DataGeol - User Guide

Table of Contents

DataGeol_4.0-beta Download
Minimum requiements :
- Microsoft® Excel® for Microsoft 365 MSO 64 bits, version 2104
- QGIS LTR 3.16.4

DataGeol is a database that allows to organize, store and use geological data efficiently. Upon returning from a field mission, the user can enter the information he has noted in his field notebook in different dedicated tables (location, observations, samples, etc.). The different tables are organized and linked together, allowing data to be exported in different formats for processing or display.

The data are organized into several **tables**. Each row is called a **record** and each column a **field**. The field is a single item information that describes the content of the column.

DataGeol is given in EXCEL format, that require a valid Microsoft licence and also in SQL format for PostgreSQL use. The following user guide is designed for the Excel use, see section PosrgreSQL for the specifications of DataGeol in SQL format.

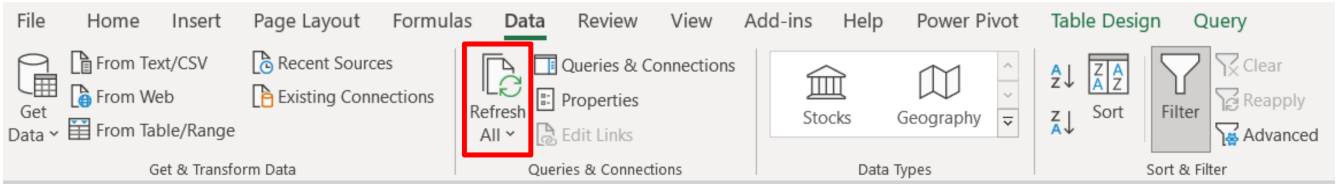
Getting started

DataGeol can be run either on Mac, Windows or Linux environment while it has Microsoft excel installed.

The database is split in several tables : black, blue, green, yellow and red.

- **Black**: Lexicon table describing the vocabulary used in the database for geological objects.
- **Blue**: Auxiliary tables containing supplementary informations - *filled by the user*
- **Green**: Table containing informations about the location or the observations - *filled by the user*
- **Yellow**: Table containing informations about the samples and analysis - *filled by the user*
- **Red**: Output tables generated for GeoModeller or GIS use - *generated*

For generating the output tables, you have to **refresh** the EXCEL sheet. You will find this command in the "data" tab. As function of the quantity of data inside the database, the process can take few seconds.



To reduce the possibility of errors and bugs, we recommand you to refresh the sheet often as possible. Ideally each time you enter a new record.

Tables

In order to keep the database consistent, you **must not** change the columns headers.

Missions

This table contains the informations about the field mission. You should at least enter one mission.

Maps

This table contains the informations about the topographical and geological maps used in the field mission. This table is not mandatory.

Instruments

This table contains the informations about the location and elevation instruments used for the field mission.

Location

Each record corresponds to a station of observation and **must** have an unique name.

Data export from Garmin GPS device without *Garmin BaseCamp*:

1. Extract GPX file from the GPS device *(path: ...)*
2. Load the GPX file in QGIS with *GPS tools*
3. Export the imported GPX file in *ESRI shapefile*
4. Generate geometry attributes : *vectors/geometry tools/add attrivutes geometry/*
5. Copy and paste the attribute table informations in a standardized CSV table "USER_location.csv" : Station ; Lat ; Lon ; Elev GPS ; Elev aux ; Time GMT
6. Copy and paste the informations in the database: columns A to F.

Through this protocol the time informations are lost.

You need to activate *GPS tools* in the plug-in menu of QGIS.

Data extraction from Garmin GPS device with *Garmin BaseCamp*:

1. Export CSV file with the Garmin BaseCamp software.
2. Save the CSV file with headers organized as follow : Station ; Lat ; Lon ; Elev GPS ; Elev aux ; Time GMT
3. Copy and paste the fields in the database: columns A to F.

The GPS device save the time in ISO 8601 format (yyyy-mm-ddThh:mm:ssZ), which is often shifted from the local time. You will be allowed to set the time shift later in the process of data saving.

The position must be in **decimal coordinates** in the WGS84 coordinate reference system.

For location accuracy, you can select the best GPS position among the field mission participants. If you don’t want to use this option skip this part.

Formations

Notebooks

Observations

Sample sections

Analysis

Export

GIS

GeoModeller

PostgreSQL

In progress...

Example

The example uses the Ales data.

Contact

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