

## Impact of the Disasters and Recovery Efforts



**The Japanese automobile industry faced two major natural disasters in 2011: the Great East Japan Earthquake and the Thailand floods. Toyota overcame these crises through unified efforts with its group companies, suppliers, and dealers, all engaging in a variety of efforts to restore operations so as to achieve even more prompt delivery of vehicles to customers.**

### Impact of the Disasters and Subsequent Efforts

#### The Great East Japan Earthquake

The Great East Japan Earthquake of March 2011 caused massive damage in Tohoku and other regions, and had an impact on many Japanese companies. Many of Toyota's suppliers are located in Tohoku and eastern Kanto, and this resulted in a temporary halt of production at its domestic vehicle-production plants in the immediate aftermath of the disaster.

The disaster delayed output through June 2011 by approximately 760 thousand vehicles globally, but enlisting the entire company in efforts to restore the supply network enabled us to recover output of about 600 thousand units from July on. Therefore, the total impact of the disaster in fiscal 2012 was a decrease in output of about 150 thousand vehicles.

#### Floods in Thailand

The Thailand floods that began in July 2011 caused damage to Toyota's suppliers there and had an impact on global production. By adjusting the operational levels of each production line according to the parts situation, we were able to return to normal operations in North America by the first half of December 2011, and in Thailand by the beginning of

2012. As a result, the Thailand floods caused a decrease in output of about 240 thousand vehicles in fiscal 2012.

While the impact from these two disasters was initially estimated to decrease output globally by approximately 1 million vehicles, output of 600 thousand vehicles was recovered through a unified, companywide effort that held the drop in output to only about 390 thousand vehicles (actual vehicle output: 7.52 million).

#### Disaster Response

Toyota is revising its Business Continuity Plan (BCP) as needed to strengthen measures to protect lives and maintain production in the event of a natural disaster. Drawing upon lessons learned from the supply chain disruptions we experienced due to the Great East Japan Earthquake and Thailand floods, we conducted a "visualization" analysis of the supply chain, including tertiary and 4th-tier suppliers. We then launched measures such as decentralizing sources for at-risk parts and converting to generalized designs. Our work to further strengthen our disaster countermeasures is proceeding from the twin perspectives of strengthening our everyday competitiveness and building a business structure able to withstand disasters.

### The Great East Japan Earthquake: Production Recovery Efforts

At Toyota, we believe that recovering production is impossible without revitalizing communities. Therefore, our production recovery-effort priorities were in the following order of priority: 1) Human life; 2) Quickly restoring stricken communities; 3) Restoring production. Our core measures for post-quake production restoration were as follows:

#### (1) Status assessment (mainly conducted by the Purchasing Group)

- We conducted an investigation of all primary suppliers, including the impact of issues at secondary and tertiary suppliers.
- Dispatched onsite investigation teams to confirm production items and inventory.
- Examined the impact on overseas production.
  - ➡ The purchasing units within the operations confirmed the availability of supplies via the primary suppliers.

#### (2) Support for suppliers

- Provided support for the 200 supply bases visited by the onsite investigation teams.
  - ➡ Support for prompt restoration was provided under our policy of immediately doing what is truly necessary onsite.

#### (3) Look into finding substitutes

- Look into finding substitute products, but only when restoring onsite production is problematic.
- Evaluate substitutes.

All Toyota companies, from suppliers through dealers and overseas operations, came together to provide support and to restore, applying *genchi genbutsu* (on-site verification) and the power of the workplace for swift decision-making, immediate action plus teamwork. This brought about a normalization of operations far in advance of predictions, with domestic production at almost normal levels by July 2011 and fully restored by September.

## Impact of the Disasters and Recovery Efforts

### Toyota's Efforts to Drive the Recovery of the Tohoku Region

Toyota is committed to helping the people of Tohoku build a bright future by focusing on revitalizing the auto industry, creating new businesses and making social contributions.

#### Revitalizing the auto industry

We established Toyota Motor East Japan, Inc. in July 2012 as our third major production base in Japan. It will contribute to global growth by building compact vehicles, and join with the Tohoku region in revitalizing the economy through manufacturing. In January 2013, we will establish the Tohoku Local Procurement Promotion Center to join with the region in promoting manufacturing and increase procurement from within the region by finding and cultivating parts makers. In April 2013, we will open the Toyota East Japan Technical Skills Academy for medium- to long-term human resource development for manufacturing.

#### Creating new businesses

Toyota is looking into new businesses to promote revitalization. One example of this is the F-Grid Concept for comprehensive energy management. Rather than managing the energy use of individual factories, the F-Grid covers energy usage among regional plants as well as coordinating the use of energy among plants and communities. The goal of the F-Grid is to contribute to post-disaster regional restoration by creating actual "smart communities" focused on industrial areas, so as to promote higher levels of energy conservation and use of renewables. This will revitalize local industry by enhancing the value, competitiveness, and appeal of industrial areas and surrounding communities.

#### Making social contributions

Not only will we continue to provide supplies and personnel to the Tohoku region, but through the Kokoro Hakobu\* Project, Toyota will also sponsor charity concerts and cultural events, and promote food and produce from the stricken areas.

\* The Japanese words "kokoro hakobu", mean "to carry (or deliver) one's heart"

