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**The NATO Science for Peace
and Security Programme**

Article by Jayne Clinton, NATO PDD, for the NATO CEP Newsletter (April 2009)

NATO Science Programme contributes to important earthquake research in the Caucasus

Spitak, Armenia, December 1998. An earthquake with a magnitude of 6.9 on the Richter scale struck at 11:41 local time. The consequences were catastrophic: 25,000 people killed; 20,000 injured and over half a million left homeless.

The Caucasus region is seismically very active and earthquakes pose a constant threat: Baku, Azerbaijan, 2000; Tbilisi, Georgia, 2002. Both quakes caused loss of life and severe economic damage. In order to help mitigate the effects of earthquakes in the region, it is critical that local experts have access to the latest equipment and proven methods to carry out essential hazard assessment.

In response to this need, a three-year NATO Science for Peace (SfP) programme was awarded in July 2008. The project, entitled "Caucasus Seismic Emergency Response", is being led by eight experts from NATO member and partner countries, with the overarching goals of building capacity in the region and promoting sustainability, stability and cooperation. The official project launch is scheduled to take place during the NATO week in Georgia in May/June 2009.

On a practical level, the project is providing the necessary funding for equipment such as seismographs, accelerographs and strong motion recorders, which will be installed at selected sites in Armenia, Azerbaijan and Georgia. Project task forces from each country will be set up and trained in the deployment of equipment, digital seismic data processing and analysis, and basic skills in first aid, etc. These task forces will be ready to move quickly into neighbouring countries that may need their assistance, enabling them to gather data from what is known as "first day's aftershocks", a critical factor of in-field investigations.

A Communication Network for earthquake data acquisition and information exchange between the countries will also be established using the latest and most reliable GPRS/GPS techniques.

Through this project, Armenia, Azerbaijan and Georgia will work together to build inter-regional cooperation that will encourage unhampered response in the event of strong earthquakes. All of the data and information gathered as a result of this project will be shared with the relevant public officials responsible for disaster response in each country.

Earthquakes in any country cause destruction. In developing regions such as the Caucasus, the effects are even more disastrous, often setting the countries back economically by many years.

This situation then has the potential to lead to social unrest and ultimately threatens the secure development of the region as a whole. It is hoped that the results from this NATO Science for Peace project will make a significant contribution to improved seismic risk assessment for the region.

With more information available on the potential hazards, countries will become less vulnerable, and ultimately better prepared to respond to the earthquake threat.