Geophysical Research Abstracts
Vol. 18, EGU2016-7806, 2016
EGU General Assembly 2016

Interconnection of tectonic stresses in the Earth's crust and dynamics of the groundwater basin functioning

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1. Possible influence of tectonic stresses on the occurrence of catastrophic floods by the mechanism of modification of the 3D-cracknet of the rock formations and the transit of the groundwater in this natural transport system in the conditions of functioning of the river catchment basin is discussed. Several floods (not freshets) took place in 2013-2014, which probably could be associated with corresponding seismic processes in the Earth's crust, are considered.
2. A river basin formation in the mountain slope can be considered as a self-organizing staged process of its evolution passing through several non-equilibrium but steady-state conditions. The controlling parameter is the process of the crack spreading out. Crack development up the slope but downward substance transit, stipulates a feedback within the unified 3D-river basin system.
3. We have briefly described and rendered the mechanism of the influence of seismic activity on the occurrence of concrete floods with the use of combined maps of groundwater resources and the boundaries of lithospheric plates on the territory and the revealed regularities in seismic waves propagation and interaction with groundwater.
4. In the practical aspect a proposed hypothesis can be useful during the definition of potentially dangerous areas for catastrophic water events taking into account the interference of the state of the underground hydrosphere and the tectonic structure of the rheological section of bowels of the earth on the concrete territories under some adjustable (seismic) conditions.