

## INTERRELATION OF NATURE AND SOCIETY

VIKULINA, Marina<sup>1\*</sup> ; VIKULIN, Alexander<sup>2</sup> ; PETROVA, Elena<sup>1</sup>

<sup>1</sup>Faculty of Geography, Lomonosov Moscow State University, Moscow, Russia, <sup>2</sup>Institute of Volcanology and Seismology, Petropavlovlovsk-Kamchatskiy, Russia

The analysis carries out by the authors using a large amount of data has shown that all biological crises on the planet over the last 600 million years, human separation in independent genus, all the main stages of Homo sapience and society formation, the rise and fall of civilizations, empires and states preceded and accompanied by natural disasters: climatic anomalies, floods and droughts, earthquakes, volcanic eruptions, etc., which confirms the well-known Aristotle-Leibniz-Mach principle of indissoluble unity of the physical and spiritual world.

In order to study the relationships between the "lifeless" and "living" nature and the society the authors compiled a list of natural disasters and social events (wars, revolutions, epidemics, genocides, fires, etc.), weighted by magnitude.

Classification of events by their magnitude is constructed on proposed by M.R. Rodkin and N.V. Shebalin in 1993 logarithmic scale, which is based on socially significant parameters of the material and human losses caused by earthquakes. Scale was modified by authors in accordance with established by S.P. Kapitza demographic characteristics of human development and changes of exchange rates over time and is used for the classification of natural disasters and social phenomena from unified positions.

This list includes about 2400 most socially significant ("strong") events occurring on the planet from the XVI century BC to 2014 inclusive. Such list of events weighted by the magnitude over a long period of time is compiled for the first time. It is fairly complete and statistically representative basis for studies of the distribution of natural disasters, social phenomena and their interrelation.

Keywords: geodynamics, society, magnitude of disaster, interaction of disasters, impact of society on the geodynamic processes