

SLOVAK ENVIRONMENT AGENCY

is implementing an activity



INTERNATIONAL CONFERENCE
CONTAMINATED SITES
ZNEČISTENÉ ÚZEMIA
MEDZINÁRODNÁ KONFERENCIA

INTERNATIONAL CONFERENCE

CONTAMINATED SITES 2018

BANSKÁ BYSTRICA, SLOVAK REPUBLIC, 8 – 10 OCTOBER 2018

*The activity has been implemented within the framework of national project
Information and providing advice on improving the quality of environment in Slovakia.
The project is cofinanced by Cohesion Fund of the EU under Operational programme Quality of Environment.*

CONTAMINATED SITES IN HUNGARY – present state and perspective

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European achievements in **soil remediation** and **brownfield redevelopment**

A report of the European Information
and Observation Network's
National Reference Centres
for Soil (Eionet NRC Soil)

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2017



Historical achievements

1. The hungarian national environmental remediation programme (OKKP)

LOCATION	Various, Hungary
POLLUTANT	Halogenated volatile organic compounds (HVOC)
SOURCE	Carcass pit, pesticides and poisons warehouses, industrial waste sites, spoil-bank, fly-ash and slurry dump, military and mining sites
GENERAL CLEAN UP OBJECTIVES	Protection of human health, drinking water and soil, water reservoir and environment, remediation of contaminated areas
REMEDIATION ACTIONS	Unspecified
SITE/END USE	Industrial, commercial, residential
SOCIAL-LEGAL ISSUES	Various national decrees
KEY LEARNING/ EXPERIENCE TO SHARE	Development of a register with public access to the data sheets

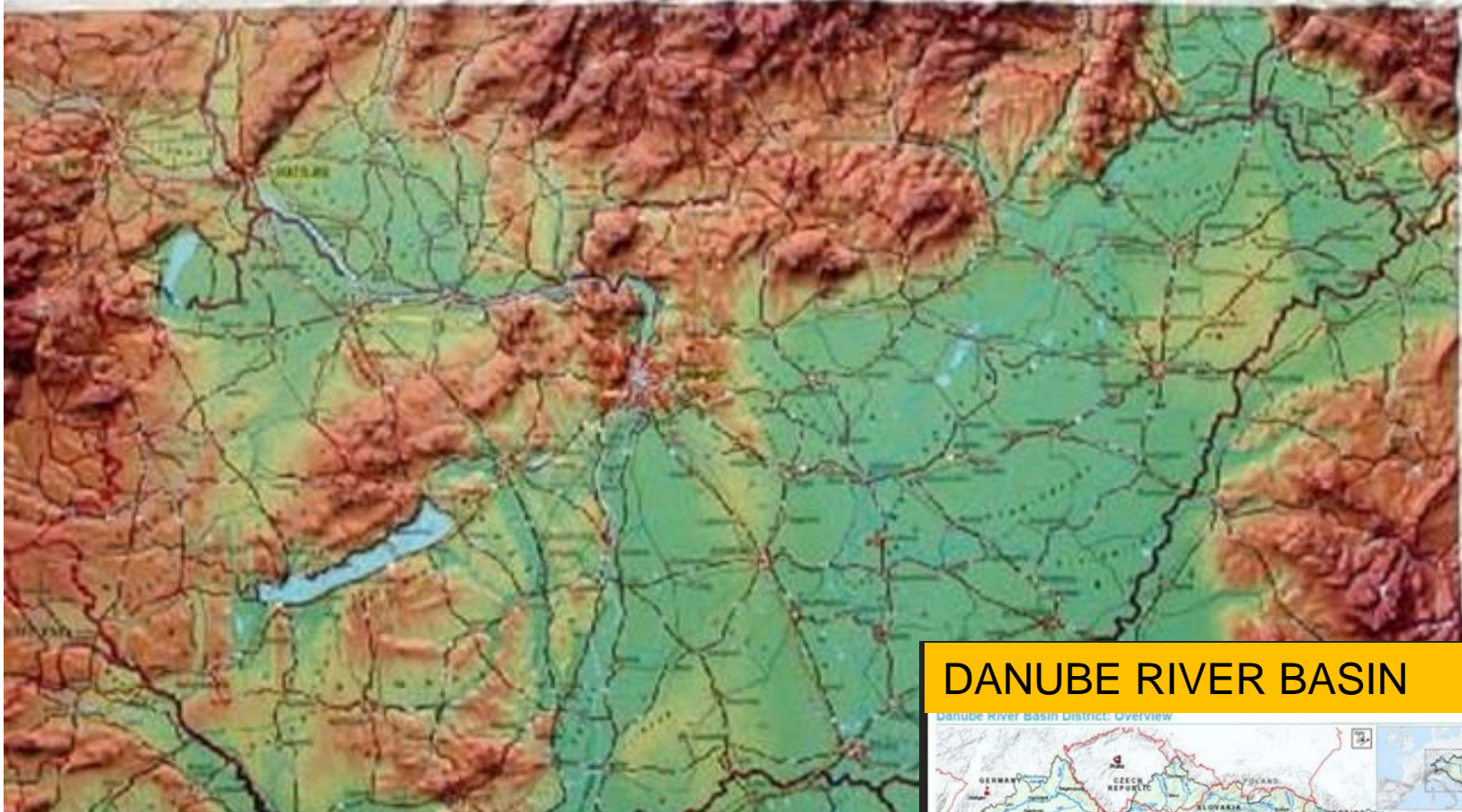
<https://ec.europa.eu/jrc/en/publication/>

HUNGARY



93 030 km²

10 million
people



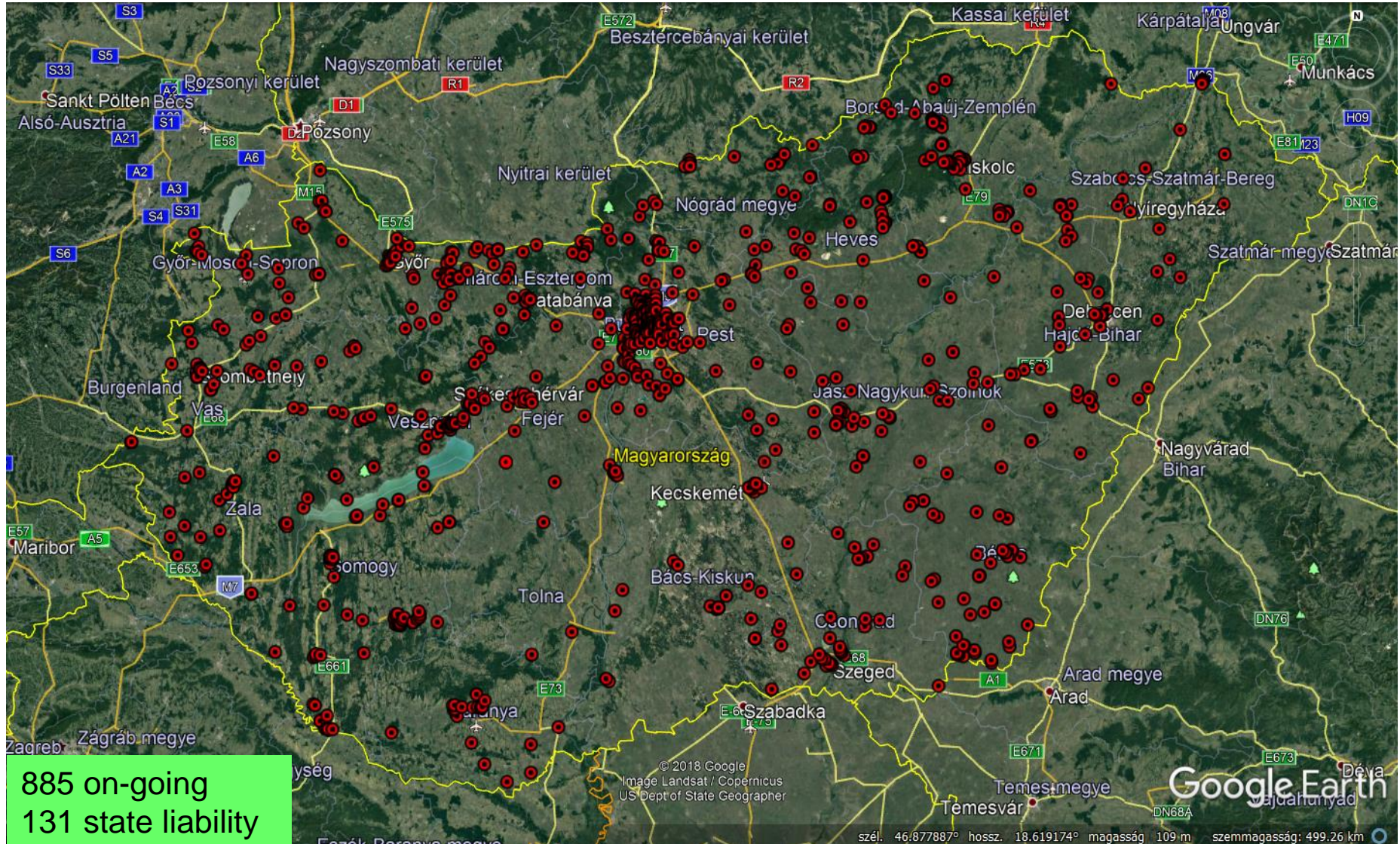
DANUBE RIVER BASIN



801,463Km²
Second Largest
Danube River:
2,857 Km long
1.5 m wide
83 million people



Registered contaminated sites and on-going remediations



The story began....

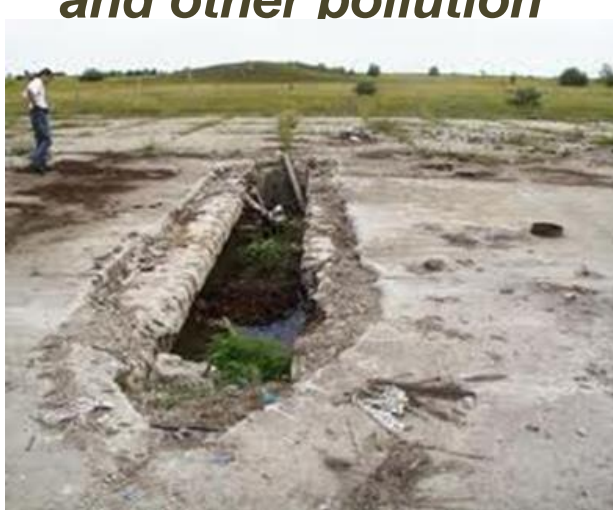
(1990-1991)

Solving environmental damages concerning former soviet army base and military training area

- 330 settlements, 171 military objects,
- 48 000 hectars
- 2,5-3 million m³ contaminated soil
- 1-1,2 million m³ contaminated ground water
- 60 billion Ft cost of damage



Source of pollutants: hydrocarbons, heavy metals, hazardous waste and other pollution



1996 - the main goal of the program was to develop the frame for remediation



1991. Governmental Action-Plan

Planning: a long term program for inventory, investigation and removal of accumulated pollution

1995. The basic environmental rules are fixed in **Act No.53./1995.**

1996. The National Environmental Remediation Program (OKKP) was adopted by the Parliament as part of the National Environmental Plan

1996: The assumption was: **30-40 000 contaminated sites**
The first inventory results: 15 000 sites datasheets on potential/contaminated sites

OKKP



- 1996** Government decision No. 2205/1996. (VII. 24.):
National Environmental Remediation Programme (OKKP)
- 1997** Government decision No. 2304/1997. (X. 8.) Medium term
tasks of the OKKP and establish subprograms
- 2000** legislative framework entered into force

The aims of the OKKP:

- a) identification of risk, extent of pollution and deterioration of the groundwater and geological medium,
- b) mitigation the risk of pollution in risk areas, and
- c) reduction of the level the risk or elimination of pollution in the contaminated area.

Legal frame

**Act No. 53 in 1995. on
general rules on
environment
protection**

Env. Ministerial Decree No.
14 in 2005. rules on
screening methods for
investigation

**Gov. Decree No 219 in
2004. on Groundwater
protection**

Joint Ministerial decree No. 6
in 2009. on limit values for
contaminated groundwater and
geological medium and general
rules for measuring

Env. Ministerial Decree No. 18 in 2007. on registry and
data collection of GW & GM

OKKP Subprograms



Ministry of Innovation and Technology

- Hungarian State Railways Subprogram
- Public Road Subprogram
- Solid Mineral Mining Subprogram
- Uranium-mining Subprogram
- The Hungarian National Asses Management Inc.

Ministry of Interior

- Water Management Subprogram
- Municipality Subprogram
- Penal- Institutions Subprogram

Ministry of Defence

- Home Defence Subprogram

Ministry of Human Resources

- Educational Institution Subprogram
- Health Institution Subprogram

REGISTER



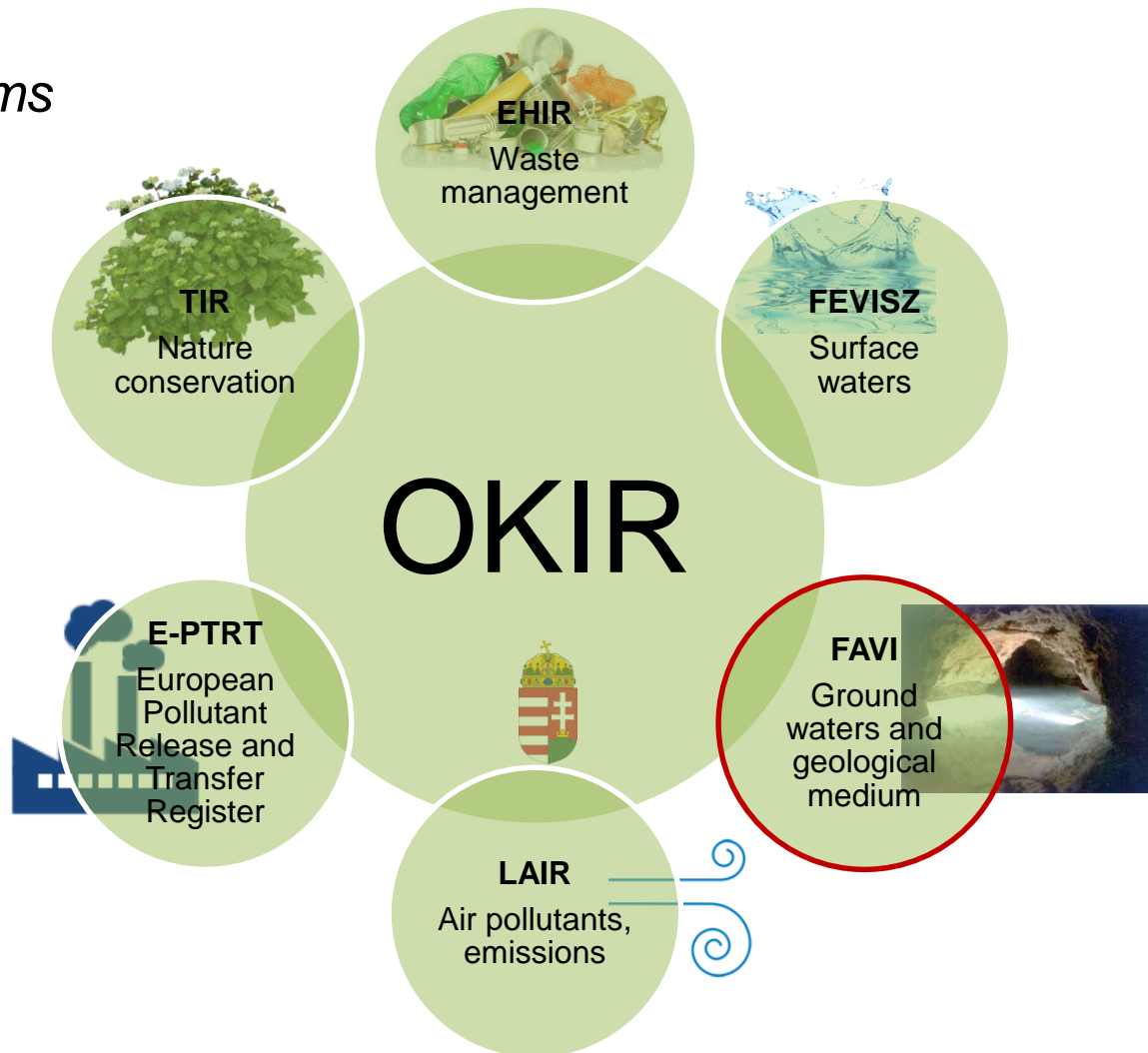
<http://web.okir.hu/hu/>

National Environmental Information System (OKIR)

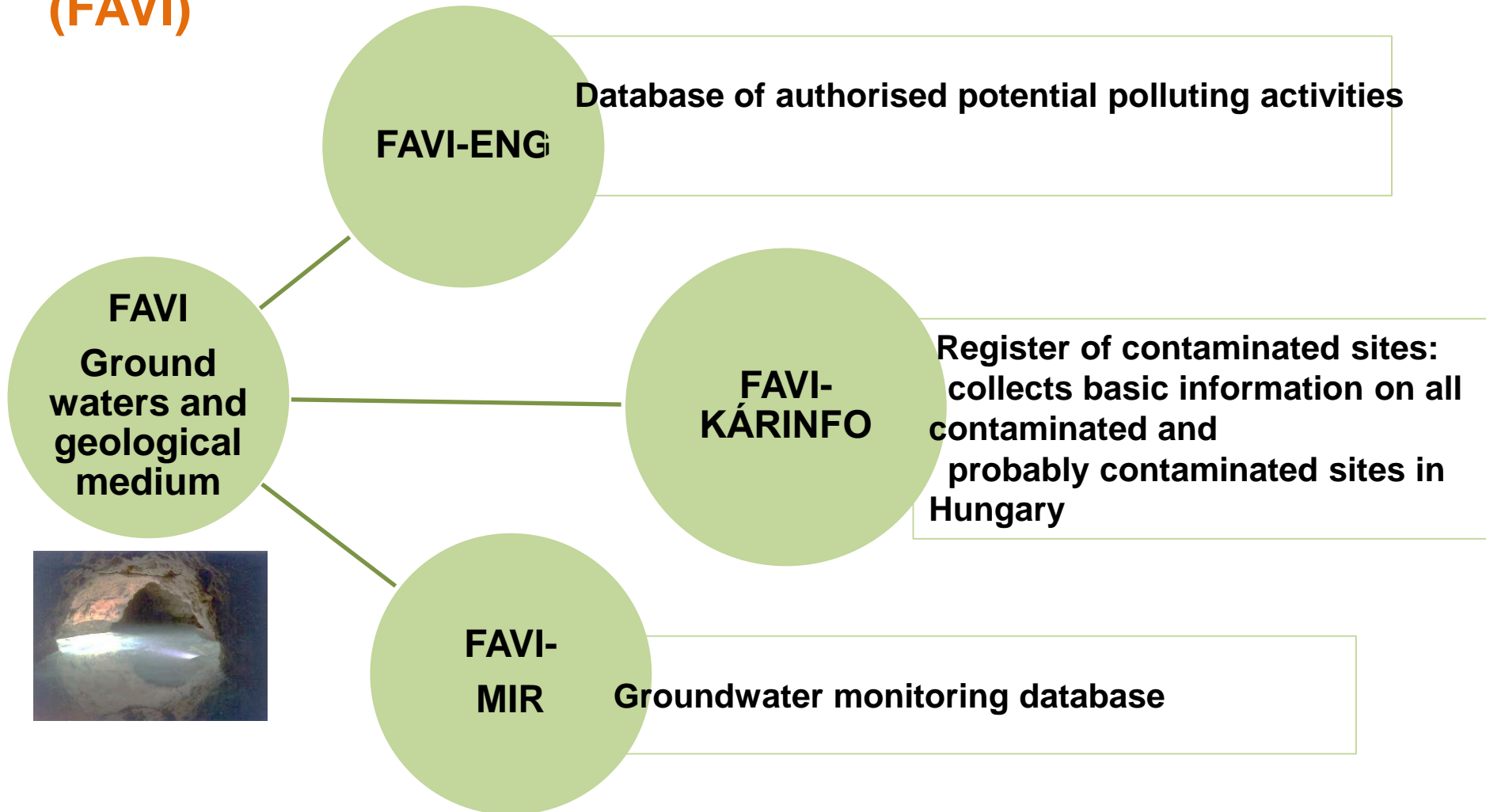
- Act LIII. of 1995 on the general rules of environmental protection;
- Stores data on the identification, registration and technical classification of all contaminated sites;
- Aims to follow current state and use of environment.

National Environmental Information System (OKIR)

Six subsystems



Register System of Groundwater and Geological Media (FAVI)



Register System of Groundwater and Geological Media (FAVI)

Data provision system



Users of the environment upload data online (B1, B2, B3 forms) as regulated by *Ministerial decree No. 18/2007*



Regional environmental authorities process the reported data, perform measurements

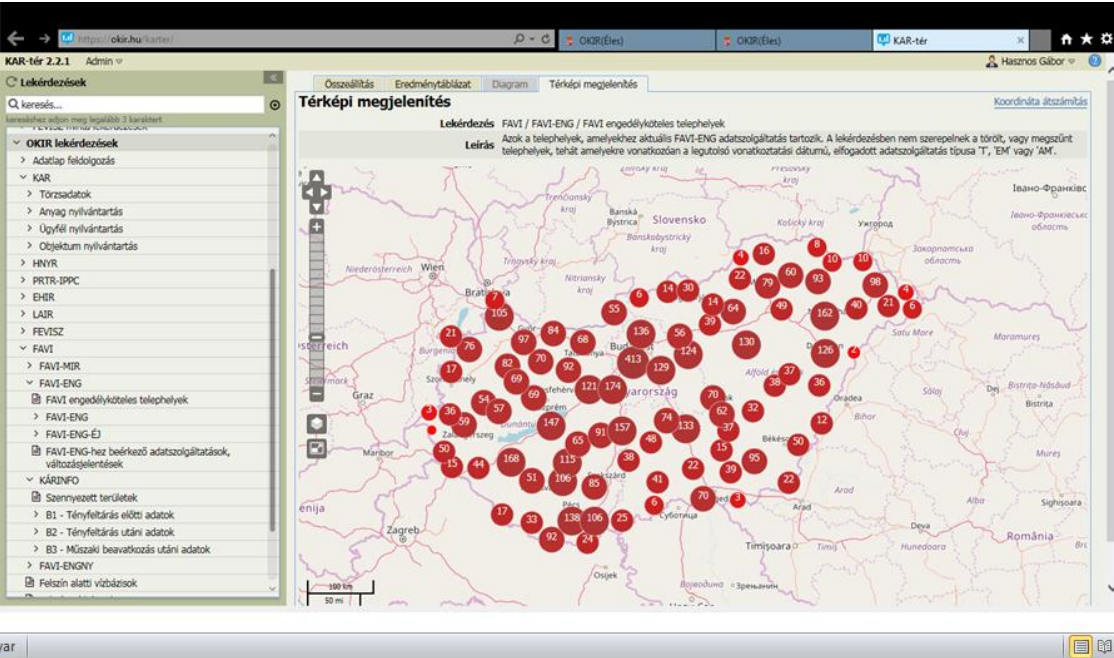


Regional environmental authorities transmit the data to the OKIR

ADATSZOLGÁLTATÁS		FAVI-KÁRINFO B1
ZÉRŰ SZENNYEZŐFORRÁSOK / SZENNYEZETT TERÜLETEK ORSZÁGOS SZÁMBAVÉTELE		
TÉNYFELTÁRÁS ELŐTTI ADATOK ADATLAPJA BORÍTÓLAP		
VONATKOZTATÁSI DÁTUM: □□□□.□□.□□.		
ADATSZOLGÁLTATÁS TÍPUSA: <input type="checkbox"/>		
adatok		
mi Ügyfél Jel): □□□□	0.2 Ügyfél neve:	
adatok		
0.4 Beosztás:		
település neve utca, út, tér házszám		
0.7 Fax-szám:	0.8 E-mail:	
szennyezőforrás, szennyezett terület adatai		
mi Terület Jel): □□□□	0.10. A potenciális, pontszerű szennyezőforrás, szennyezett terület megnevezése:	
elrendelő határozat száma: □□□□□□□□		
házsám		
FAVI-KÁRINFO B2		
FAVI-KÁRINFO B3		

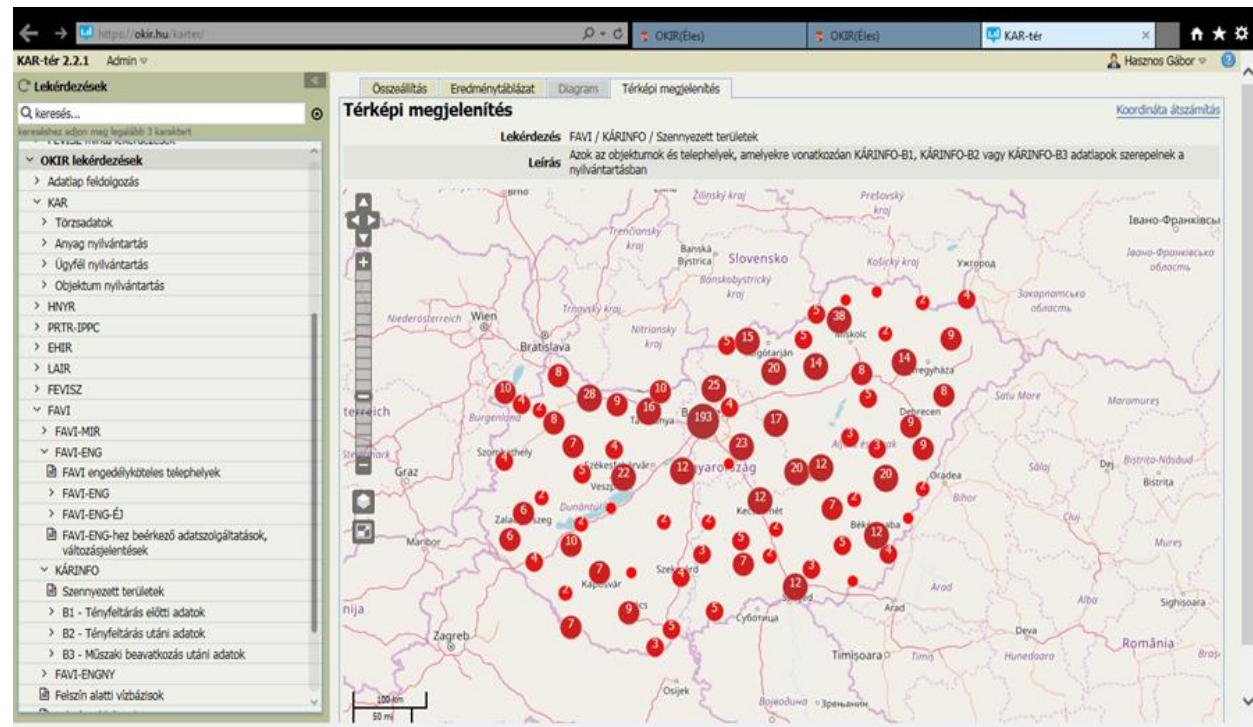
National Remediation Priority List:

- **B1** technical datasheet, priority number before site investigation
- **B2** technical datasheet, priority number after site investigation
- **B3** technical datasheet, priority number after engineering intervention



Registered potentially polluting activities

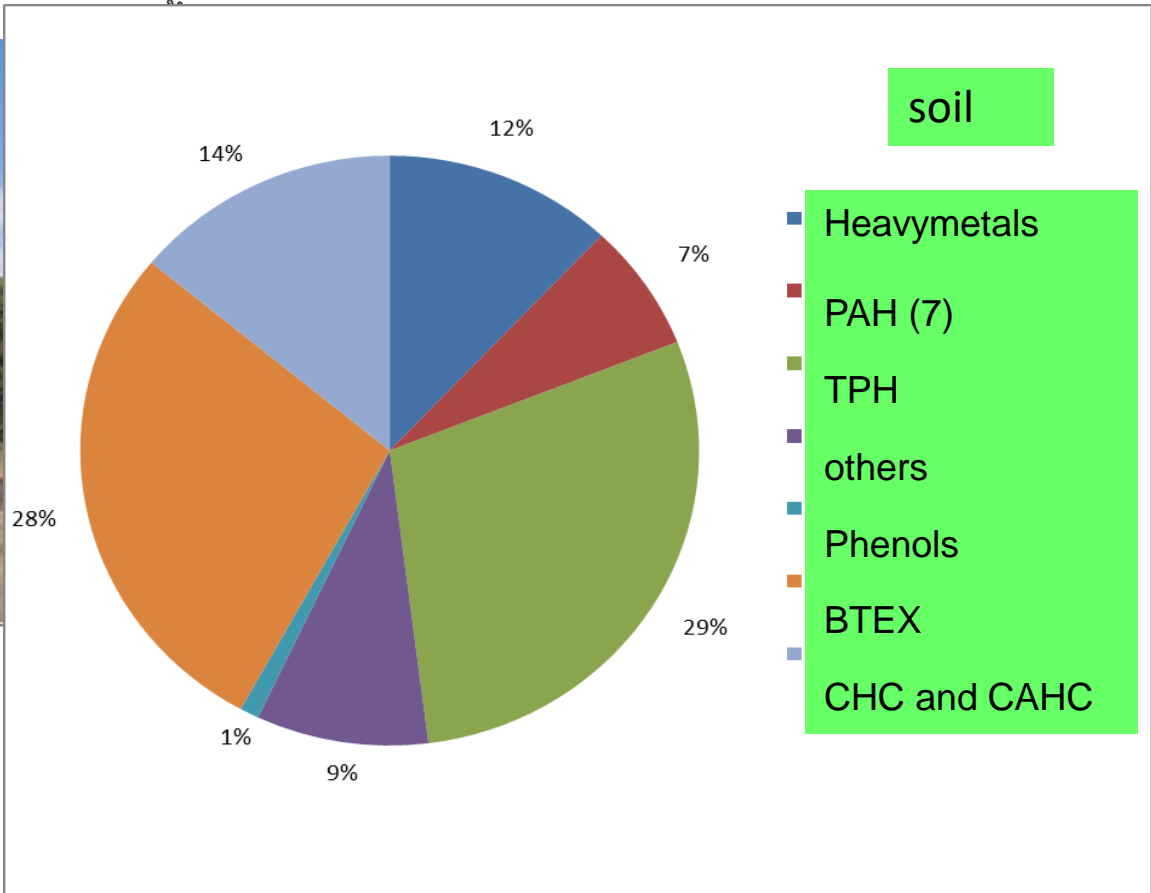
Registered contaminated sites



Mintavétel - Sampling

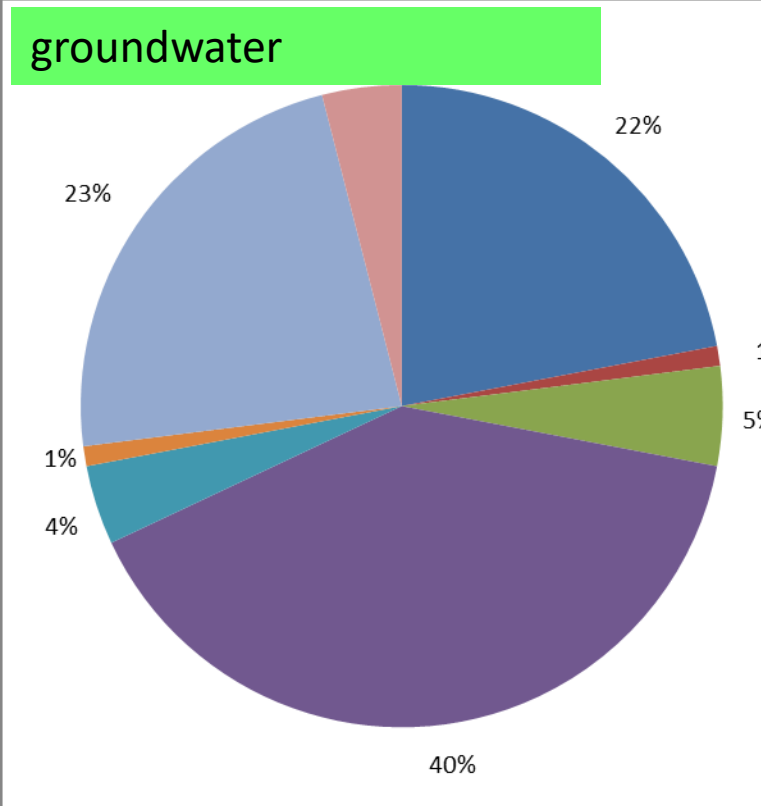


soil



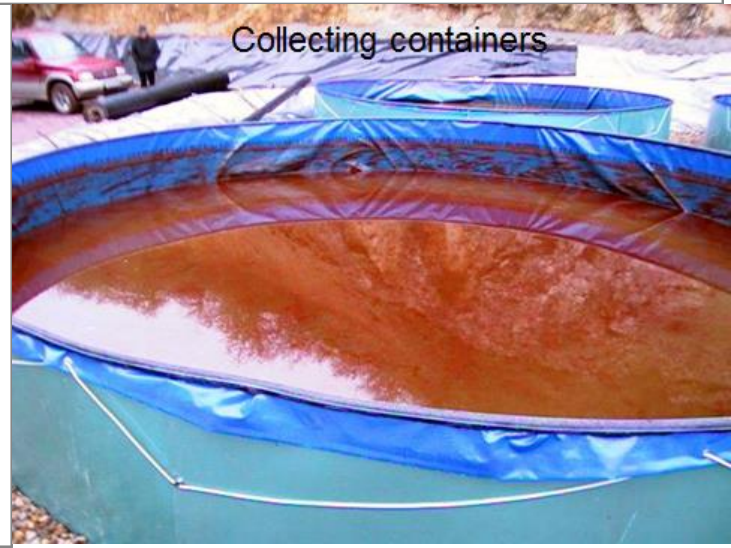
- Heavymetals
- PAH (7)
- TPH
- others
- Phenols
- BTEX
- CHC and CAHC

groundwater



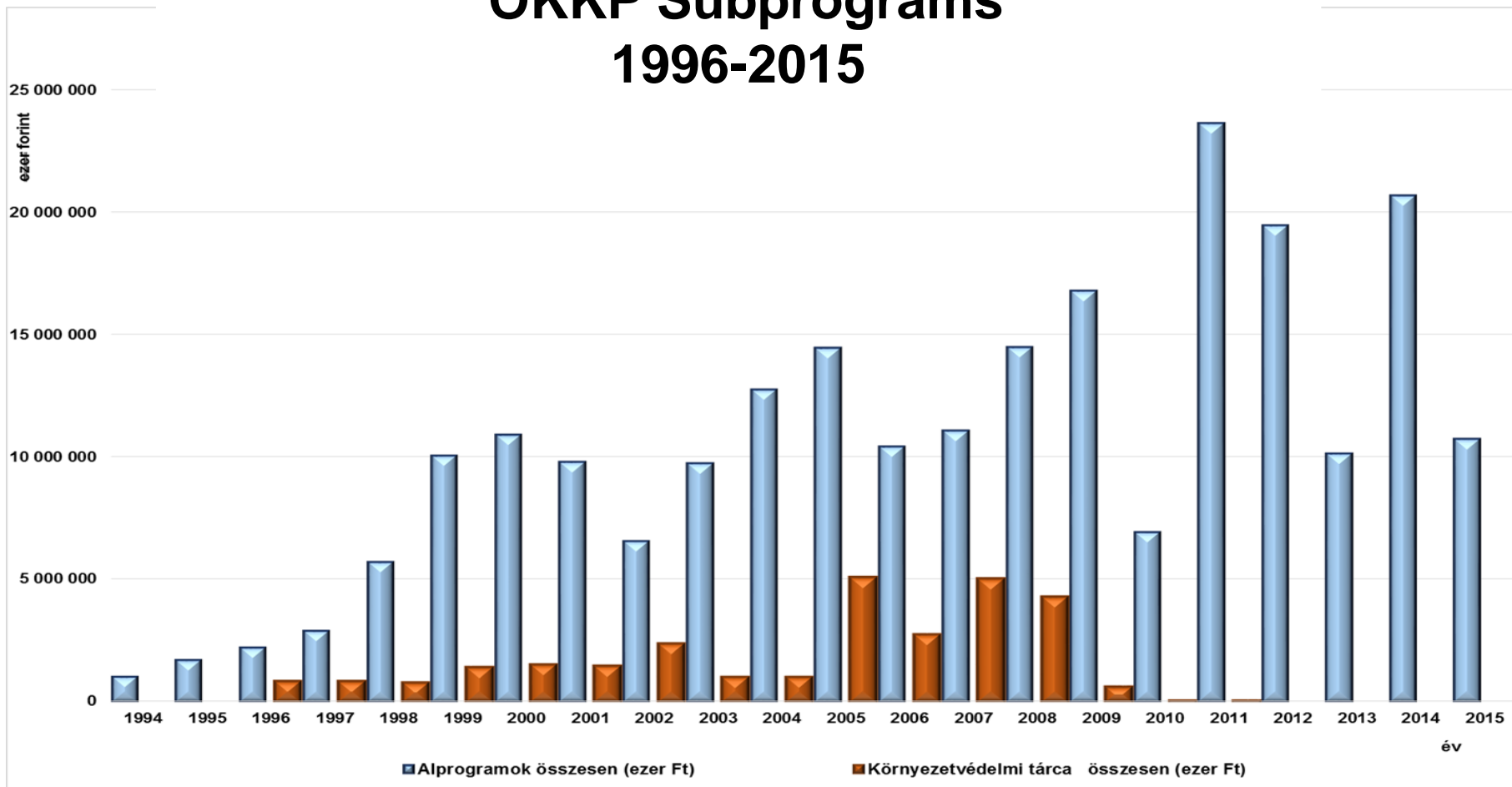
- Fenol 1%
- Egyéb 4%
- Fenol 1%
- Aromás szénhidrogének (BTEX) 23%
- Halogénezett aromás és alifás szénhidrogének 4%
- Ásványi olaj 40%
- PAH 5%
- others 1%

Collecting containers



National Budget

OKKP Subprograms 1996-2015



EU supported and co-financed projects

2004-2007

- **KIOP 5 projects (6,5 Mrd HUF)**
- **ROP 5 brownfield projects (2,5 Mrd HUF)**

2007-2014

- **KEOP 17+6 projects (39,3 Mrd HUF)**

2015-2020

- **KEHOP: 7 projects started (28 Mrd HUF)**
- **TOP: 52 brownfield projects (34,8 Mrd HUF)**

Results achieved



- More than 600 state intervention remediation measures
- New legal and technical regulation
- Measurement-sampling and technological developments
- Lots of experience and routine
- 37 guidebooks, thematic brochures
- CD, DVD
- OKKP web page, all documents available
- OKIR database -FAVI structures
- Bilateral connection (e.g. Slo-HU)
- 11 occasion remediation onference



Future perspective and challenges

We are working now on...

- Drafting a comprehensive national wide brownfield strategy
- Middle term actionplan of the OKKP
- Special treatment solutions for the privatised and liquidation under

*Thank You Very much for Your kind
attention!*

