

# Goro Mouri laboratory

## [Study on Future-minded Catchment Environmental System]

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<http://hydro.iis.u-tokyo.ac.jp/indexJ.html>

Environmental Ecology, Hydrology and Modeling

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## Development of Future-minded Catchment Environmental System

Our study is to develop a river basin simulator based on geo-spatial information such as geographical data, precipitation, air temperature, river water temperature, and land use data. The river basin simulator has been developed in order to reproduce the historical pollutant load variations in a basin and then to project the future situation.

The goal of our study is to understand existing water-related problems and to solve them by applying the developed simulator to the global society.

[Without considering personal appearance, it seems that we are presently surrounded by large amounts of artificial structure.]

[Traditional landscape including terraced paddy fields covering artificial forested catchment ecologically systems.]

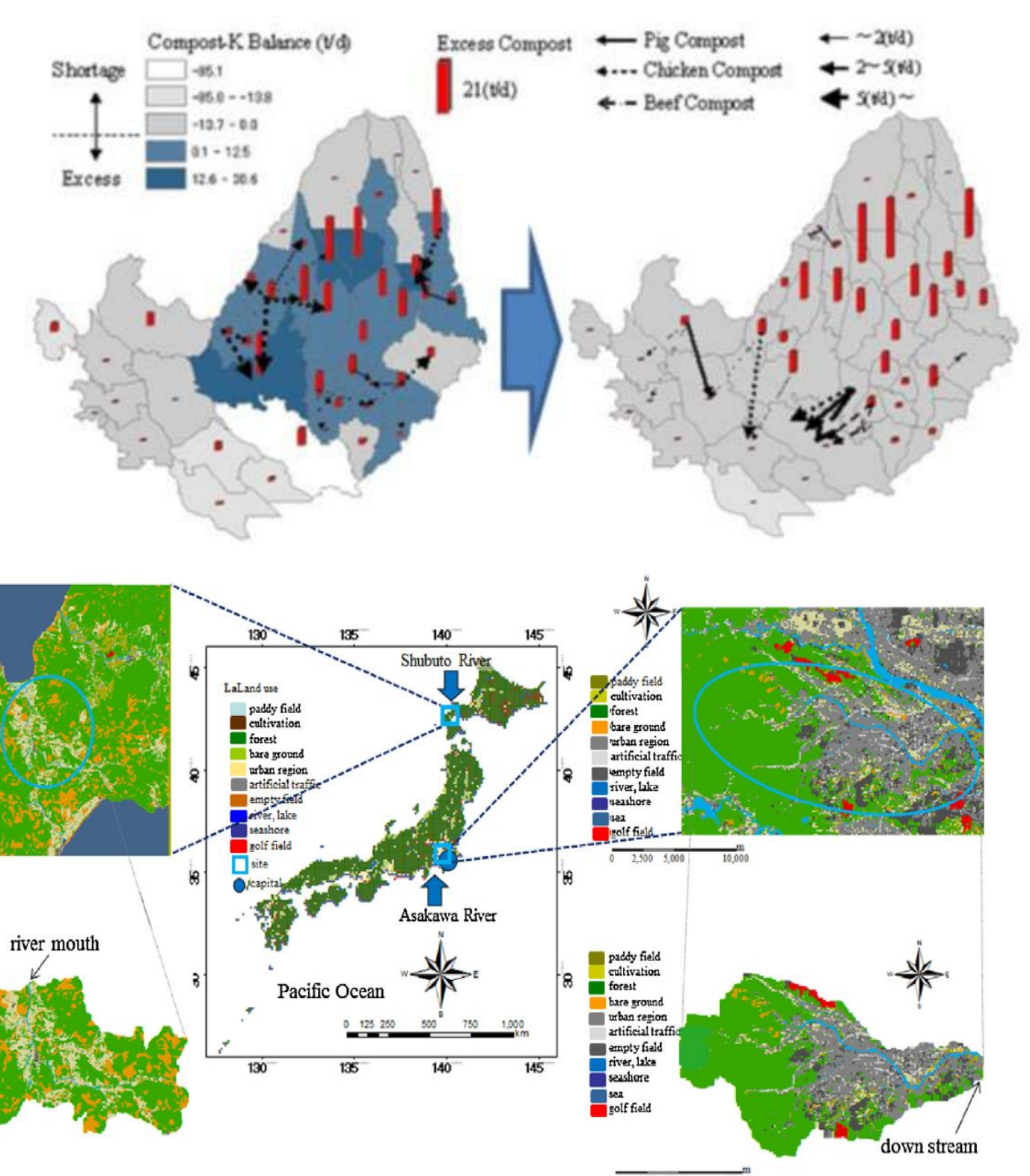
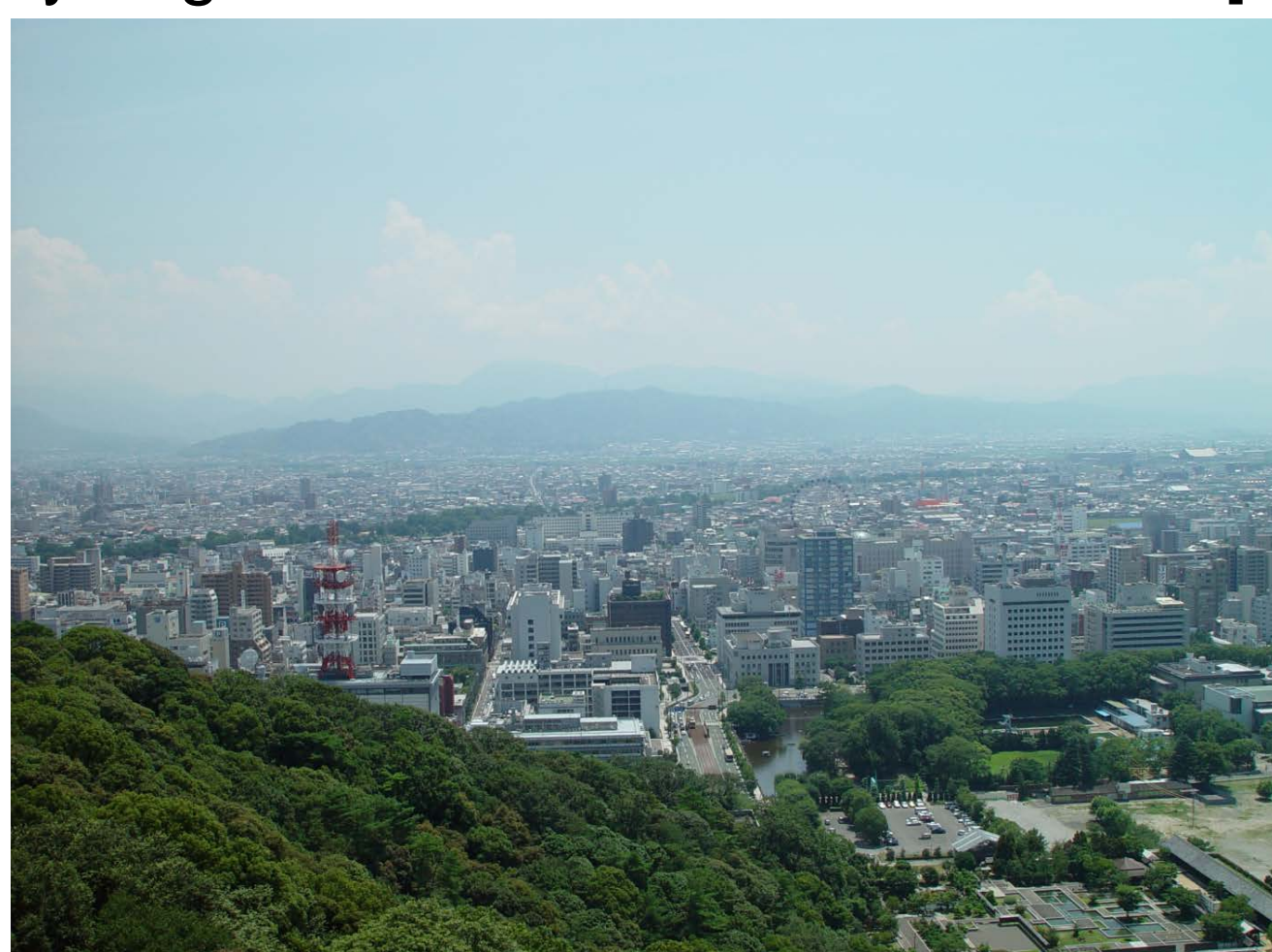


Fig. 1 Integrated System of prediction of environmental context

## Study on Environmental Ecology in the Extreme Volcanic Environment (A Case Study of the Kamchatka Peninsula)

An active volcanic territories in Kamchatka have a range of hydrological features which determine the extreme environmental context. Insufficient understanding of the interaction of numerous factors, including both climate,

precipitation, discharge, geology, human impact, and the land use underlie wrong conclusions regarding environmental context. This study has been trying quantitative prediction concerning such behavior.

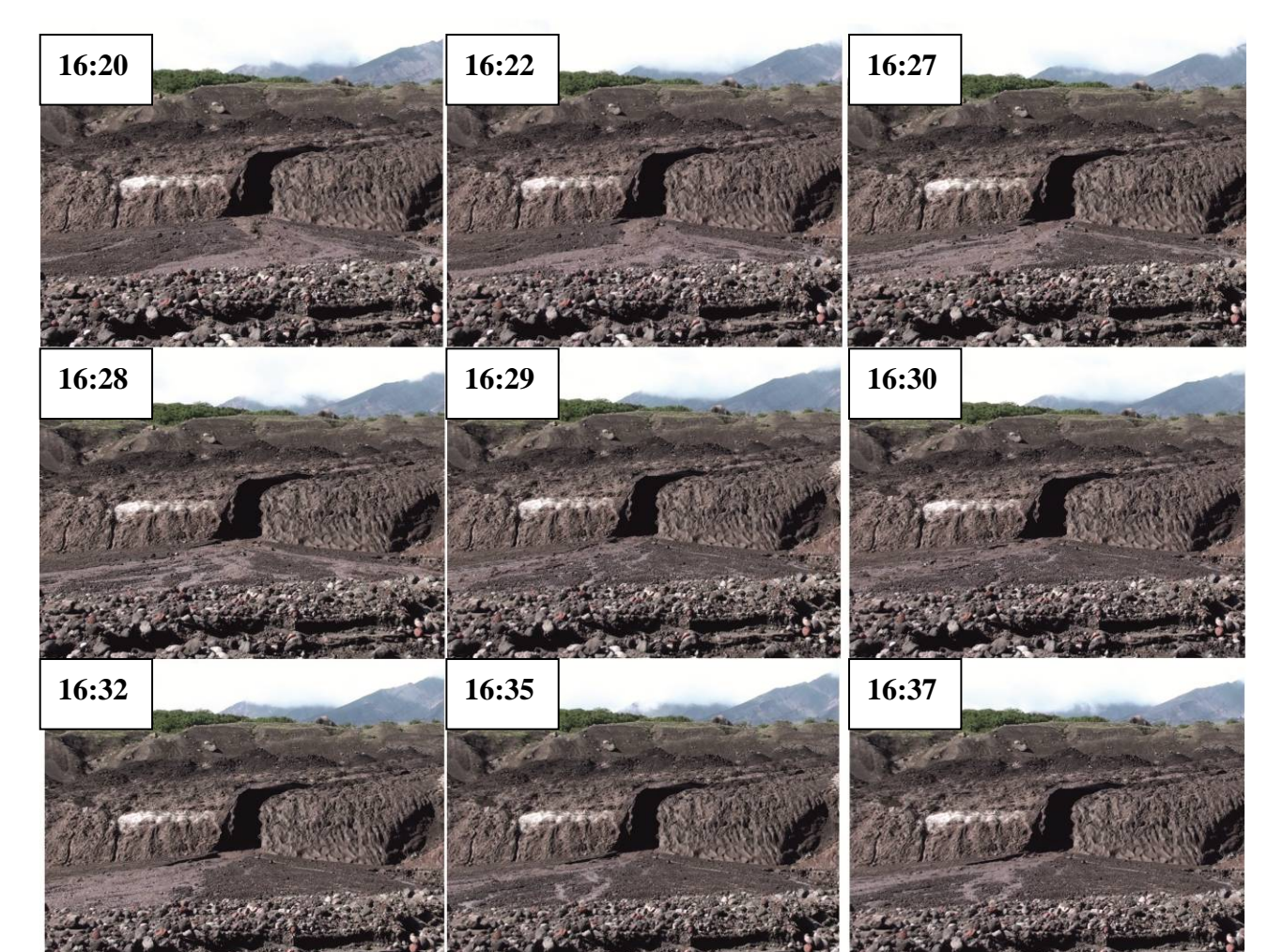
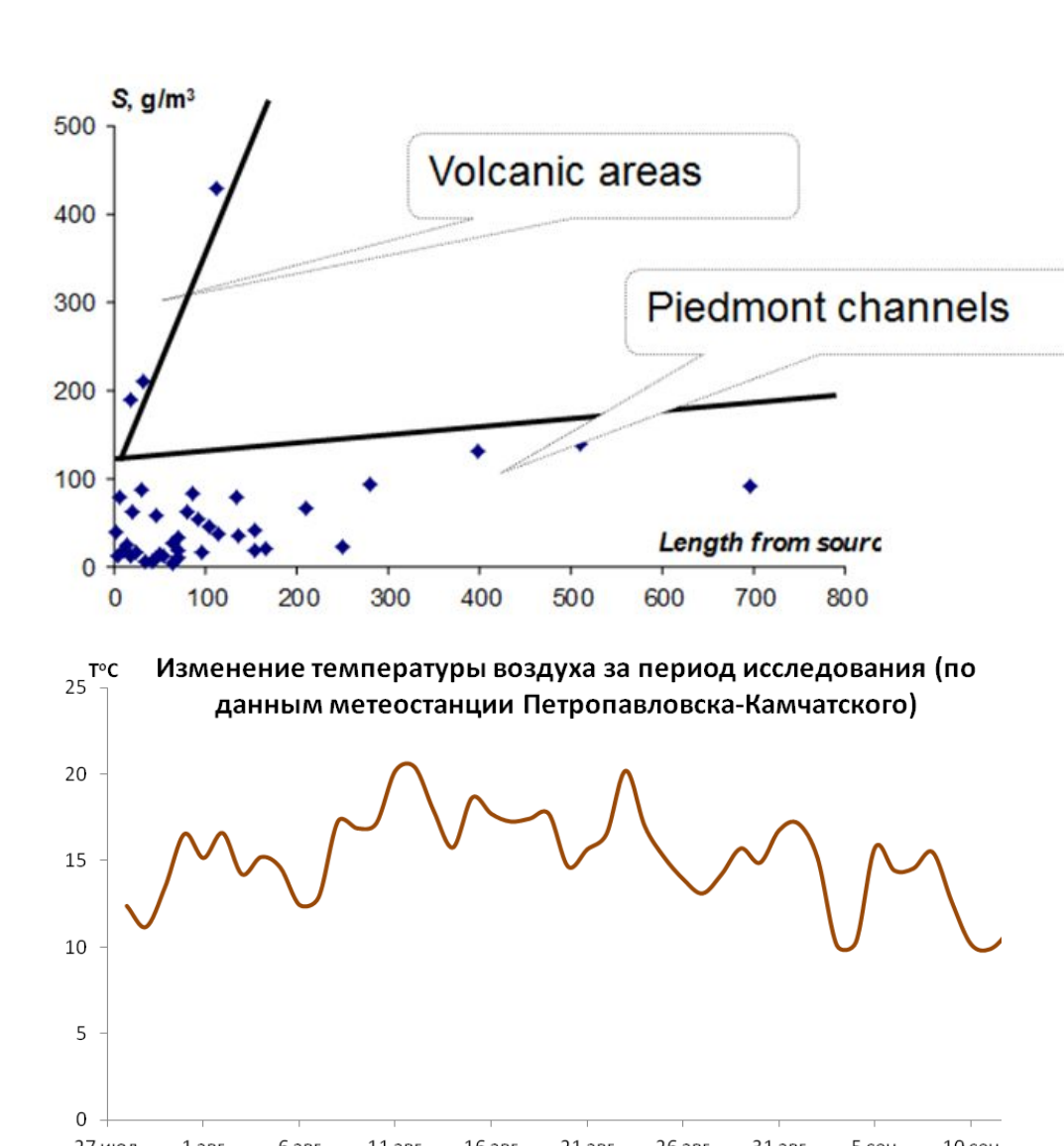
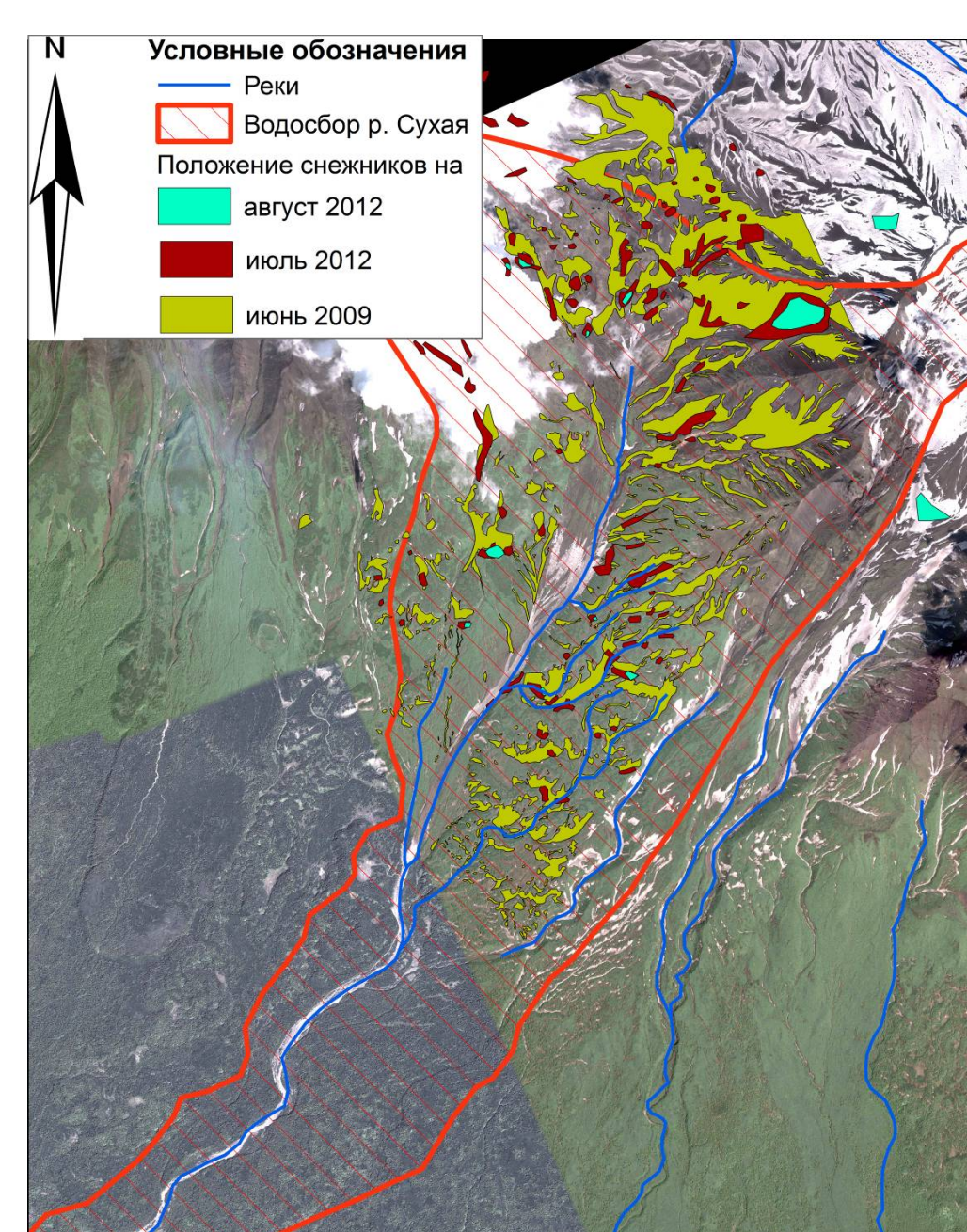
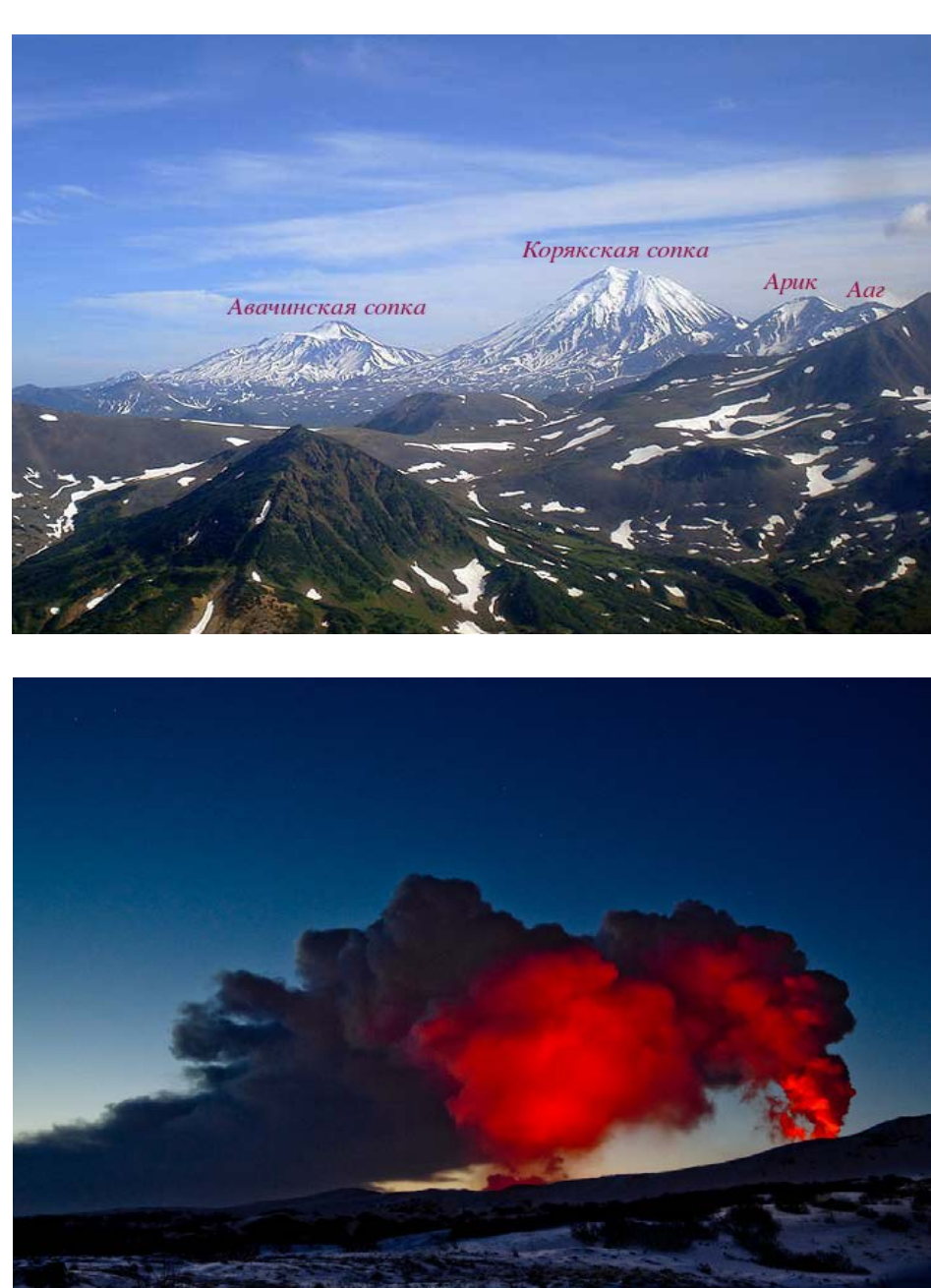


Fig. 2 The outline of a study site showing the prediction result by Catchment Simulator and the volcanic region.