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**Title:** *Data integration for the researches in Russian part of Arctic*

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Nowadays environmental impact assessment of northern areas is a complicated scientific task requiring a multidisciplinary approach to the research of ecosystems and socioeconomic processes, requiring involvement of all stakeholders. The development of informational technologies of data processing can play a significant role in this process, providing decision- and policymakers with relevant, up-to-date and reliable information.

Because of relationship complexity in geographical features, large volumes of regional geographic studies of northern territories (quite fully described at the stage of system design), addressing major challenges of the present study is impossible without adequate methods of geographic forecast. A complete set of software for geographic features development predicting should be defined. These tools including statistical, objective and simulational modeling (each of which has positive and negative aspect), are based on some mathematical model (each of which has its own scope, as well as its advantages and disadvantages).

The aim of presenting work is the development of methodology for management of information on the natural resources and modeling tools for the assessment of the state of the environment and social sphere for the support to the decision-making in the spheres of ecology, nature management, population policy, urbanization, zoning, and regional planning of Northern areas.

Meeting the challenges of resource assessment and forecasting the state of environmental components, environmental management and environmental protection of the northern territories with the help of a shared system of geodata is closely related to the scenarios of use and user groups for whom they were intended.

The results of our works during last years are:

- monitoring of biological diversity, impact of climatic change, landscape ecology and hydrology of the Arctic, the marine and coastal ecosystems, wildlife;
- environmental impact assessment;
- search for optimal development directions of the social monitoring of regional development and the ecological control of nature management;



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- study of demand and consumption patterns, compiling of informational metadata sets;
  - problem- and subject-oriented databases and databanks;
  - system of spatial and temporal modeling and informational support of management decision-making;
  - shared system of data processing on the basis of modern informational technologies.