

Use of GIS-technology in the botanical gardens

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For advancing the use of GIS in botanical gardens and Arboreta of Russia, there are a number of important reasons.

1. Information on the botanical collections are stored, usually on paper that are not sufficiently reliable and easily damaged. The use of this information is available for a very limited number of individuals.

2. The absence of precise plans for the territories of Botanic Gardens and Arboreta, as well as the necessary information support made it difficult to interact with various federal and municipal authorities on the staging areas on the cadastral registration, the Organization of the territory, carrying out various kinds of economic activities, etc.

3. The lack of detailed plans for the Properties collection of plants on exhibition areas was an obstacle to the effective and prompt implementation of the scientific work necessary economic activities.

GIS allows managers of these institutions to receive updated information on the status of the object; they can evaluate different scenarios of administrative decisions, as well as make informed choices about when and where to invest to achieve strategic goals. Staff units (scientific and economic) are able to carry out a quick search of any information, perform statistical, analytical and other analyses of available data, generate necessary reports.

GIS greatly reduces costs caused by duplication and loss of data. When their implementation increases the speed of the design work (for example, if you create multiple maps for considering alternative options). Maps are created, depending on the needs of users in a matter of minutes. Also the system can provide an automatically generated report with the specified forecasting systems and aggregate information.

Modern GIS technologies provide different levels of access to information for different groups of users. For example, representatives of the Administration must be available complete database for scientific staff members of departments or laboratories and collections-information about the State of the plants, to the infrastructure of the information necessary to conduct business activities. Customers can in advance and plan your visit to the botanical garden or Arboretum, with visits to specific collections or even individual copies of plants.

Establishment of a framework for GIS specific object needs to start with the selection of the architecture of the future system. Currently exists as a paid software (ArcGis, MapINFO, etc.) and their free equivalents (QGIS, Saga, GRASS, etc.).

Keywords: Botanic Garden, geographic information systems, kollektionnye plants, stretches of Exposition, space images with super-high resolution.