

# **The Main Directions and Results of Researching the Russian Part of the Amur River Basin in 2014**

**Petr Baklanov**

*Pacific Geographical Institute, Far Eastern Branch of Russian Academy of Sciences, 7 Radio St., Vladivostok 690041, Russia, pbaklanov@tig.dvo.ru*

## **Abstract**

The main studies were focused on the preliminary analysis of causes and consequences of the largest for the whole period of observation summer flood in the Amur River in 2013; investigation of the ecological problems of gold mining and hydropower industry; preparation of a variety of thematic maps. The causes of flood are high winter runoff, heavy snow storage in winter, spring rains, heavy precipitation in July-August throughout the basin and anthropogenous factors. The temporal movement of the flood was traced and the space images and maps of the flood propagation are presented.

The maps of existing and planned hydropower complexes were compiled. Their possible impact on the ecological situation within the basin – changes in flood-plain ecosystems upstream and downstream of dams, fragmentation and blocking of the river basins, transformation of habitats around the water storage basins - was considered as well as the indices of integral and individual actions of the hydropower stations were estimated. The GIS (Geographical information system) of existing and planned hydropower plants with their affected objects which allows us to simulate the comparable scenario geo-ecologic estimations was developed and created. A series of ecology-evaluation maps displaying the predictive scenarios of the hydropower industry development within the Amur River basin was produced. The maps and atlas of environmental impact when using the placer mining were produced. The map of the investment projects in the Far East which traces the key role of the projects within the Amur River basin was prepared.

The investigations sponsored by the grant of the Russian Geographical Society and oriented to the integral estimation of environmental change and quality in the coastal regions with the use of the geo-information technologies were started. The investigations cover the coastal areas of the Sea of Okhotsk and Sea of Japan. The key sections were identified and the mapping of techno genic and base natural landscapes was made.