



Opening Workshop
of the „Terra Preta” Project
Budapest, 1st of September 2014

Results and achievements of previous project activities

„SOILUTIL” Waste database

On behalf of the
SOILUTIL project
Consortium



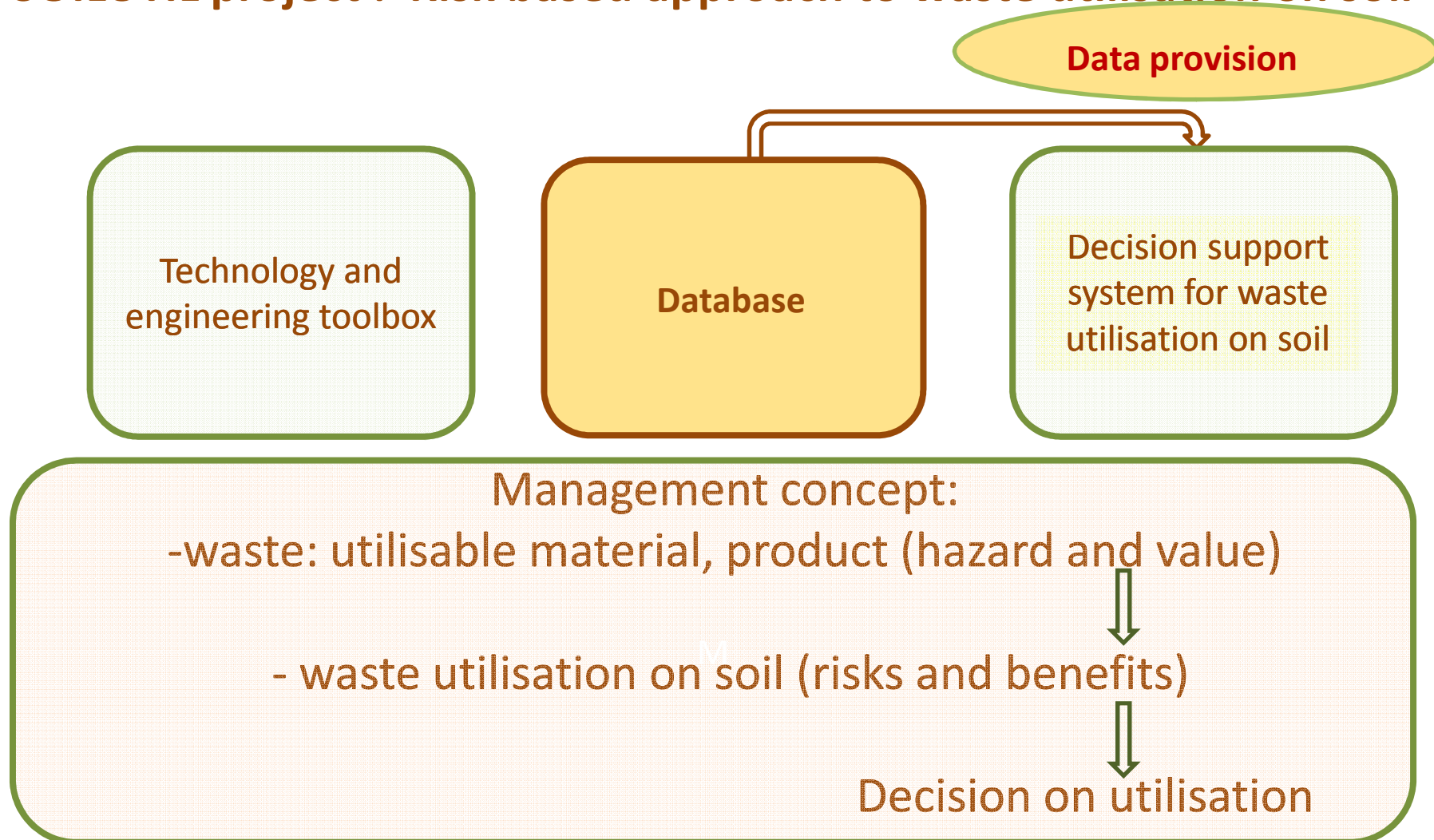
Emese Vaszita (BME)



*„Terra Preta” Project
(July 2014- April 2016)*

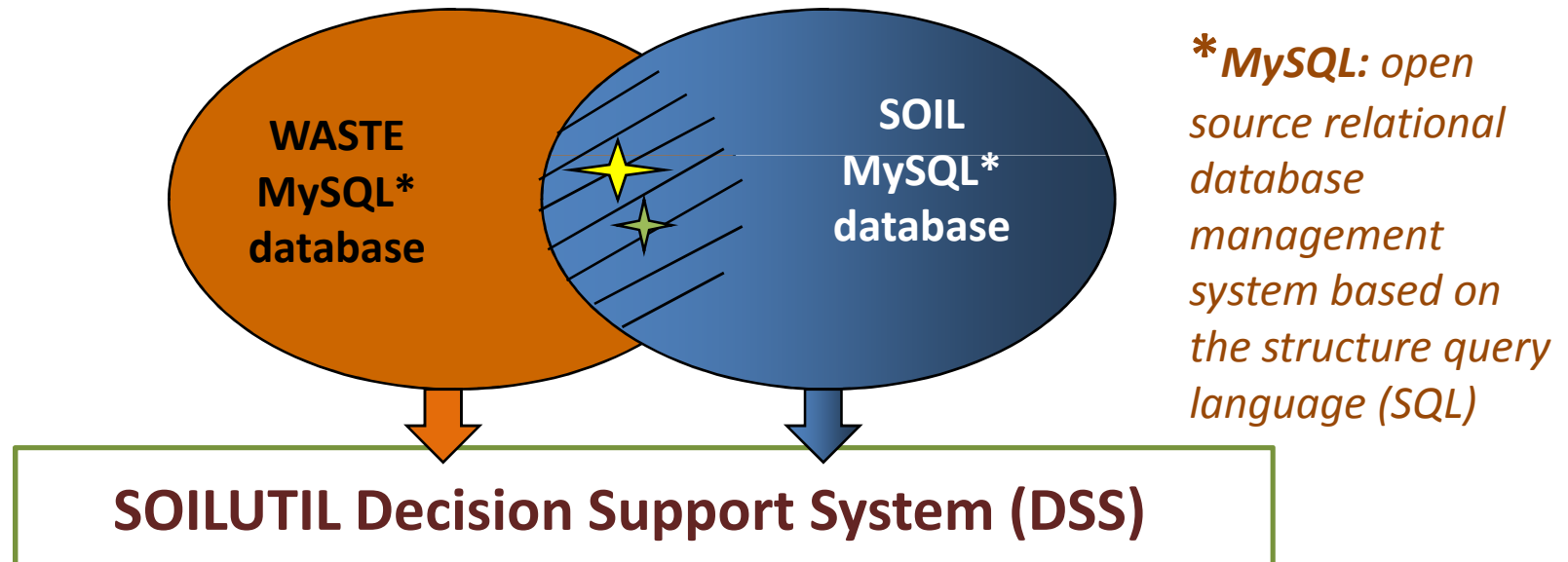
SOILUTIL Waste database – SOILUTIL project

SOILUTIL project : Risk based approach to waste utilisation on soil



Role of the Waste database

- To support the risk-based and sustainable utilisation of waste on soil providing data to the SOILUTIL Decision Support System



Matching point: suitable waste to amend a given degraded soil



Matching point: suitable technology to amend a given degraded soil

How to reach the SOILUTIL Waste database?

Location: in an already existing database (MOKKA-ENFO)

<http://www.mokka.hu>

<http://www.enfo.hu/>

<http://www.enfo.hu/drupal/enfo>

<http://soilutil.hu/>

The screenshot displays the SOILUTIL website interface. At the top, there are two search bars: one in Hungarian with a 'Keresés' button and one in English with a 'Search' button. Below these is a green navigation bar with links for 'Home', 'Glossary', 'Database' (circled in blue), 'Maps', 'Photos', 'DST', 'E-learning', and 'About us'. A secondary orange navigation bar contains 'Résztevők', 'A Projektől', 'Hírek, események', 'Jelentések', 'Eredményeink', and 'Kapcsolat'. The main content area features a 'Főoldal' section with text about the SOILUTIL project and a 'Részletek az alábbi oldalon:' section. On the left side, there is a sidebar with 'Languages', 'Támogató' (supporting organizations), and 'Linkek' (links). The 'Linkek' list includes 'MOKKA lexikon', 'Képtár', 'E-tanfolyamok', 'Térképek', 'Hulladékadatbázis', 'Talajjavítási technológia adatbázis', 'Hulladékjellemzők', 'Hulladékokban előforduló vegyi anyagok adatbázisa', 'Talajjellemzők', 'Talajok adatbázisa', and 'Talajremediációs technológiák'. The 'Belépés' (login) section is at the bottom of the sidebar, with fields for 'Felhasználói név:' and 'Jelszó:' and a 'Belépés' button.

Waste database: interface for unregistered users

The screenshot shows the ENFO - MOKKA Database interface. At the top, there is a search bar with the filter '5.1 Waste / by-product survey' and a 'Search' button. Below the search bar, there is a 'Search by matrix' button and a dropdown menu for 'Search datasheets in the following language: Hungarian'. The search results are displayed in a table with the following columns: Sheet id, Creator, Type, Name, State, Creation, Modification, and Commands. The table contains six rows of data, each representing a different survey sheet. The first row is circled in red, and an arrow points to it with the text 'Opening of a datasheet'.

ENFO - MOKKA Database

Filter: 5.1 Waste / by-product survey

Text search: Search

Search by matrix Search datasheets in the following language: Hungarian

Waste / by-product survey (245 matches were found)

Sheet id	Creator	Type	Name	State	Creation	Modification	Commands
812	feigl	Waste / by-product survey	Oroszlányi erömüvi pernye	✓	2010-08-02	2013-07-29	
813	feigl	Waste / by-product survey	Tatabányai erömüvi pernye	✓	2010-08-02	2013-08-12	
821	bartazsolt	Waste / by-product survey	Cukorrépamelasz	✓	2010-08-09	2013-08-05	
822	bartazsolt	Waste / by-product survey	Préselt cukorgyári répaszelet	✓	2010-08-09	2013-08-05	
825	bartazsolt	Waste / by-product survey	Cukorgyári méziszap	✓	2010-08-10	2013-08-22	
832	bartazsolt	Waste / by-product survey	Papíriszap	✓	2010-08-11	2013-08-05	

Main parts of the system: user interface
MYSQL database

User entitlements:

- unregistered user (browse public data)
- registered user (browse public data and edit his/her own datasheets)
- editors (browse and edit all datasheets)

Waste database: datasheets, text search in the database

Search: text search

ENFO - MOKKA Database

Filter: 5.1 Waste / by-product survey

Text search: foszforgipsz **Phosphorgypsum** Search

Search by matrix Search datasheets in the following language: Hungarian

Searched text: foszforgipsz (1 matches were found - Waste / by-product survey)

Sheet id▼	Creator	Type	Name	State	Creation	Modification	Commands
1219	vaszita	Waste / by-product survey	Foszfor gipsz		2012-07-12	2014-01-10	

Waste database: user interface for registered users and editors

5. Waste, by-product 6. Soil

[Waste / by-product survey new datasheet](#) [SOILUTIL soil new datasheet](#)

Waste / by-product survey (358 matches were found)

Sheet id	Creator	Type	Name	State	Creation	Modification	Commands
1059	feigl	Waste / by-product survey	Ajkai vörösszap (nedves technológiából származó)	Public datasheet	2011-08-12	2014-01-14	
1060	feigl	Waste / by-product survey	Csepeli ivóvíztisztítási csapadék	Datasheets in progress	2011-08-12	2012-03-07	
1072	barsonyzsolt	Waste / by-product survey	Rácszemét üledék	Public datasheet	2011-08-13	2013-08-13	
1078	nemethagnes	Waste / by-product survey	Török pernye	Datasheets in progress	2011-08-15	2012-05-12	
1079	nemethagnes	Waste / by-product survey	Ipari hulladék hamuja	Datasheets in progress	2011-11-15	2012-05-12	

Deleting

Verification of completeness

Opening

Public datasheet

Datasheets in progress

Waste characterisation datasheet: the first page: main chapters and details

Site map („bread-crumbs“):
the main chapters of the
datasheet

Details of the main chapters

ENFO - MOKKA Database

Waste / by-product survey

Help Base data handling

Waste / by-product survey

Data provider Edit form

Base data handling Select from the list or fill the form Select >>

1. Data provider's name

2. Contact person's name

Contact data

3. Town

4. Street name, number

5. Postal code

6. Telephone/fax

7. E-mail address

8. Webpage

Previous Next Finish

Information about Data Provider, Producer and Dump

Information about the waste: origin, EWC code, technology

Chapters for decision support : waste characterisation and potential utilisation on soil

Waste characterisation datasheet: General data about the waste (origin, type etc)

Waste / by-product survey

- Data provider
 - New Data on the producer, manager, collector...
- The production, treatment and dumping place of the waste or by-product
 - New Production, treatment and dumping place...
 - General information about the waste or by-product**
- Features and chemical content/composition of the chemical, mixture of chemicals
 - New Content...
 - Main characteristics of the product and/or of the waste blend
 - Characterisation of the waste or by-product
 - Hazards of the waste or by-product
 - Potential utilisation on soil

General information about the waste or by-product Edit form

- Denomination of the waste or by-product
- Denomination of the waste or by-product in English
- Classification according to the provided matrix Select >>
- Type of the waste or by-product data-sheet
- Functional characterization
- Other
- Consistency of the waste or by-product
- EWC code of waste
- Attachments to the waste, by-product data sheet
- Description of the waste generating technology
- Has your waste or by-product got any special attributes?
- Is it a hazardous waste?
- What is the generated waste or by-product tonnage per annum
- What is the dumped waste or by-product tonnage
- Characterization of the waste as a chemical substance

Previous Next Finish

Waste characterisation datasheet : generic and site specific characterisation

4. Type of the waste or by-product data-sheet

General characterization
Characterisation of particular waste or secondary product

General characterisation of a waste type (generic)

1193	vaszita	Hulladék / melléktermék felmérés	Acélműi salak	Steel slag		2012-05-18	2013-08-13	
1198	vaszita	Hulladék / melléktermék felmérés	Nagyolvasztói salak	Blast furnace slag		2012-05-21	2013-08-13	

Characterisation of a particularly known and localised waste (site specific)

1238	ujaczkieva	Hulladék / melléktermék felmérés	Dunaújvárosi salak	Blast furnace slag from Dunaújváros		2012-08-14	2013-04-24	
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Waste characterisation datasheet: subchapters for decision support

CHARACTERISATION/ASSESSMENT OF THE WASTE FOR UTILISATION ON SOIL:

Selection of the concentration and measuring unit of the chemical substance

ENFO - MOKKA Database *Waste / by-product survey* Help Base da

Waste / by-product survey

- [Data provider](#)
- Data on the producer, manager and collector of the waste and by-product
 - [New Data on the producer, manager, collector...](#)
- The production, treatment and dumping place of the waste or by-product
 - [New Production, treatment and dumping place...](#)
- [General information about the waste or by-product](#)
- Features and chemical content/composition of the chemical, mixture of chemicals
 - New Content**
 - [Main characteristics of the product and/or of the waste blend](#)
 - [Characterisation of the waste or by-product](#)
 - [Hazards of the waste or by-product](#)
 - [Potential utilisation on soil](#)

New Content... Edit form

1. Chemical substance, Main group
2. Chemical substance, Subgroup
3. Other type of chemical substance
4. Amount of the chemical substance in the waste or by-product
5. Concentration of the chemical in the waste or by-product

mg/kg
ug/kg
ug/l
ug/l
g/m3
%
volume %
mass %
g
mg
ug

Previous Next F

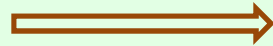
Waste characterisation datasheet: subchapters for decision support

WASTE UTILISATION ON SOIL

Hazards of the waste or by-product

Potential utilisation on soil

Amendment of
nutrient deficient
soils



3. Would it supply nitrogen, phosphorous and/or potassium for the soil?

 Yes
 No
 No information

4. Justification, references

5. Would it supply mesoelements (Ca, Cl, Fe, Mg, Na, S, Si) for the soil?

6. Justification, references

7. Would it supply microelements

Waste characterisation datasheet: subchapters for decision support

**Amendment of
compacted, sealed soil**

17. Would it improve the structure of compacted soil or/and would it contribute to soil crumbs formation in case of poor structured soils?

18. Justification, references

**Physical stabilisation of
loose, waterlogged soil**

19. Would it be suitable for physical stabilisation and/or texture improvement of loose, bog soils?

20. Justification, references

Improvement of sandy soil

21. Would it be suitable for amending sandy soils?

22. Justification, references

Erosion protection

23. Would it be suitable for erosion protection?

24. Justification,

The GIS database: wastes

<http://www.enfo.hu/gis/korinfo/>

- **Aim:**

to visualise on an interactive map the location of all waste dumps in Hungary and get all available information about the deposits

- **Modules:**

browsing
editing

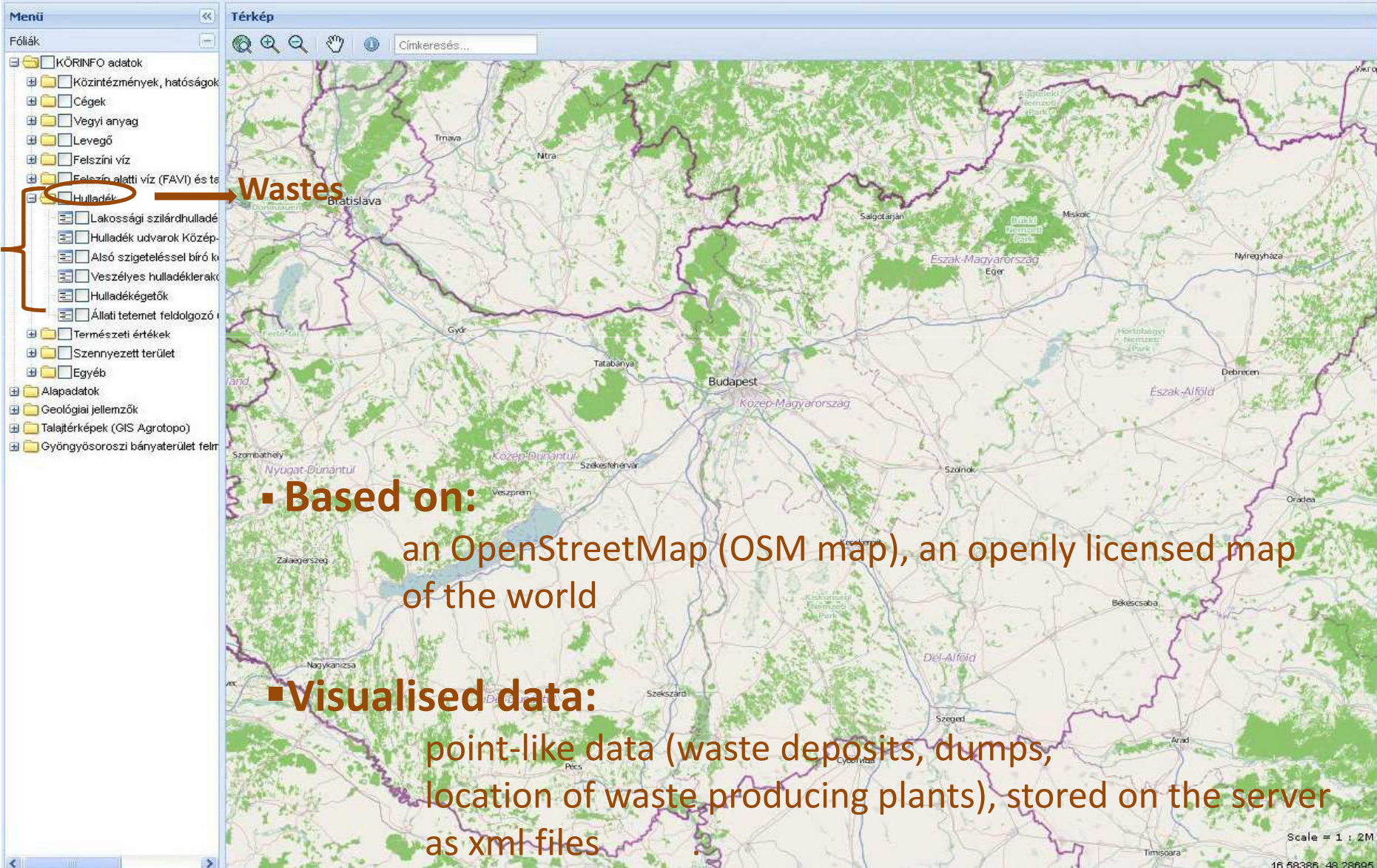
How to reach the GIS map database?

<http://soilutil.hu/>

<http://www.enfo.hu>

The screenshot shows the KÖRINFO website interface. At the top, there is a search bar with the text "Keresés" (Search) and a magnifying glass icon. Below the search bar, the website logo "KÖRINFO" is visible, along with the text "KÖRNYEZETVÉDELMI FORRÁS" (Environmental Source). The main navigation menu is located below the logo, with the following items: Főoldal, Lexikon, Adatbázisok, Térképek, Képtár, DST, E-tanfolyam, Fórum, and KÉR. The "Térképek" (Maps) menu item is highlighted, and its dropdown menu is open, showing the following options: Alapismeretek, Gyakorlati alkalmazás, and Interaktív térképek. The "Interaktív térképek" (Interactive maps) option is circled in red. Below the navigation menu, the main content area features a welcome message "Üdvözöljük a honlapján!" (Welcome to the website!) and a search bar with the text "Keresés". The main content area also contains several sections of text, including a paragraph about the website's purpose, a section titled "Lexikonunk" (Our lexicon), a section titled "Adatbázisunk" (Our database), a section titled "Térképeken" (On maps), a section titled "Döntéstámogatás" (Decision support), a section titled "E-tanfolyamaink" (Our e-courses), and a section titled "Regisztráció" (Registration). The "Dinamikus térképi információ Open Street Map alapon" (Dynamic map information based on Open Street Map) text is also visible.

GIS database: wastes



The image shows a screenshot of a GIS application interface. On the left, there is a 'Menü' (Menu) panel with a tree view of layers. The 'Fóliák' (Layers) section is expanded to show a list of categories. The 'Hulladék' (Waste) category is highlighted with a red circle and a red arrow pointing to the word 'Wastes' in orange text. Below this, several sub-categories are listed, including 'Lakossági szilárdhulladék', 'Hulladék udvarok Középm...', 'Alsó szigeteléssel bíró k...', 'Veszélyes hulladéklerak...', 'Hulladékégetők', and 'Állati tetemet feldolgozó...'. The main map area shows a satellite-style map of Hungary with various geographical features and city names. The map is overlaid with a purple outline representing the waste management regions. In the bottom right corner, the scale is indicated as 'Scale = 1 : 2M' and the coordinates are '16.68386; 48.28695'.

- **Based on:**
an OpenStreetMap (OSM map), an openly licensed map of the world
- **Visualised data:**
point-like data (waste deposits, dumps, location of waste producing plants), stored on the server as xml files

GIS database: municipal solid waste deposits

KÖRINFO interaktív térkép - Mozilla Firefox

www.enfo.hu/gis/korinfo/

KÖRINFO interaktív térkép

KÖRINFO - Környezetvédelmi információ

Menü

Térkép

Fóliák

Helységnév

Szilárd hulladéklarakók_Mo-2.xls [Olvasásra] [kompatibilis üzemmód]

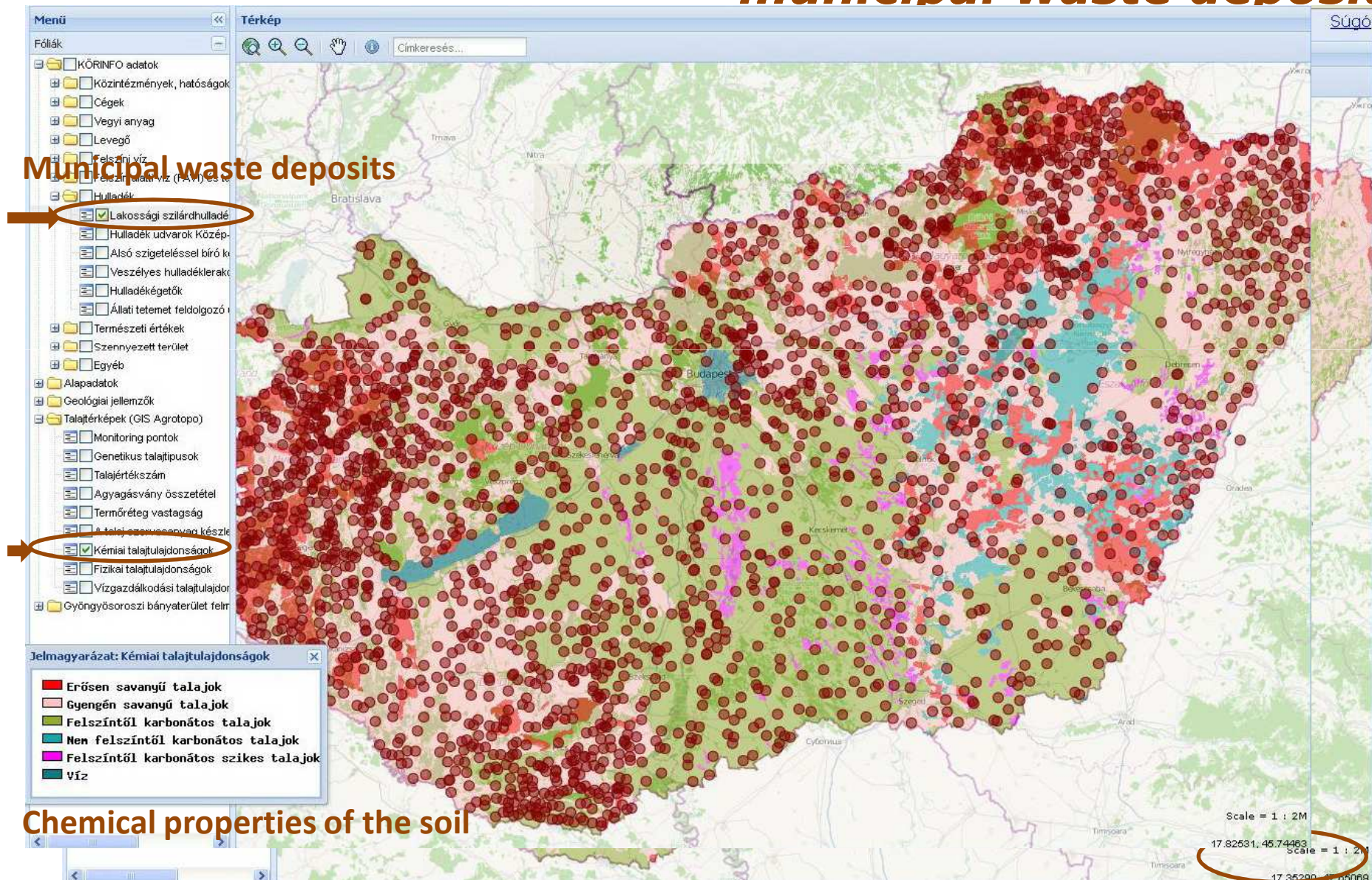
	A	N	O	P	Q	R	S	
1	Helységnév	Lerakó	kockázatmagyarazát	használt terület m2	szabad terület m2	lerakott térfogat m3	üres térfogat m3	éves lerakás m3
226	Bezenye	Bezenye	A szemételep lakóházaktól,	20000	0	70000	0	
227	Bezeréd	Szilárdhu	Kevés a hulladék, vékonyan	280	0	490	0	
228	Biatorbágy	HULLA:	A lerakott hull. mennyisége	5800	0	23200	0	
229	Bicsérd	Kommun	Mert bezárták, kevés a szem	15700	0	23500	0	
230	Bicske	Rumpold	Műszaki védelemmel, monit	13000	14000	300000	700000	
231	Bicske	Bicskei r	Lakott területől messze, term	10000	0	150000	0	
232	Bihardancsháza	Hulladék:	Kevés hulladék .	8000	0	4000	500	
233	Biharkeresztes	Biharker	Nagy terület , lakóterülethez	48000	46000	48000	46000	
234	Biharnagybajom	Biharnag	Magas talajvíz .	12000	0	36000	0	
235	Bihartorda	Bihartord	Magas talajvíz .	1971	0	4000	2000	
236	Biharugra	Biharugr:	Nagy kiterjedésű lerakó, hull	29700	0	29700	0	
237	Bikács	Bikácsi k	Lakott területtől távol	1000	1400	500	700	
238	Bikal	Lerakó /	Kisebb mennyiségű hulladék	3300	0	2000	0	
239	Bikal	Szemétt	Nagymennyiségű szemét viz	5000	0	20000	4000	
240	Biri	Biri kom	Viszonylag kis méretű , zöm	13343	0	5470	0	
241	Birján	Birján kö	Teljesen nyitott lerakó, közel	1800	0	3060	0	
242	Bisse	Kommun	A hulladék mennyisége kicsi	500	0	375	0	
243	Boba	Földgödr	Már bezárt a hulladékkezelő,	800	0	1600	0	
244	Boba	I. Szemé	Néhány éve kevés hulladéko	1500	300	3000	600	
245	Bocfölda	Illegális l	Veszélyes hulladék /dög/ is v	1000	0	1500	0	
246	Bocfölda	Bükkalja	Kevés hulladék, nincs üzeme	1500	0	2250	0	
247	Boconád	Kommun	Laott területhez közel, endez	9000	0	31500	0	
248	Böcsa	borpince	Településhez közeli , de fölg	9960	0	21912	2000	
249	Böcsa	Bagi- Bö	A hulladék a környezetéhez	7663	0	13027	500	
250	Bocska	Bocskai l	Az éves beszállított mennyis	40	0	320	0	
251	Boda	Boda köz	Rendezetlen.	2900	0	4660	450	

Adatok

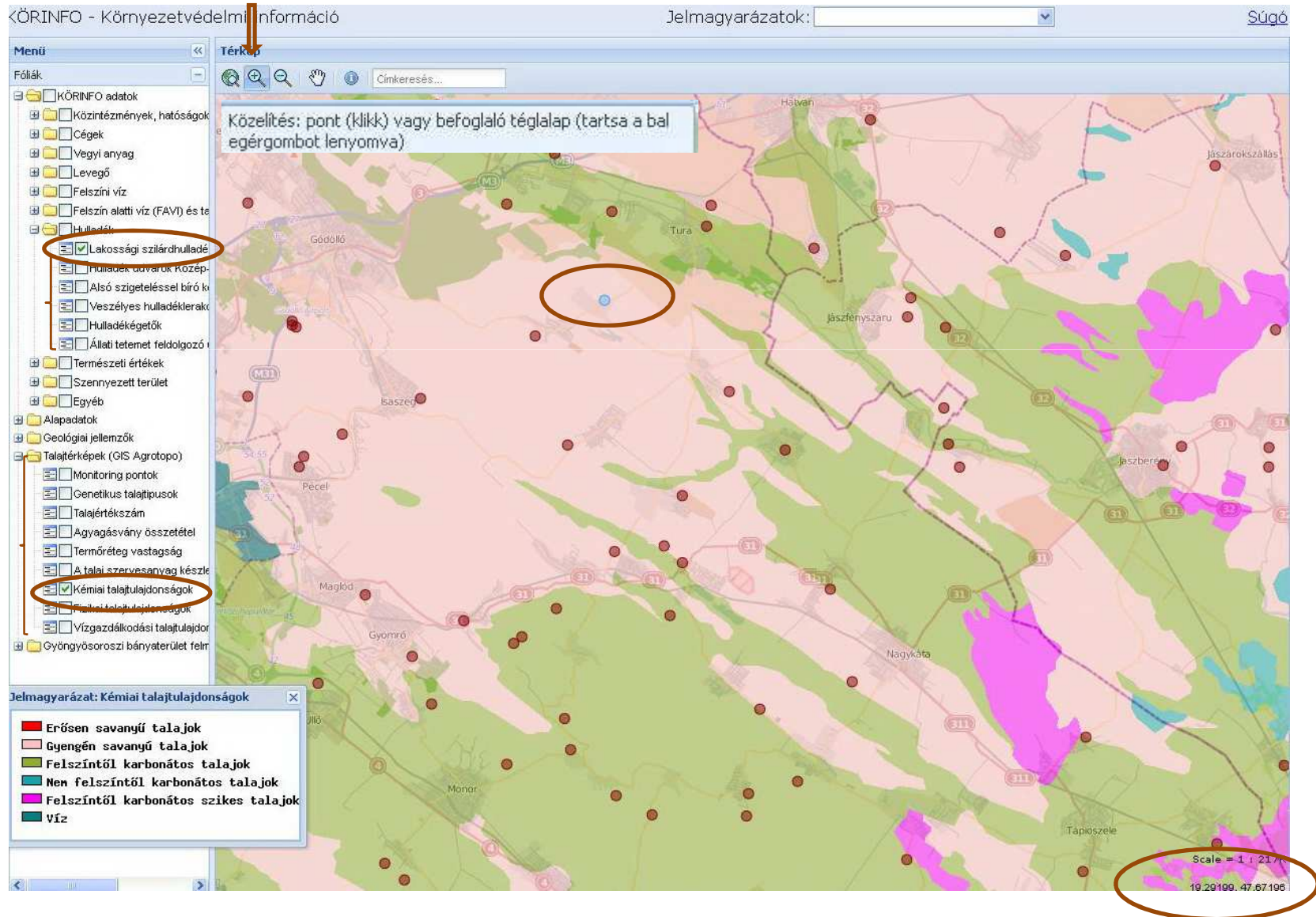
Scale = 1 : 2M

Additional data about every waste deposit are provided via overlay point data with pop up

GIS database: spatial distribution of soil characteristics and geographical location of the municipal waste deposits



GIS database: geographical location of the waste dumps and spatial distribution of soil characteristics



Thank you for your attention!

Waste database: http://www.mokkka.hu/db1/db_forms.php

GIS database: <http://www.enfo.hu/gis/korinfo/>