

「災害発生時、物流はどのように対応するか」

2011年3月11日に発生した東日本大震災は、人的、物的に様々な被害をもたらした。物流においても、避難所に生活必需物資がなかなか届かない、被災地だけでなく被災地外においても店舗の棚には商品が並ばないという事態が発生し大きな問題となった。さらに部品、原材料等の調達が滞り、例えば自動車メーカーの工場が長期間にわたって操業停止するなどサプライチェーンの途絶ということも大きな問題となった。このように、東日本大震災は、物流の脆弱性を明らかにすると同時に、その重要性を改めて認識することとなった。

東日本大震災発生後、政府、あるいは企業等は、災害に強い物流システムの構築に向けて、様々な検討をし、体制構築を図ってきている。その後の大規模災害が発生するたびに、物流対応が重要な社会的課題ともなっており、体制の整備も進んできている。しかしながら、今後発生が予想されている南海トラフ巨大地震、首都直下地震が発生した場合、従来の大規模災害をはるかに上回る物資需要が発生すると同時に、工場、物流センター等の被災による供給の停止、高速道路等の交通の大動脈の寸断が予想される。そのため、従来の備えだけでは対応が難しいことも予想される。

本号では、大規模災害発生時に物流はどのように対応するべきかについて、様々な視点から論じるものである。

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How can logistics providers respond to natural disasters?

On March 11, 2011, the Great East Japan Earthquake devastated eastern Japan, taking a massive toll in both human and material terms. The distribution infrastructure was also severely damaged, making it difficult for vendors to deliver the essentials of daily life to people who were trapped in evacuation centers. Even in areas of the country that had not been damaged by the earthquake there were serious supply problems. Many stores were not able to stock their shelves, while manufacturers often found it difficult to procure parts and raw materials. For example, many automakers were forced to suspend operations at their factories for extended periods of time. Interruptions in the supply chain caused severe problems. In this way, the Great East Japan Earthquake exposed many weaknesses in the traditional distribution system, reinforcing the importance of supply chain management.

Since the earthquake, both private corporations and government organizations have been examining various factors and examining ways to develop distribution systems that are more resilient, allowing them to cope with natural disasters. All of the large-scale natural disasters that have taken place since 2011 have helped to reinforce the importance of having a distribution system that can cope with such unexpected challenges, and have spurred on efforts to develop such a system. Scientists are already anticipating the next major disaster, which could take place in the Nankai Trough (off Japan's southeast coast) or in the Tokyo area. If a major quake occurs in either of these locations, the extent of the damage is likely to be severe, and the demand for essential goods may well surpass that of any prior disaster. Damage to factories and distribution centers will probably once again interrupt the supply of goods, while expressways and other major transportation arteries are expected to be thrown into chaos. It is unlikely that disaster preparations alone will be adequate to address these problems.

This article examines various potential ways to address the distribution problems that a major natural disaster is likely to create. We intend to examine and discuss the issue from various points of view.

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