## A Double Whammy

The recent massive earthquake and tsunamis in eastern Japan have caused a collapse of fisheries in the disaster-ravaged areas, which are now fighting to come back

n 11 March 2011, a great earthquake of magnitude 9 (on a scale of magnitude one to 10; magnitude 9 is the highest level ever recorded in Japan) occurred along the Pacific coast of northeastern Japan, commonly known as the Sanriku region. The earthquake subsequently triggered massive tsunamis that destroyed many fishing communities and ports along the coast of the region. While the Sanriku region has experienced several large tsunamis and other natural disasters in the past, the March 2011 earthquake is said to be equivalent to the huge quake that hit Japan 1,000 years ago and caused damage on such a devastating scale as could happen only once in 1,000 years.

The Japanese government publicly put the death toll from the earthquake and subsequent tsunamis, as on 22 May 2011, at 15,179, with 8,803 people still missing.

towns and villages in areas have the tsunami-stricken been changed completely by the overwhelming power Fishing ports, fishing vessels and aquaculture facilities were swept away by the giant waves, and landbased processing plants, markets and other distribution centres were completely destroyed. Fire broke out in Kesennuma, one of Japan's major home ports for distant-water tuna fishing vessels in Miyagi Prefecture. The once-thriving port town is nowhere to be seen now.

The disaster-hit Sanriku area has one of the richest offshore fishing grounds in the world. With bountiful marine resources, fisheries have naturally developed to become an important industry for the area.

According to the Fisheries Agency of Japan, the area has produced 80 per cent of *wakame* seaweed produced in Japan, 30 per cent of cultured oyster and 32 per cent of Pacific saury.

The earthquake and tsunami wiped out, in an instant, all the necessary components for fisheries, together with countless lives of fishermen and others related to fisheries. Rubble and rubbish from demolished household property, fallen trees and smashed automobiles are piling up in the sea, making it impossible to use fishing ports and fishing grounds.

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The revitalization of fisheries in this area has necessarily to begin with the mind-boggling work of removing these massive piles of debris. The start is not from a zero position but rather from a negative, minus status. The resultant burden on the shoulders of local fishermen and others related to fisheries in the disaster-struck area is extremely heavy and onerous.

## **Nuclear accidents**

A more serious problem is the outbreak of accidents at the nuclear power plant in Fukushima. As all electric power sources were cut off by the quake and tsunami, it became impossible to cool off the nuclear reactor, and radioactive substances began to leak into the surrounding

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Fishing vessels thrown off the Kesennuma port, Japan. The road to the commercial wharf was made impassable as the ground near the fish market sank about 1 m

environment, including the oceans. Residents near the Fukushima Nuclear Electric Power Plant were compelled to take refuge in safer places. As things stand, it is very unlikely that restoration work on the nuclear power plant can be started for some time to come.

On the possible impact of radioactivity on fishery products, an expert of the Fisheries Agency explained: "The radioactive cesium emitted into the environment is not necessarily enriched within the fish body by way of food chains. It is not accumulated in the body of fish because it is discharged out of the body in marine fish, which constantly continues to take in sea water in order to maintain salinity within body. Iodine presents problems because its half-life period of radioactivity is short—about eight days."

In clarifying thus, the expert was cautioning consumers not to be misled by unfounded rumours but instead to seek for facts and a correct understanding of the situation. The Fisheries Agency regularly carries out measurement of radioactivity values in marine products in related sea areas to ensure safety standards for seafood. The agency has also made it clear that it intends to further reinforce its inspection of seafood. Therefore, there appears to be no risk of fish with radioactive

values beyond regulated levels being distributed in the market, and consumers can continue to safely buy seafood.

The willingness of fishermen in the disaster-ridden areas to help in the reconstruction of their fisheries very strong. The Japanese government is also exerting its utmost efforts to rehabilitate fisheries in the region. Added to that is the active movement among Japanese throughout the country to assist the disaster-stricken people, including in the form of a campaign to promote the purchase of seafood from the disaster-hit areas. The total restoration of the tsunami-ravaged areas is the desire of all these people. It is hoped that the crippled Fukushima nuclear power plant will be restored by mobilizing the collective technological wisdom of the world, including the United States and France. Also encouraging is the basic soundness of the Japanese consumer market, which generates a persistent demand for seafood.

During the course of its history, Japan has experienced a number disasters natural including earthquakes, tsunamis and volcanic eruptions. Each time, the nation has overcome the hardships brought about by the calamities. Given the size and scale of the present disaster, it might take a considerable length of time for a total restoration of the geography and economy of the affected areas, but we believe Japan certainly overcome these difficulties—it has no other choice.

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www2.convention.co.jp/maguro/e\_maguro/index.html

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www.asahi.com/english/ TKY201103210092.html

Earthquake, tsunami cripple Miyagi fishing industry

www.abc.net.au/news/specials/japanquake-2011/

Japan Earthquake: before and after