

MEDIA RELEASE

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ATTENTION: Chiefs of Staff, News Directors



Japanese aftershock no shock, says quake lecturer

The strong aftershock which hit Japan's Miyagi Prefecture late last week, raising fears of new strains on the crippled Fukushima nuclear plants, came as no surprise to the new Executive Director of the Institute for Marine and Antarctic Studies, Professor Mike Coffin.

Prof. Coffin, a marine geophysicist who lived and worked in Japan for nearly seven years until the end of 2007, will analyse the unfolding saga at a public lecture entitled *The Great 2011 Tohoku Earthquake and Tsunami*, in the University of Tasmania's Centenary Lecture Theatre on Thursday evening.

The March 11 megathrust earthquake, which was measured at 9.0, is rated as one of the five most powerful in the world overall since modern record-keeping began in 1900. Last Thursday's aftershock had a magnitude of 7.1, according to the United States Geological Survey.

"This aftershock reflects ongoing adjustment along the portion of the plate boundary associated with last month's event. Adjacent to this rupture zone, both north and south, stress is building in regions of so-called 'slip deficit'," Prof. Coffin explains.

Strong aftershocks also followed the 2004 Boxing Day earthquake in Indonesia, and more recently, near Christchurch.

It's probably little comfort to the inhabitants of Japan's devastated north-eastern coast that quakes of the magnitude of March 11 are few and far between: in the case of this region, it's been 1142 years since the last such catastrophe.

"That happened in 869AD – we know the date from studying silt deposits carried far inland by the attendant tsunami – and it's known as the Jogan Earthquake and Tsunami," Prof. Coffin said.

"So the repeat times for megaquakes in this region may be about 1,100 years, which given the stresses that have built up in the interim explains why Honshu moved 2.4m to the east on March 11."

That part of Asia sits on the North American tectonic plate, which wraps up and around the Pacific plate and extends a tentacle southward that part of Japan sits atop. The Pacific plate is moving about 8 centimetres a year in a west-northwest direction, and in that collision the Pacific plate dives under the North American plate.

Prof. Coffin is happy to now live in what is geophysically one of the safest places on Earth.

“Not only do we have little to fear in terms of a major earthquake threat but we are also isolated from nuclear contamination in the northern hemisphere.”

Prof. Coffin will give his free public lecture on Thursday at 6pm in the Centenary Lecture Theatre, Sandy Bay campus.

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