

Scientists explore Sichuan fault

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Durham University expert, Alex Densmore, is to explore the fault lines that caused the May 12th earthquake in China that killed 69,000 people.

Dr. Densmore, Director of Hazards Research at the Institute of Hazard and Risk Research at Durham University, is the first UK scientist to visit the region to research the faults and the effects and causes of the Sichuan earthquake since the disaster.

Dr. Densmore said: "We'll be looking at the effects of the earthquake on the ground and for evidence of what actually happened during the earthquake. We'll be looking very closely at how the tectonic blocks actually moved in relation to each other.

"Much of what actually happens during earthquakes is difficult to view because it occurs deep below the surface. By looking at the way in which roads, pipelines, rivers and other man-made markers are affected, we can map out how the earth moved, what faults were responsible, and what kind of activity we might expect in future events."

Dr. Densmore leaves for China on Wednesday 13th August and will be working alongside colleagues from Shell UK Ltd, the Chengdu University of Technology, and the Seismological Bureau of Sichuan Province. The research team will study:

1. which faults were active during the earthquake and what actually happened;
2. how the tectonic blocks are moving relative to each other in this part

of the India-Asia collision; and

3. what is expected to happen in the future the next time an earthquake happens

It is thought that two main faults were involved in the May 12 earthquake, out of four or five active faults in that part of China. At least 22,000 aftershocks, measuring up to 6.9 in magnitude, have been monitored in the quake zone, according to the China Earthquake Administration.

Dr. Densmore said: "Aftershocks are expected after every large earthquake and this has been no exception. Earthquakes release stress where they occur, but they also cause increased stress in the surrounding rock, and this additional pressure has to be released. Peak aftershock activity is generally in the first few days after the main quake, and the number and size of aftershocks decreases rapidly after that."

18,000 people are still officially missing and a further 374,000 people have been classified as injured following the Sichuan disaster. Beichuan town has been completely evacuated following the earthquake. The Chinese authorities are looking at building a whole new town for the former residents.

Dr. Densmore said: "We are conscious of being as sensitive as possible while working in this area. There is still a lot of recovery work going on and there are obvious long-term infrastructural problems. We hope to be able to visit the town of Beichuan which was decimated by the earthquake, but this will depend very much on the local authorities. We're very thankful to the Sichuan provincial government for granting us access to the earthquake zone at such a critical time.

The location of the active faults is crucial. We want to see if the faults that we've previously mapped were activated during the earthquake, or if

the quake occurred along a new set of faults. Knowing where the active faults lie, and how much they are likely to move in future events, can help the Chinese authorities in planning new buildings and towns to reduce the likelihood of future casualties."

Source: Durham University

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