



## Hungarian progress with UNFC

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# Introduction to the MBFSZ activity with UNFC

- MBFSZ project between 2012-2020 for MRI inventory modernization
- Comparison between the National Mineral Resources Inventory and the UNFC-2009, CRIRSCO-2010, JORC-2012, PERC-2012, SPE-PRMS, Australian and Canadian Codes for Geothermy-2010, CSLS-2007, CO2CRC-2008 and USGS definitions
- Bridging between CRIRSCO family, SPE-PRMS, Geothermal codes and UNFC-2009
- Stakeholder consultations: research, authority, experts, entrepreneurs
- Previously harmonized datasets are being updated with more detailed methodology to provide data for projects with UNFC
- 2020-2021: Up to date BATER and MRI are used to define UNFC subcategories



## BATER

(Inventory of mining areas –  
*official database*)

## MRI

(Inventory of mineral resources  
and geothermal energy –  
*official database*)

# UNFC in the legislation

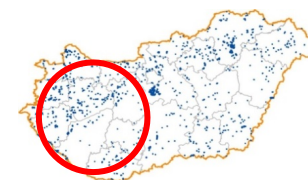
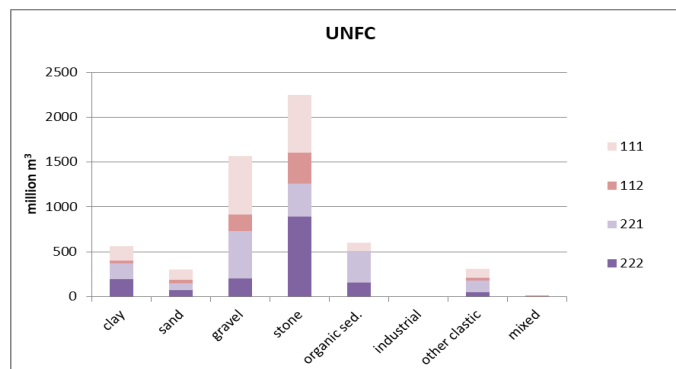
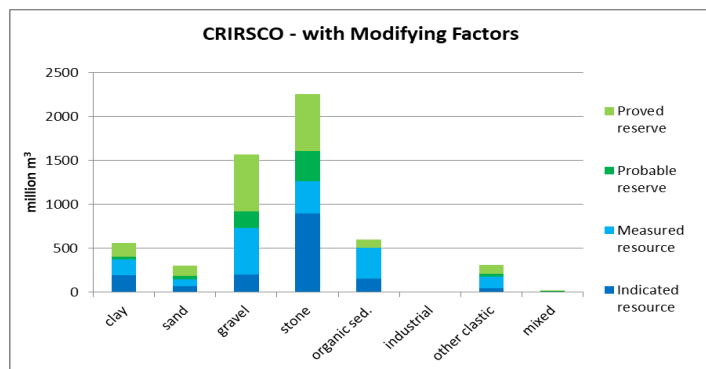
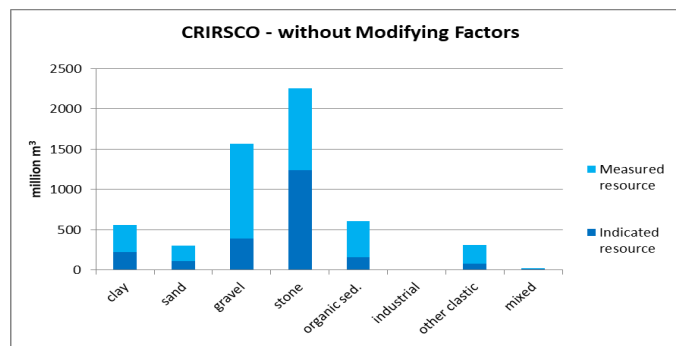
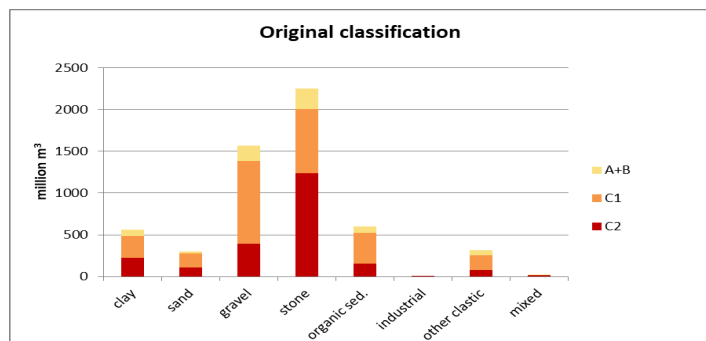
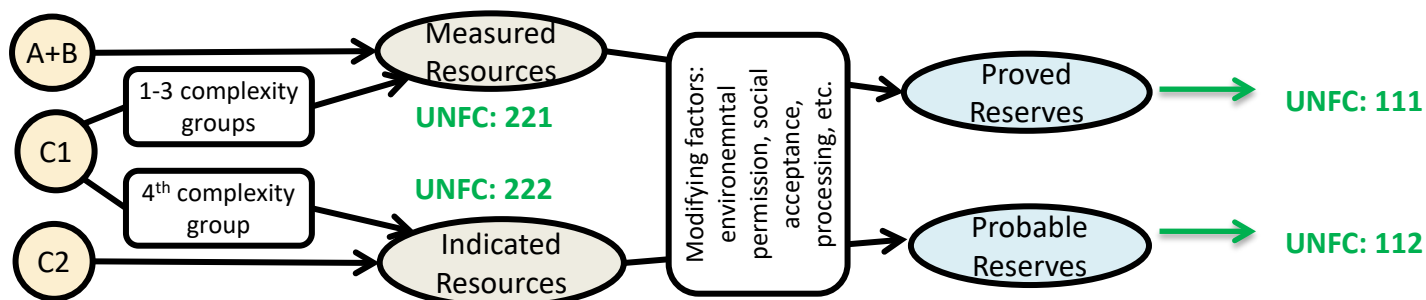


- **Terms and links are harmonized** between the Hungarian national classification and international CRIRSCO type reporting codes and UNFC.
- **2020: published legislation:** amendment on the 203/1998. (XII. 19.) Government Decree implementation of the XLVIII of 1993 on Mining Act (enclosure 5).  
<https://net.jogtar.hu/jogszabaly?docid=99800203.KOR&txtreferer=00000003.TXT>
- **Russian-type national mineral resource classification is specified in the Gov. Decree:**
  - **Category „A”, „B”, „C1” and „C2”** described taking into account field and underground survey, related analytical methodology, geological knowledge, tectonic settings, knowledge on groundwater, etc.
- **CRIRSCO type terms for solid minerals;** resources and reserves are harmonized with national terms for resources and related terms, reserves are also identified.
- **SPE PRMS is also harmonized with national hydrocarbon database** (P10, P50, P90)
- **UNFC categories are harmonized for hydrocarbon and solid minerals**
- **Mining companies report changes** in volume and quality for hydrocarbons according to SPE PRMS (Bridging between SPE PRMS and UNFC is used)
- **CRIRSCO aligned and UNFC compatible reporting forms are available:** MBFSZ webpage:  
<https://mbfsz.gov.hu/bevallas/nem-femes-nyersanyag-es-meddo>
- **Legislation on the need of national competent person:** 40/2010. (V. 12.) KHEM decree on the detailed rules for the pursuit of geological expertise

# Methodology for harmonization between national-CRIRSCO\_UNFC



- According to FGU-GKZ (2010) and bridging between CRIRSCO and UNFC



Transdanubia  
-Hungary

Supporting tool  
to  
resource  
management  
and planning

- Mining and Geological Survey of Hungary

# Detailed methodology for E, F category with BATER



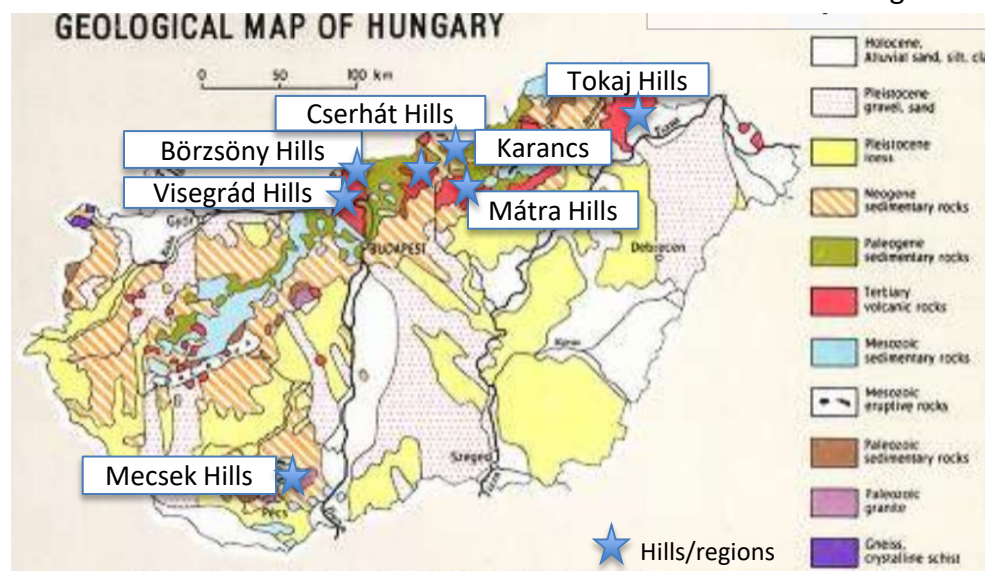
Status of the mining plot from point of view of the extraction, and approval of the Technical Operation Plan (TOP)	E	F
1. A new mining plot that does not have a TOP yet. <i>(Within 5 years from the date of the mining permission, the licensee must submit the TOP for extraction.)</i>	E1.1	F1.2
2. Mineral deposit (in the exploration phase) or mining plot with approved TOP for development	E2	F2.1
3. Mine with approved TOP for extraction	E1.1	F1.1
4. Mine with approved TOP for suspending mining activity	E2(E3/E1.2)	F2.2
5. Mine with approved TOP for termination of mining activity and mine closure	E3.3	F3(F3/F2.3)
6. Mine operating earlier (with approved TOP for extraction) that currently has no TOP		
6.A Mine without licensee, where tendering is in progress. <i>(The mining authority has cancelled the mining right of the previous licensee. The mining right can be obtained through a tender which is in progress.)</i>	E2	F2.1
6.B Mine without licensee, where tendering failed. <i>(The mining authority has cancelled the mining right of the previous licensee. The mining right was tendered on two occasions but both were unsuccessful.)</i>	E3.1	F2.3
6.C Mine with a new licensee. <i>(As a result of the tender for the mining right, a new licensee has been appointed, who has 1 or 5 years to submit a TOP.)</i>	E1.1	F1.2
6.D Mine where mining activity has been permanently stopped. <i>(A stopped mine where the landscaping and reclamation tasks have been completed, but the mining plot cannot be deleted from the state inventory, e.g. due to the eventual surface movements.)</i>	E3	F4(F3/F2)
6.E Mine where implementation of the mine closure TOP has been approved by the mining authority. <i>(A stopped mine, where the landscaping and reclamation tasks have been completed, and the mining plot is to be deleted from the state inventory.)</i>	E3	F4
6.F Mine that currently has no TOP, but 6.A–6.E are not the case. <i>(In this case, the mining authority is obliged to request the licensee to submit a TOP, as the owner of the mining right must always have a valid TOP except of cases 6.A–6.E.)</i>	E1.2	F2/F2.2
7. Closed mine. <i>(Mining plot deleted from the state inventory.)</i>	E3/E2	F4/F3

# Andesites in Hungary

- Joint use of inventory of mining areas and inventory of mineral resources to apply UNFC

ID of locality	TOP category	TOP state	UNFC E	UNFC F	UNFC G	volume (million m <sup>3</sup> )	HUN A+B (million m <sup>3</sup> )	HUN C1 (million m <sup>3</sup> )	HUN C2 (million m <sup>3</sup> )
Mátra Hills 2.	existing license /TOP	TOP-3	E1.1	F1.1	G1	< 2	< 1	1	0
			E1.1	F1.1	G2	5	0	0	5
			E1.1	F1.1	G2	42	0	0	42
Mátra Hills 7.	new licensee / TOP not yet approved	TOP-6C	E1.1	F1.2	G1	12	5	7	0
Mátra Hills 8.	closed mine	TOP-7	E3	F4	G1	204	47	157	0

HUN: Traditional Hungarian resource classification



## Selected areas with different projects in UNFC

- UNFC categories identified with stages of TOP and mineral resource data

Mecsek	E1.1F1.1G1	25
	E1.1F1.1G2	115
Mátra	E1.1F1.1G2	5
	E1.1F1.1G1	30
	E1.1F1.2G1	12
	E3F4G1	< 1
Cserhát	E1.1F1.1G1	16
	E1.1F1.1G2	14
Karancs	E1.1F1.1G1	< 1
Börzsöny	E1.1F1.1G1	16
	E1.1F1.1G2	< 1
Visegrád	E1.1F1.1G1	< 1

	E1.1F1.1G2
Mecsek	119
Mátra	5
Cserhát	14
Karancs	0
Börzsöny	< 1
Visegrád	0

	E1.1F1.1G1
Mecsek	25
Mátra	29
Cserhát	16
Karancs	< 1
Börzsöny	16
Visegrád	< 1

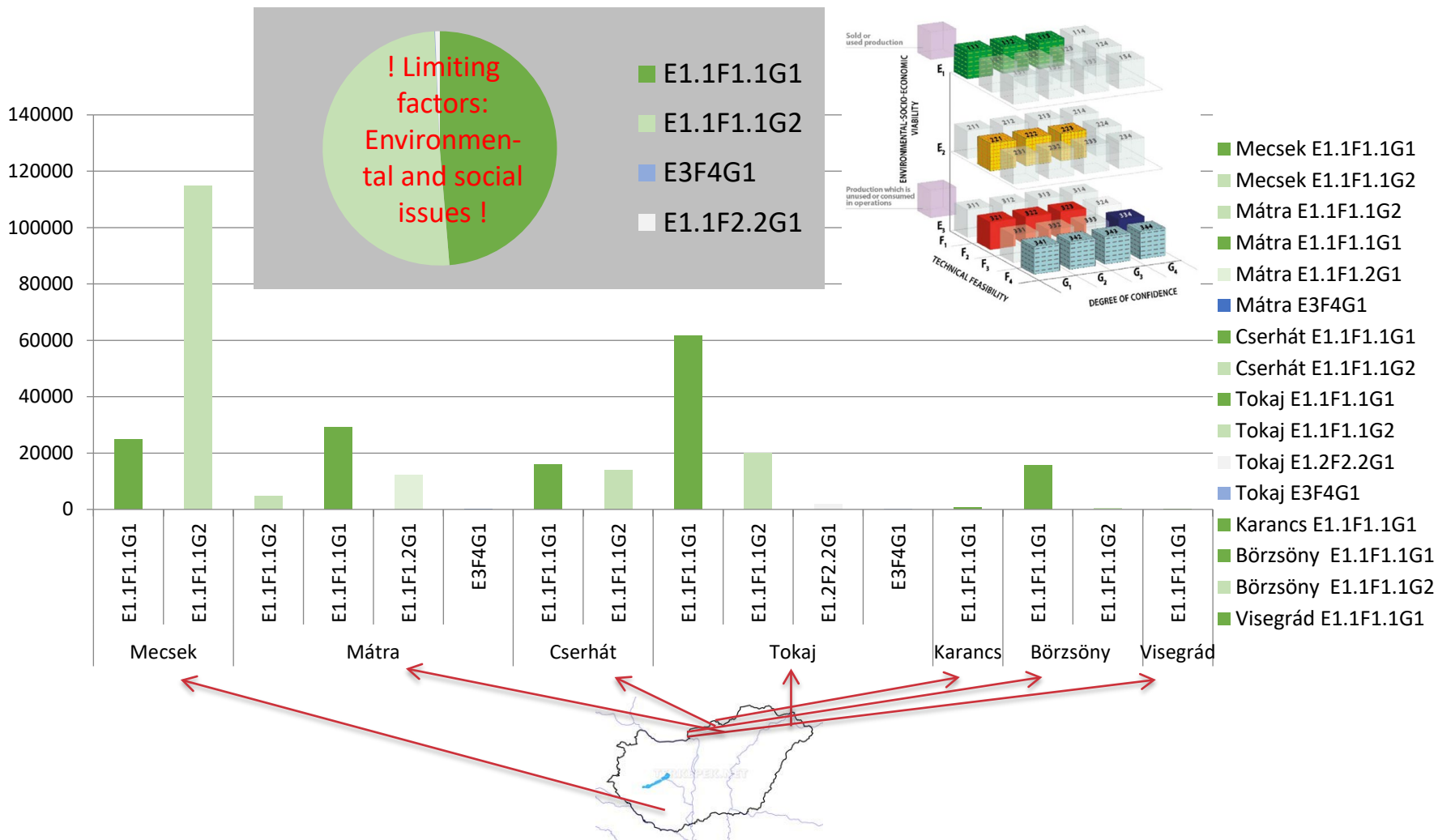
	E3F4G1
Mátra	< 1

Volumes in million m<sup>3</sup>

- Limiting factors influence the access to mineral deposits and hinder mining activity

Full limitation	Partial limitation
<b>32%</b> <i>for prognostic areas</i>	<b>58%</b> <i>for prognostic areas</i>

# UNFC supports mineral resource management





## Summary

- MBFSZ projects between 2012-2020. have achieved objectives to establish the modernization of National Inventory for Mineral Resources and Geothermal Energy with using of UNFC.
- Results, publications and amendment of legislation with UNFC support the the application of UNFC
- MBFSZ updates inventories of mineral reosurces and mining areas and UNFC is applied.
- Reporting forms are available with UNFC alignmenet, UNFC identification is in the MBFSZ
- Methodology is supported by BATER and MRI datasets, and helps to achieve detailed classification
- UNFC works in 2021 have importance to support strategic documents for mineral resource management
- Future plan: proper datasets and visualization of UNFC information to serve data in the in accordance with the growing national and EU-level data management for raw materials and provide data on limiting factors.





THANK YOU FOR THE ATTENTION!