



Misunderstood “forecasts”

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It is often difficult to transmit properly from scientists to the population the information about the evolution of a seismic sequence and sometimes it determined unintended consequences. This is because the earthquake process remains in a large part unknown by science while the communication media ask for certainness, possibly provided by sensational news. We report here two examples.

The Friuli earthquake of 1976 was the first seismic event that involved both the international scientific community and the state structures that would subsequently gave rise to the Italian Civil Protection Service. On May 6, 1976 at 9:00 p.m. (local time) an earthquake of ML 6.4 struck central Friuli causing nearly 1,000 deaths. The earthquake was preceded a minute before by a quake of ML 4.5 that allowed at least some people to find shelter before the devastating tremor. No shocks were recorded in previous days from the affected area by the existing instrumentation in the seismological stations of Trieste and Ljubljana located, respectively, at 70 and 100 km from the epicentral area. The number of shocks and their magnitude diminished gradually as time passed and in August it seemed that the seismic sequence had been exhausted. In early September, however, there was an upsurge of the number of earthquakes recorded by the Trieste station, which resulted with four strong events respectively on September 11 (ML 5.4 and 5.6) and 15 (ML 5.9 and 6.1). These shocks created more victims and damage in the same epicentral area of the May quake. On September 26 a further increase in the local seismicity was noted on the recordings of the temporary network. On the basis of the previous experience, the director of the Experimental Geophysical Observatory (OGS), institution managing the seismological station of Trieste, issued a press release highlighting this increase of activity. Consequently, the special commissioner for the Friuli earthquake sent a telegram to the OGS director blaming him for the unmotivated alarm.

The city of Banja Luka (at that time in Yugoslavia, today in Bosnia and Herzegovina) was heavily damaged by two powerful earthquakes in October 26 (ML 6.1) and 27 (ML 6.4), 1969. The urban legend says that there was a successful prediction of the second earthquake which has saved a lot of lives. In reality, the Head of the Astronomical-Geophysical Observatory of Ljubljana said that it was possible that more earthquakes would have followed the event of October 26, as it is usual after a strong quake.

A question rises: “Is there any further scientific aspect of the seismic process that the scientists should consider before disseminating information?” considering, e.g., that in the case of the Friuli event two “anomalous” phenomena (earthquakes in the aseismic area of Latisana, and oscillations recorded by the Trieste Earth Tide station, respectively 50 and 70 km from the May 6 epicentre) preceded the main shock. A re-evaluation of the seismic activity recorded by the Trieste station is here presented to investigate the aspect of seismicity fluctuation during the Friuli sequence.