

Virtual research environment for analysis, evaluation and prediction of global climate change impacts on the Northern Eurasia environment

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Description and the first results of development of virtual computational information environment for analysis, evaluation and prediction of the impacts of global climate change on the environment and climate of a selected region is presented. The thematic virtual research environment (VRE) is aimed at development of an Internet-accessible computation and information tools providing specialists, decision-makers and stakeholders with reliable and easy-used tools for in-depth statistical analysis of climatic characteristics, and instruments for detailed analysis, assessment and prediction of impacts of global climate change on the environment and climate of the targeted region. VRE under development comprises best features and functionality of earlier developed information and computing system CLIMATE (<http://climate.scert.ru/>), which is used in Northern Eurasia environment studies. It also provides computational processing services launching to support solving tasks in the area of environmental monitoring, as well as presenting calculation results in the form of WMS/WFS cartographical layers in raster (PNG, JPG, GeoTIFF), vector (KML, GML, Shape), and binary (NetCDF) formats. Its usage for solving related to Northern Eurasia climate change research problems is illustrated. The work is supported by the Russian Science Foundation grant No16-19-10257.

Keywords: virtual research environment, web-GIS, climate change