Field of research – Geology: an overview of main goals in frame of REC "Baikal"

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Study of geology and tectonics of Lake Baikal area and adjacent territories is principally important issues as numerous aspects of human and natural systems development strongly controlled by geological and tectonic processes. This statement could be confirmed by the following well-known facts:
a) chemistry of bottom sediments, i.e. of the habitat of lacustrine animals and microorganism depends directly of the character of rocks on lake shoreline which are destroyed and transferred into Lake Baikal;
b) mineral and chemical composition, internal structure of rocks, their tectonic transformation determine very much the character of the surface relief, down-hill gradient of lake slopes and bottom, i.e., determine situation of constant and temporary water flows, life conditions of terrestrial and underwater fauna, etc.;
c) finally, catastrophic geological phenomena, such as earthquakes, earth-creeps etc have a strong influence on existence of the whole ecosystem of Lake Baikal and adjacent areas.
What is the main reason why special Unit (#1) in frame of REC "Baikal" is focused especially on study such important fields as Geology and Tectonics. The title of this Unit is "Study of Geological and tectonic process to reduce the risk and decrease consequences after natural disasters". The Geological Department of Irkutsk State University and the Institute of the Earth's crust of the Siberian Branch of Russian Academy of Sciences are responsible for geological and tectonic investigation around Baikal Lake under Research – Education Center "Baikal". Main aims and task of the research could be presented as following:
1) Baikal geosystems integrated study (geology, tectonics, geodynamics, geomorphology, and hydrogeology) to recognize main stages of the region structure formation;
2) Petrological, geochemical and geochronological investigation of geological building blocks (terranes) of the Baikal area and adjacent territories;
3) Study of geological structures (faults, seismic dislocations etc) that control modern seismic process in the Baikal area;
4) Study of modern geological and seismic processes that can cause natural disasters;
5) Producing possible forecast of natural (including seismic) disasters in the Baikal area.

All science directions mentioned above could be extremely productive used for possible international (Russian–German) collaboration under support of international science foundations such as RFBR and DFG. Our team has already done long and short-period collaborative research of geology and tectonics of the Siberia with German colleagues from Max-Plank Institutut fur Chemie (Mainz), Munich University, Mainz University, Kiel University. However these researches

could be continued with Universities mentioned above and with new partners as well.

Next important direction of REC “Baikal” activities is involving students and young generation of researchers in the international scientific process without any countries and language boarders. The Baikal area is one of the best and mostly spectacular places of the World for manage international student practices in many fields of Earth sciences such as Mineralogy, Petrology, Tectonics, Palaeogeography, Geomorphology, Hydrogeology, Geobotanics, Geoarcheology. These practices could provide a students and young researchers with important experience in their field of scientific interests and with international collaboration as well.

Unique affinities of the Baikal area attract every year thousands people from hundreds countries for rest and touristic adventures. Working under possible Russian – German collaborative Program we could invite active researchers for scientific investigations, student practices and geotourism around the Lake Baikal (an object of the Word Heritage of UNESCO since 1996).