Geophysical Research Abstracts
Vol. 18, EGU2016-2401, 2016
EGU General Assembly 2016

"Water bombs" and seismic areas: two sides to the same problem?

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Intensification of catastrophic events over the last few years in Northern Tuscany (Italy), caused by real "water bombs", with the ensuing risk of flooding and an increase in seismicity, may point to a cause-effect relationship between the two phenomena.
A relationship between baric variations and seismic activity resulting in earthquakes with a magnitude greater than M3, has already been described by Sytinsky (1997). Studies carried out on atmospheric processes during strong earthquakes have shown that there are also strong perturbations in atmospheric circulation, which manifest as a major restructuring of the pressure fields, as with changes in meteorological parameters. Recent studies by Straser (2015) have emphasized that variations in atmospheric pressure can affect the equilibrium of the rocks in fault zones, above all if part of a distensive tectonic context like the Lunigiana and Garfagnana area, which became an open-air laboratory to carry out this current study.
Interaction between tectonic thrusts, the gases emitted in areas under crust stress, the production of ions in the atmosphere, detectable instrumentally and associated with pre-seismic signals have been described by Pulinets, (2007) and Pulinets with Boyarchuk (2004), as has the formation of nano particles and filamentous structures, of varying origin, caused by a combination of meteoric phenomena associated with electrical discharges and airborne ions as highlighted by Courty and Martinez (2015).
One element to bear in mind when hypothesizing variations in equilibrium in distensive faults, is water. Indeed, it has been proposed that the quantity of water that reaches the ground during the kinds of strong precipitation analysed in this study might well create pressure variations in close proximity to the faults at the same time as lowering the friction coefficient in tectonically vulnerable areas.
In contrast, it has also been suggested that frequent and prolonged seismic activity in the same area can release gaseous and particulate compounds into the atmosphere (climate drivers), such as ozone, methane, nitrogen oxides and particulate matter, which exert an influence on the amount of solar energy, including heat, that the Earth traps, as well as the solar energy it reflects back into space.
The considerations made in this study hold true for variations in atmospheric pressure at ground level, since this does not happen on the seabeds where the water moves to offset pressure differences. Given that friction is proportional to pressure acting perpendicularly to the fault plane, it can be concluded that even a modest variation may affect the friction within rocks if constantly repeated.