

SSA, Spring Fall Meeting, San Francisco, April 2006 dedicated to 100 Anniversaries of the Seismological Society of America and San Francisco Earthquake, April 1906.

**Bulletin of the Seismological Society of America,
Seismological Research Letters, Volume 77 number 2, March/April 2006**

**THE INSTABLE DYNAMICS OF THE EARTH ENERGY:
THE METHODS AND POSSIBILITIES OF CONTROL THEREOF**

I. Kerimov¹, S. Kerimov²

¹Scientific Centre of Seismology of the Presidium of Azerbaijan National Academy of Sciences, ²Seismotech Globe B.V

This problem has become a most actual. We believe the intensive growth in last years of various catastrophic phenomena's combined with ever growing rate of energy and speed that occur in various spheres of the planet leave no hope that the mankind can put up a resistance thereto only by strengthening constructions and creation of more advanced alerting systems.

Our conclusion is that one can not explain such remarkable catastrophes growth by purely natural background, it is induced by the technogenic influence on the environment. We perceive this problem from the point of view of what we call the energy pollution, and in particular the accumulation of additional stress in the mediums caused by non-controlled industrial and military activity. This problem has become so enormous that the mankind needs to put simultaneous efforts to solve it and as the first step to create global geophysical and seismological network.

Our view on the subject is based on understanding of the medium as a dynamic system with ever changing properties and that environmental problems are much more complicated and delicate than seemed to be at first sight: any large scale human activity should be controlled to avoid disturbance of natural balance.

A thorough research have shown, for example, that even weak repeated external impact can cause the medium to manifest high dynamic activity. After years of analysis we worked out the methods to investigate, control and manage the medium state and obtained such clear results based on the analysis and experiments on the following subjects:

relationship between the seismic events and the intensity of the oil production therein;
influence of various energy explosions on manifestation of strong and weak seismicity;
influence of the underground nuclear tests on seismic events of Middle Asia, Caucasus, Caspian Sea and other regions;
microseisms field variations in the regional and global scales under influence military operations;

- fast increase the medium's stressed state on territories of 500 sq km and 2,000 sq. km under controlled vibration influences;

re-establishment of the natural state of the medium under vibrations based on the medium energy model and the model of influence thereon. These models are developed using

some important parameters of the medium which make up so called “site effects” as a result of which the medium differently reacts to strong or weak external influences.

Establishment of the international program and network would help to monitor and locate most sensitive regions, to detect the sources of induced negative processes and take measures to prevent them, to manage the states of the medium using the methods developed by us and to step towards the major goal- stabilise and balance natural processes and, perhaps, bring it back into the previous medium energy level (of year 1945? or even 1900?).