerged underwater due to the tsunami. However, emergency evacuation measures were implemented ensuring the safety of all employees working inside the Mill. Among a variety of initiatives implemented in the wake of the disaster, steps were taken to deliver emergency and relief supplies and open vacant Company housing for use by displaced residents.

Rubble and debris removal period

April to July 2011 — Period for removing rubble and debris

Reconstruction support teams were established at mills unaffected by the earthquake disaster. At the same time, heavy machinery and operators were dispatched to commence clean-up activities. Employees from the Ishinomaki Mill and partner companies combined with members of reconstruction support teams to remove rubble and debris.

**Placing the utmost emphasis on safety and human life as an initial response**

Takashi Sato
Assistant Manager, General Affairs Dept. Ishinomaki Mill Nippon Paper Industries Co., Ltd.

Immediately after the earthquake struck, radio broadcasts began warning about a tsunami that would be several meters high. We took prompt steps to evacuate the 1,306 employees working onsite. I immediately felt that this was going to be worse than any tsunami we had seen, so I insisted that everyone climb to higher ground. The mill-wide emergency broadcasting system proved invaluable. It meant that even after we lost electric power we were able to repeatedly broadcast evacuation orders. Undoubtedly, disaster preparation initiatives saved lives that day. Several of the employees, who had evacuated to higher ground asked to return to the Mill to retrieve their mobile phones. Actions of this nature were strictly prohibited as a matter of course.

Once the safety of staff had been secured through the evacuation of all employees, employees responsible for organizing the evacuation only just had time to scramble to safety themselves before, seconds later, the horrifying force of the tsunami hit the mill. Our urgent actions were successful. Every single mill employee was safe.
The Ishinomaki Mill, owned and operated by Nippon Paper Industries, took steps to secure a platform that would allow local residents to lead stable lives, remove rubble and debris, and restore facilities and equipment. On August 30, 2012, the Mill brought back online Paper Machine 6 and Coating Machine 2 in accordance with the Group’s Paper Business Revitalization Plan announced in August 2011.

In conjunction with the removal of rubble and debris, the Mill took steps to ascertain the status of damage and to undertake repairs. In August 2011, the Mill’s power source was restored. In the following month, production facilities were brought back online in order of precedence. Thereafter, all six paper machines and two coating machines recommenced operations on August 30, 2012 according to plan. Production began anew with an annual capacity target of 850,000 tonnes.

After inspecting equipment and facilities following the earthquake, the first floor pump and electric power machinery powering Paper Machine 8 were submerged under water. In contrast, the main Paper Machine unit located on the second floor was spared any major damage. Under these circumstances, we felt that a resumption of operations was more than possible. With a strong sense of mission, we focused on delivering printing paper to our publishing customers at the earliest possible opportunity.

Restarting a paper making machine is a complex process, and sometimes problematic. It requires demanding skills and time to establish the flow of paper through the machine. However, that day the machine started perfectly and the paper flowed without a problem. It seemed like a miracle. There was now no doubt; we could make paper again in Ishinomaki. Hope had been reborn.
Ishinomaki City suffered horrendous damage as a result of the Great East Japan Earthquake. Houses and businesses near the coast suffered the severest damage from the tsunami. Most tragic of all was the terrible loss of so many lives.

Despite these difficulties, the damage incurred to their own equipment and facilities, and personal suffering, Nippon Paper Industries Co., Ltd. and group companies have been selfless in providing their support and assistance in removing immense volumes of rubble. I would like to express my sincere appreciation for their efforts.

Mr. Haga, president of Nippon Paper Group, Inc., was quick to pledge the full reconstruction of the Ishinomaki Mill, owned and operated by Nippon Paper Industries Co., Ltd. At a time of deep anxiety and uncertainty, this commitment provided encouragement to the 160,000 residents of the city.

I am filled with awe and respect toward the efforts of all concerned at Nippon Paper Industries Co., Ltd., who brought about a complete recovery of the Mill in the very short period of one year and six months. At the same time, I am convinced that the recovery of the mill would, in turn, lead to a strong recovery of the whole Ishinomaki area.

As a city, we have identified the fundamental principles of building a city that is resilient to disasters, revitalizing industry and the regional economy, establishing a society that is defined by its close ties and bonds forged through cooperation. Our goal is to serve as a reconstruction model for the rest of the world. Working hand-in-hand with Nippon Paper Industries Co., Ltd. we will strive to realize a full recovery.

The Ishinomaki Mill came to us with the idea of making enormous colorful carp streamers in an effort to provide encouragement to the people of the region as they took the first steps toward rehabilitation and to promote the healthy growth of children. Young children from all schools throughout the region threw themselves into the task.

Seeing these massive streamers blowing majestically in the wind from the stacks of the Ishinomaki Mill impressed all of the children and local residents and provided a wonderful source of encouragement.

Encouraged by the sight of koinobori (colorful carp streamers)

The scene was unforgettable. After the earthquake I stood in my garden and stared in disbelief at what had been the office and the canteen I had often visited; now they were just piles of debris. Rubbish was everywhere, with the wreckage of people’s homes from outside the mill.

In the aftermath of the disaster, the Nippon Paper Group provided emergency and relief supplies, opened its facilities to local residents, and worked hand-in-hand to bring about a recovery. More than anything else, however, the community was encouraged by the pledge to reconstruct the Mill. A great weight was lifted and anxieties allayed as we witnessed efforts to rebuild the facility. The completion of construction in less than a year and a half brought a significant ray of hope to the City of Ishinomaki.

A key issue confronting Ishinomaki City in the wake of the earthquake is rising unemployment. My hope is that the continued growth and development of the Mill will help generate additional employment.
I would like to extend my sincere thanks to all customers who provided their generous support and cooperation following the recent earthquake disaster. At the same time, I am extremely grateful to all Mill employees as well as related and partners companies, who successfully brought about a complete recovery of the Mill from what was virtually a hopeless position. The sight of people working through the burning heat of summer and the bitter cold of winter, and never saying a word, will remain in my mind and in my heart forever.

The earthquake disaster again shone a light on the enormous strength and fortitude of people and the ability to overcome adversity. Supported by this power, I also take great pride in the Ishinomaki Mill. In working toward resumption of operations at the Mill, we received numerous comments of encouragement from local residents. The earthquake was undeniably a terrible experience, yet through the hardship I was able to experience things that were truly moving, to see genuine appreciation for the help given, and to witness the formation of deep ties between people. In overcoming hardships, I am convinced that the more robust Ishinomaki Mill will continue to develop and grow in partnership with the local community.

Many people participated in and supported efforts to reconstruct the Ishinomaki Mill

I would like to express my appreciation to all those who provided their support in the reconstruction of the Mill. Considerable supplies and donations were received following the disaster. At the same time, I am extremely grateful to all Mill employees as well as related and partners companies, who successfully brought about a complete recovery of the Mill from what was virtually a hopeless position. The sight of people working through the burning heat of summer and the bitter cold of winter, and never saying a word, will remain in my mind and in my heart forever.

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Hiromi Kurata
Advisor
Nippon Paper Industries Co., Ltd.
(formerly senior managing director and general manager of the Ishinomaki Mill)

Stickers made from paper produced at the Ishinomaki Mill. The design depicts the character for “dreams” and the feelings of heartfelt thanks.

Passing on the baton of successful efforts to reconstruct the Mill and focusing on activities to protect and enhance customer satisfaction.

I would like to extend my sincere thanks to all customers who provided their generous support and cooperation following the recent earthquake disaster.

Having incurred substantial damage to its facilities, Nippon Paper Industries Co., Ltd. was forced to suspend the monthly production and supply of 80,000 tonnes of printing paper. We were, however, able to minimize the impact on customers and disruptions to supply by boosting production at other mills in Japan and overseas as well as directing products earmarked for export to the domestic market.

After successfully bringing about a complete reconstruction of the Mill, the baton has now been passed on to operating, sales, and marketing departments. It is now the mission for these departments to carry on this effort through to the delivery. I believe that the genuine revival of the Nippon Paper Group will only be achieved when this complete cycle is achieved.

Shinichi Sato
Managing Director and General Manager Paper Sales Division
Nippon Paper Industries Co., Ltd.