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Earthquakes in the large aquatic ecosystems (taking Lake Sevan as an example).

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Hydrodynamics of lakes, seas and the oceans (water ecosystem) are related to the circulation of water, movement within different water layers, transport and mixing.

The mathematical model of the dynamic of water ecosystem includes hydrothermodynamic equations and boundary conditions at the surface and on the bed of water ecosystem.

Seismically induced strong ground motion changes the water dynamics of the water ecosystem.

Ground motion during an earthquake is variable, but dependent on the sediment type. Hard rocks have low amplification, soft rocks medium, volcanic soils high, but alluvium, waterlogged areas and sands have a very high ground motion amplification.

Hire is consider earthquake influence to:

- water circulation in the water ecosystem;

- underground water circulation;

- changes water chemistry;

- circulation water in the water ecosystem covering by ice.

Models realised on example of Lake Sevan (Armenia).