

## Natural Disasters



### The Great Hanshin-Awaji Earthquake 1995

One of the consequences of Japan's widespread use of asbestos was observed after the 1995 Great Hanshin-Awaji earthquake which affected Kobe, Awaji, Ashiya and Nishinomiya and their surrounding areas. Post-earthquake atmospheric monitoring by the Environmental Agency (Japan) showed an increase in ambient asbestos concentration in the stricken zone; a diffusion model was used to assess how much of this contamination was due to sprayed-on asbestos insulation/fire-proofing present in earthquake-damaged buildings at 16 sampling points. The scientists estimated that prior to the earthquake there had been 3,740 tonnes of sprayed-on asbestos stock in the affected buildings; the quake liberated 26.4 kg of asbestos into the envi-

ronment.<sup>75</sup> Experiments revealed that demolition without pre-removal of asbestos caused the highest levels of asbestos emissions into the surrounding areas; asbestos removal costs accounted for 68-94% of total demolition costs.

### Indian Ocean Tsunami 2004

The destruction wrought by the Indian Ocean tsunami devastated communities in Sri Lanka, Thailand, India, Indonesia and the Maldives. On February 22, 2005, Ian Cohen, an Australian politician who was on the beach in Hikkaduwa, in the south-west of Sri Lanka on December 26, 2004, told the New South Wales Parliament that in the aftermath of the tsunami there was:

"a great deal of asbestos spread around that coastal area. As the houses and buildings were destroyed, asbestos was broken up. It was being cleared by hand and bulldozer without appropriate safety measures."

Despite Cohen's warnings of the hazards caused by thousands of tonnes of asbestos waste, no attempts were made to control the widespread contamination. Cohen explained:

"There is an asbestos industry in Sri Lanka that claims it is just blue asbestos that is the problem, not white asbestos. I have it on good authority from people who have been involved in unions here in Australia that white asbestos is as much the issue as is blue asbestos. I have written a letter to Alexander Downer advising him that the asbestos industry in Sri Lanka has been conducting an aggressive campaign to convince particularly Southeast Asian countries that asbestos products are safe."

Observers from the United Nations Environment Programme (UNEP) were seriously concerned about the threat posed by hazardous waste, including clinical waste, waste oil, batteries as well as asbestos, found in post-impacted tsunami countries. In a series of UNEP Post-Disaster Waste Management Workshops which were held in the Maldives (May 2005), Indonesia (June 2005) and in Pakistan (March 2006), the asbestos hazard was one of many waste issues flagged up.<sup>76</sup> Although funding was available, no such workshop took place in Sri Lanka, a country where asbestos-containing materials are regarded as everyday building materials. The Government's views are expressed in a three-page document entitled: *Usage of Chrysotile Fibre-Bonded Cement Roofing Sheets for the Housing*