

FUGRO WATER MANAGEMENT BERLIN

The Berlin Senate Department for Urban Development and the Environment uses a groundwater information system based on GeoDin for the management of boreholes, monitoring wells and groundwater data. The system was developed by Fugro and has been in regular use since the beginning of 2010.

IWRMIS SYSTEM

GeoDin is used by the Senate Administration to provide a municipal information system for citizens and to manage the monthly monitoring activities. The main advantage of GeoDin as a central data management tool with integrated GIS (GeoDin Maps) is that any combination of information, analyses and graphics can be managed by a single application. The underlying database contains more than 163,000 boreholes, 11,500 groundwater monitoring wells and 13 million water samples. A special requirement of the system is to provide information on the highest and current water level at any point and in any area. For this purpose, various interpolation methods were implemented through an

interface between GeoDin and the Surfer program from Golden Software. Other areas in which the Senate Department uses GeoDin for data management are geothermal energy, groundwater flora, geotopes, water management, soil science and monitoring of contaminated sites.

WORKFLOW

Each user of the Senate Department has their own profile with various customised maps, queries and user interface. These profiles are geared to the users' areas of work and provide information on groundwater protection zones, geology, topography, groundwater surfaces and current or maximum groundwater levels.



Maps layout with geology and well design data

Object type	- ABCESEP 3		
And			
X-coordnate	>	8	
And . E-coordinate		80000	
And	e	5000	
T-candrate		0	
Anti			
7-condition	4	50000	
And			
Database field	frame Like	PACN	
And			
Measurement	value >0		
Ant			
MAXDATE	>	01.01.1990	

Query with coordinates and date input

CASE STUDY



GeoDin database queries are used to effectively bundle thematically relevant information and make it available at any time. This information can also be displayed in GeoDin maps and in prepared layout templates. In these templates, various information such as administrative data, measuring point data, development data, geological and hydrogeological data and chemical analyses are brought together. In addition, the user can navigate quickly and easily through various search options, such as address, coordinates or use a measuring point search. Surface data can be available as Shape or AutoCAD files or can be taken directly from objects in the GeoDin database.

TECHNICAL DETAILS

The recommended system requirements are PCs with Windows operating system from Windows 10 (64-bit) with 4 GB RAM and a display resolution of 1920 x 1080 px. GeoDin may also be run from a Windows Server 2016 or higher as well as Citrix. Previous Windows operating systems and RAM configurations may work, but these are not supported. When working with client/server databases the appropriate database drivers must also be installed.

UGRO

GeoDin can be used as a stand-alone program or integrated in a multi-user network. Integrated contextual help is provided in English and German.

GeoDin is designed, programmed and distributed exclusively by Fugro. Visit <u>info.geodin.com</u> or <u>geodin.com</u> for further information.

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