Explanation of the downloadable graphic files (*.png, *.pdf)

- The maps of the sample sites represent the location of the sample sites in the project survey area. The presentation is separate for the Ap and Gr samples ("Sample_sites_Ap" and "Sample_sites_Gr").
- The scale of the full size maps is 1:25 000 000.
- The suffixes "_150_dpi" and "_600_dpi" indicate the native resolution of the graphics.

Explanation of the ESRI-Shapefiles

- The shapefiles of both maps are combined in one ZIP file.
- The attribute tables of the shapefiles include the following fields:

Field name	Format	Content
ID	Double	Each sample of the GEMAS project is uniquely identifiable via its ID. It was assigned at randomisation of the samples (see chapter 6.3.1 in Demetriades et al., 2014). The Ap samples have IDs between 3001 and 5585, the Gr samples between 1 and 2464.
Country	String	Country code of the country where the sample was collected[1]
Country_ID	Double	Sequential number of the sample within the country specified in the Field "Country". The numbers were assigned separately for the Ap and Gr samples and are not randomised.
X_DG	Double	Longitude of the sample site in decimal degrees related to the coordinate system EPSG:4326 (WGS84 - World Geodetic System 1984 (see https://epsg.io/4326)
Y_DG	Double	Latitude of the sample site in decimal degrees related to the coordinate system EPSG:4326 (WGS84 - World Geodetic System 1984 (see https://epsg.io/4326)
X_LAEA	Double	Easting of the sample site related to the coordinate system EPSG:3035 (ETRS89 - extended/LAEA Europe) (see https://epsg.io/3035)
YLAEA	Double	Northing of the sample site related to the coordinate system EPSG:3035 (ETRS89 - extended/LAEA Europe) (see https://epsg.io/3035)
Regio	String	Allocation of the samples to northern ("N") or southern ("S") Europe, see Filzmoser et al. (2014)

[1] AUS - Austria, BEL - Belgium, BOS - Bosnia and Herzegovina, BUL - Bulgaria, CRO - Croatia, CYP - Cyprus, CZR - Czech Republic, DEN - Denmark, EST - Estonia, FIN - Finland, FRA - France, FOM - F.Y.R.O.M., now North Macedonia, GER - Germany, HEL - Greece (Hellas), HUN - Hungary, IRL - Ireland, ITA - Italy, LAV - Latvia, LIT - Lithuania, LUX - Luxembourg, MON - Montenegro, NEL - Netherlands, The, NOR - Norway, POL - Poland, PTG - Portugal, SRB - Serbia, SKA - Slovakia, SLO - Slovenia, SPA - Spain, SWE - Sweden, SIL - Switzerland, UKR - Ukraine, UNK - United Kingdom.

- The coordinate reference system of the shapefiles is EPSG:3035 (ESRI: ETRS_1989_LAEA). Further information can be found at https://epsg.io/3035.

References

Demetriades, A., Reimann, C. & Filzmoser, P. (2014): Evaluation of GEMAS Project Quality Control Results. In: Reimann, C., Birke, M., Demetriades, A., Filzmoser, P. & O'Connor, P. (eds.): Chemistry of Europe's Agricultural Soils, Part A: Methodology and Interpretation of the GEMAS Data Set. (Geologisches Jahrbuch). B102: 47-60; Stuttgart (Schweizerbart Science Publishers).

Filzmoser, P, Reimann, C. & Birke. M. (2014): Univariate Data Analysis and Mapping. In: Reimann, C., Birke, M., Demetriades, A., Filzmoser, P. & O'Connor, P. (eds.): Chemistry of Europe's Agricultural Soils, Part A: Methodology and Interpretation of the GEMAS Data Set. (Geologisches Jahrbuch). B102: 67-81; Stuttgart (Schweizerbart Science Publishers).