

HUNGARIAN NATIONAL REPORT AND THE FOLLOWING IMPLEMENTATION OF EU WFD IN 2005

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Map 2: Relief and Topography (final draft)



Background of report

- Responsibilities:
 - ◆KvVm/ MoEW: competent & reporting authority
 - ◆OKTVF/ NDENW: coordinator institution in aggregation of the report data & maps on national level
 - ◆Regional waterboards:
 - ★ coordinator bodies in territorial work outing & information evaluation on environmental & nature protection issues in WFD field
 - ★ providing expertise on water issues in WFD field

Features of the report

- Compatibility with:
 - ◆ Reporting guidance (approved in Dec. 2004 on Water Dir.'s Meeting),
 - ◆ ICPRD Roof report (approved in Dec. 2004 on ministers meeting in Vienna
 - ◆ prescription by WFD 5. and 6. articles & II.,III. and IV. annexes,
 - ◆ different guidances prepared by EC working groups
 - ◆ national specialities on water policy depend on carpathian ecoregions & geological features.

Table of contents (only the main chapters)

1. Features of the Danube River Basin District within Hungary
2. Overview of man made's environmental impacts
3. Uncertainties and data shortage
4. Proposals to improve the monitoring network & activity
5. Economic analysis of different water uses
6. Inventory of protected areas

Features of the Danube River Basin District within Hungary

- Surface (**non-artificial**) waters (there are only river/ water course and lakes in Hungary)
 - ◆ Number of river/water course types: 25 (22 types by nature originated conditions, 3 types by ICPDR description for hungarian Danube section)
 - ★ Number of the **river water bodies: 876** (their catchment are over the scale 10 Km²)
 - ★ Description of the river bodies by
 - Altitude & slope condition (higher hilly, hilly and low land areas)
 - Hydrogeochemical parameters (siliceous, calcareous, organic)
 - Scale of substratum composition (rude, medium, fine deposits)
 - ◆ Number of lake (lakes, oxbows, wetlands) types: 10
 - ★ Number of the **lake water bodies: 100** (their size of average water covered surface areas over the 0.5 Km²)
 - ★ Description of the lake water bodies by
 - Altitude condition (only on the low land areas in Hungary)
 - Hydrogeochemical parameters (siliceous, calcareous, organic)
 - Mean depth (less than 1 m, 1.5 m, 3 m, 4 m , between 1-3 m, 3-15 m)
 - Size of mean surface areas (small, between 0.5-10 Km², medium, between 10-100 Km², large, over 100 Km²)

Features of the Danube River Basin District within Hungary (SW's)

- Preliminary designation of **HMWB & AWB**
 - ◆ **HMWB** (man-made impact on wb. can not be changed):
 - ★ On river water bodies: 25
 - ★ Not designated any HMWB in case of lake wb. because of lack of biological validation
 - ◆ **Probably HMWB** (man-made impact on wb. might be changed):
 - ★ On river water bodies: 281
 - ★ On lake water bodies: 16
 - ◆ **AWB** (which has an ecological importance):
 - ★ In case of rivers: 150
 - ★ In case of lakes: 124

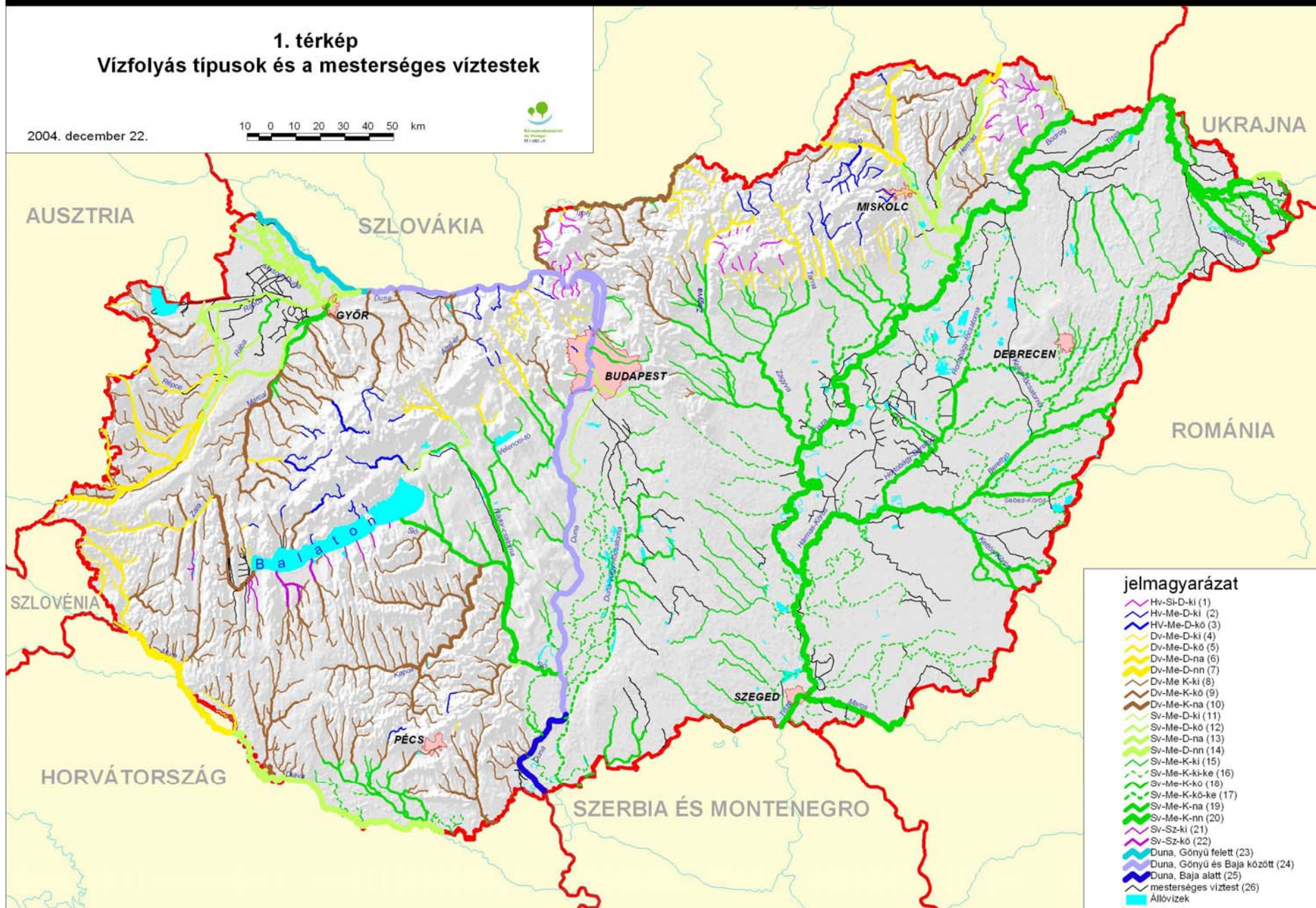
Definition of reference conditions by expert judgement!

River types (22+3) and artificial river water bodies (150)

1. térkép
Vízfolyás típusok és a mesterséges víztestek

2004. december 22.

10 0 10 20 30 40 50 km



jelmagyarázat

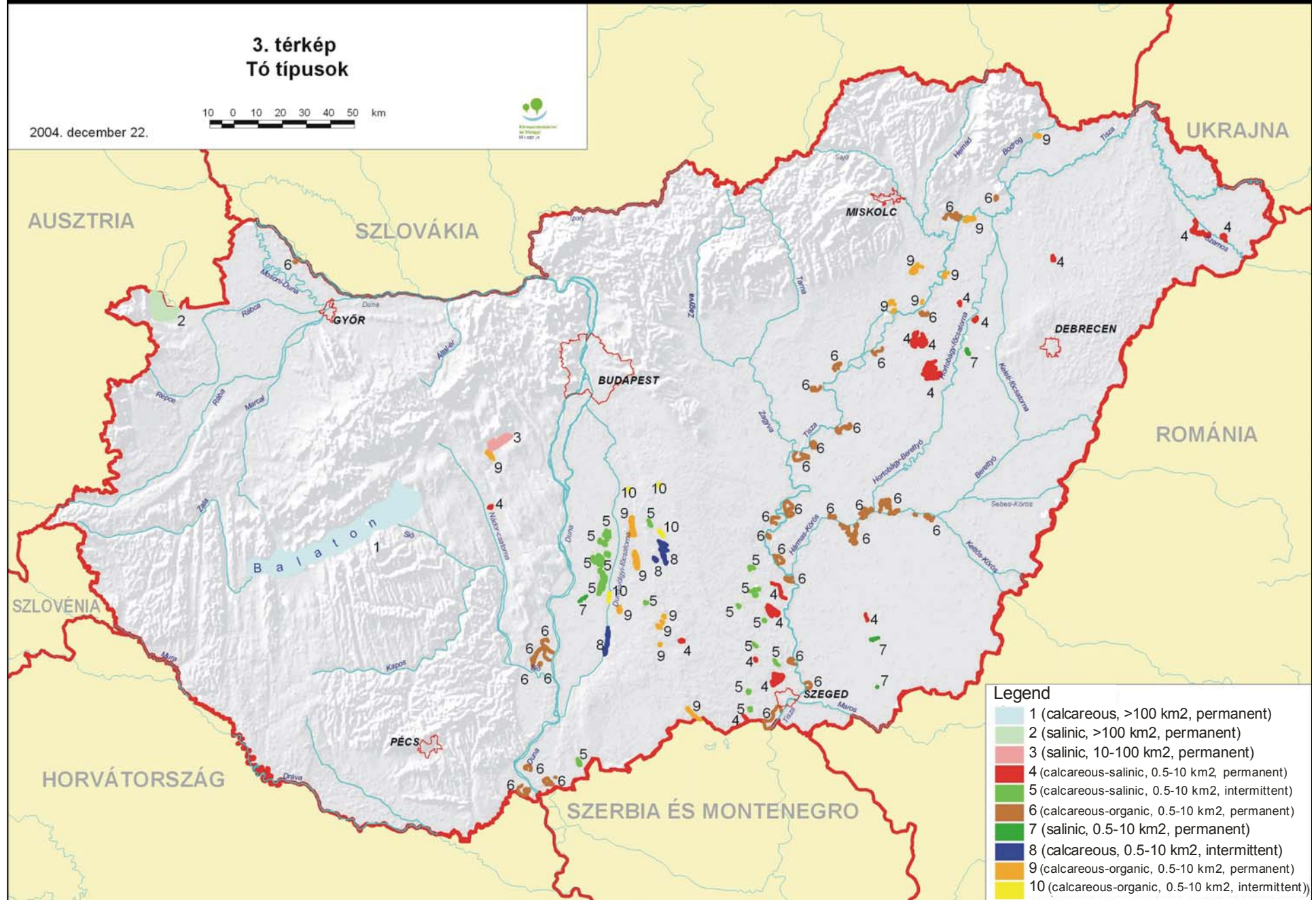
- Hv-Si-D-ki (1)
- Hv-Me-D-ki (2)
- Hv-Me-D-kö (3)
- Dv-Me-D-ki (4)
- Dv-Me-D-kö (5)
- Dv-Me-D-na (6)
- Dv-Me-D-nn (7)
- Dv-Me-K-ki (8)
- Dv-Me-K-kö (9)
- Dv-Me-K-na (10)
- Sv-Me-D-ki (11)
- Sv-Me-D-kö (12)
- Sv-Me-D-na (13)
- Sv-Me-D-nn (14)
- Sv-Me-K-ki (15)
- Sv-Me-K-ki-ke (16)
- Sv-Me-K-kö (18)
- Sv-Me-K-kö-ke (17)
- Sv-Me-K-na (19)
- Sv-Me-K-nn (20)
- Sv-Sz-ki (21)
- Sv-Sz-kö (22)
- Duna, Gönyű felett (23)
- Duna, Gönyű és Baja között (24)
- Duna, Baja alatt (25)
- mesterséges víztest (26)
- Állóvizek

Lake types (10)

3. térkép Tó típusok

2004. december 22.

10 0 10 20 30 40 50 km

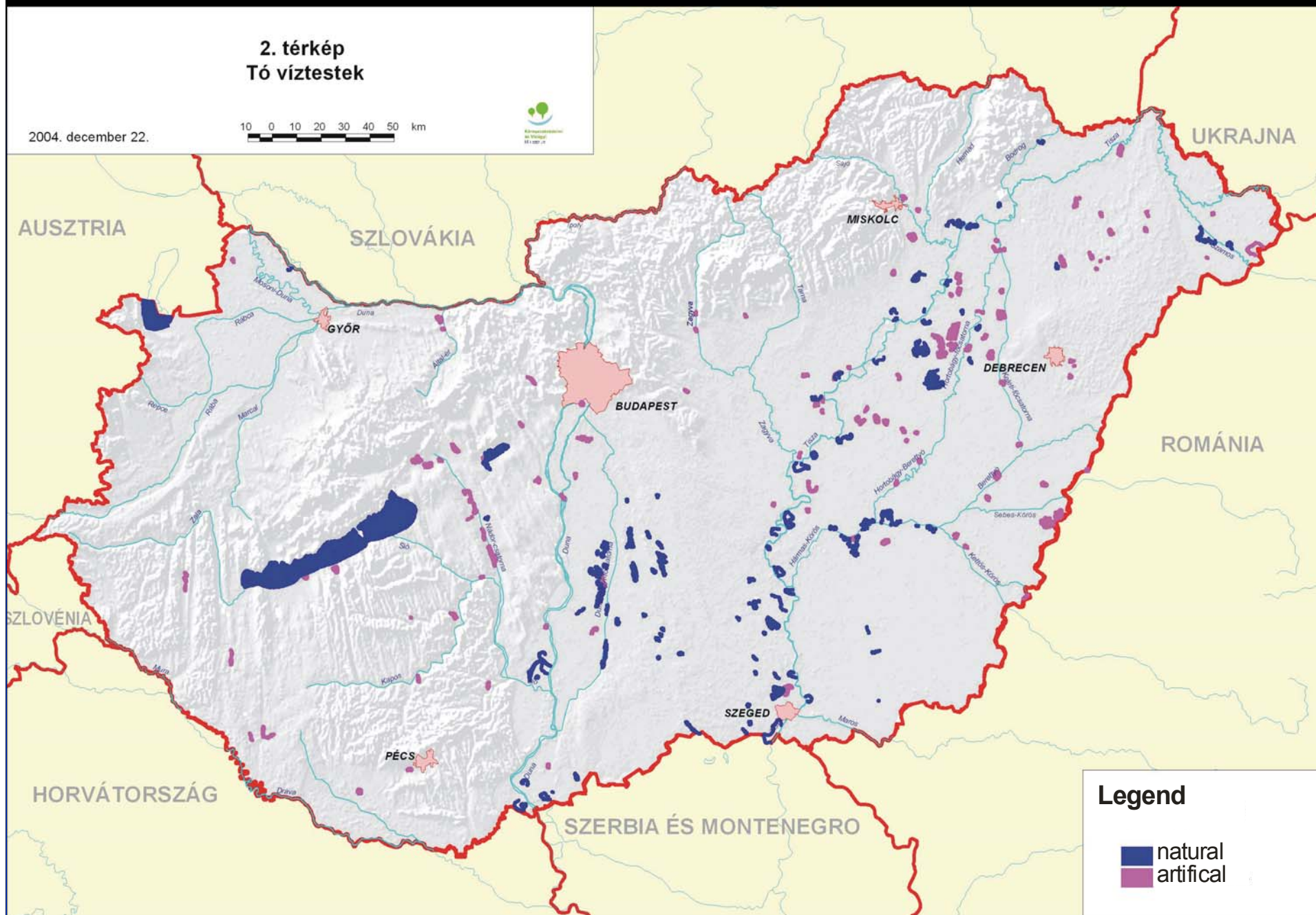


Lake water bodies (100+124)

2. térkép Tó víztestek

2004. december 22.

10 0 10 20 30 40 50 km



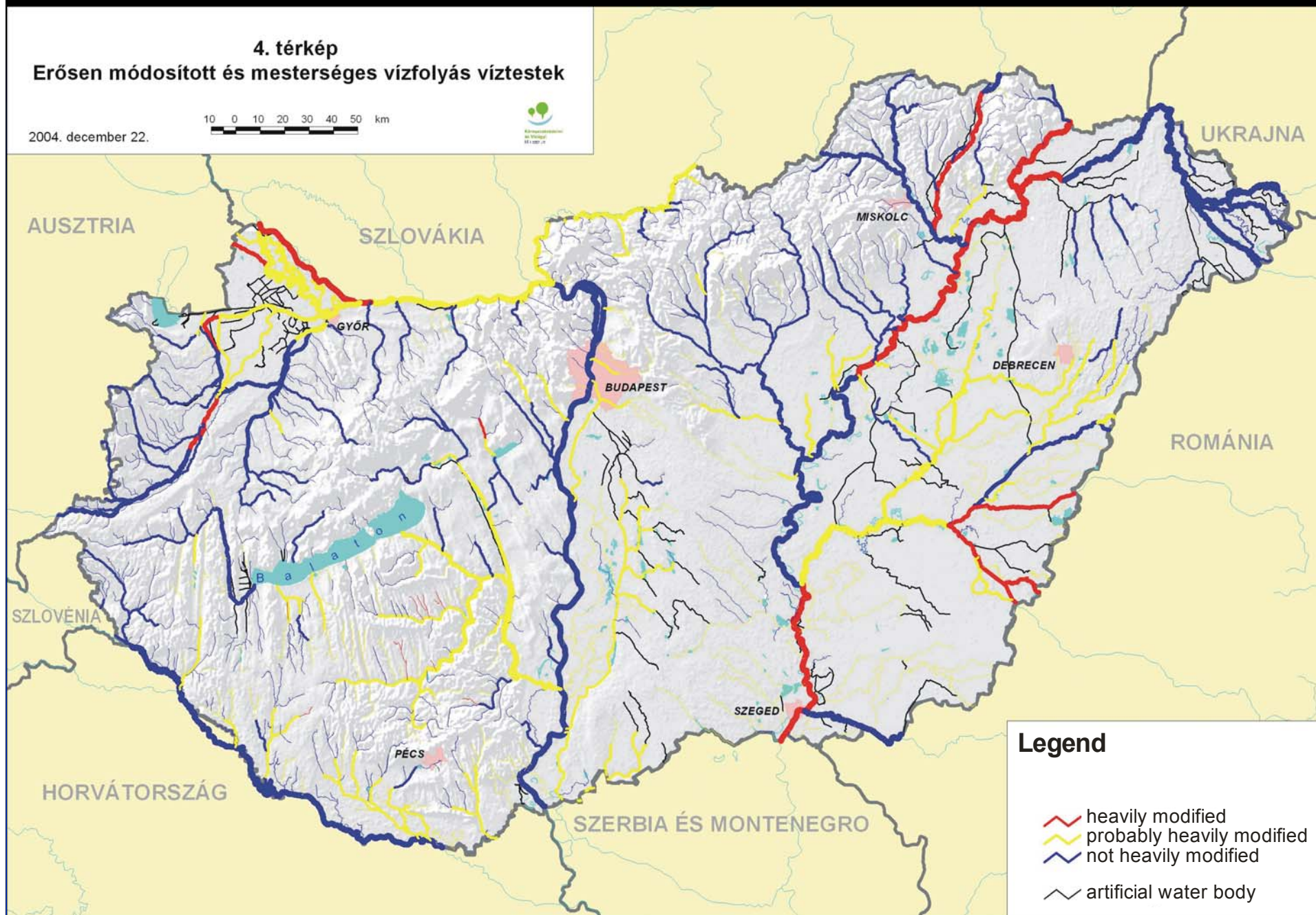
Heavily modified and artificial river water bodies (25+150)

4. térkép

Erősen módosított és mesterséges vízfolyás víztestek

2004. december 22.

10 0 10 20 30 40 50 km



Legend

- heavily modified
- probably heavily modified
- not heavily modified
- artificial water body

Features of the Danube River Basin District within Hungary (GW's)

Groundwaters (hierarchy of preliminary designation):

◆ Porous groundwater in sedimental basin

- ★ Cold groundwater bodies: 52
- ★ Thermal groundwater bodies: 6

◆ Karstic groundwater

- ★ Cold groundwater bodies: 13
- ★ Thermal groundwater bodies: 15

◆ Mountainous, fractured zones groundwater bodies (attached to surface catchments: 22

◆ More than half of designated gw. bodies are transboundary: 60 from 108

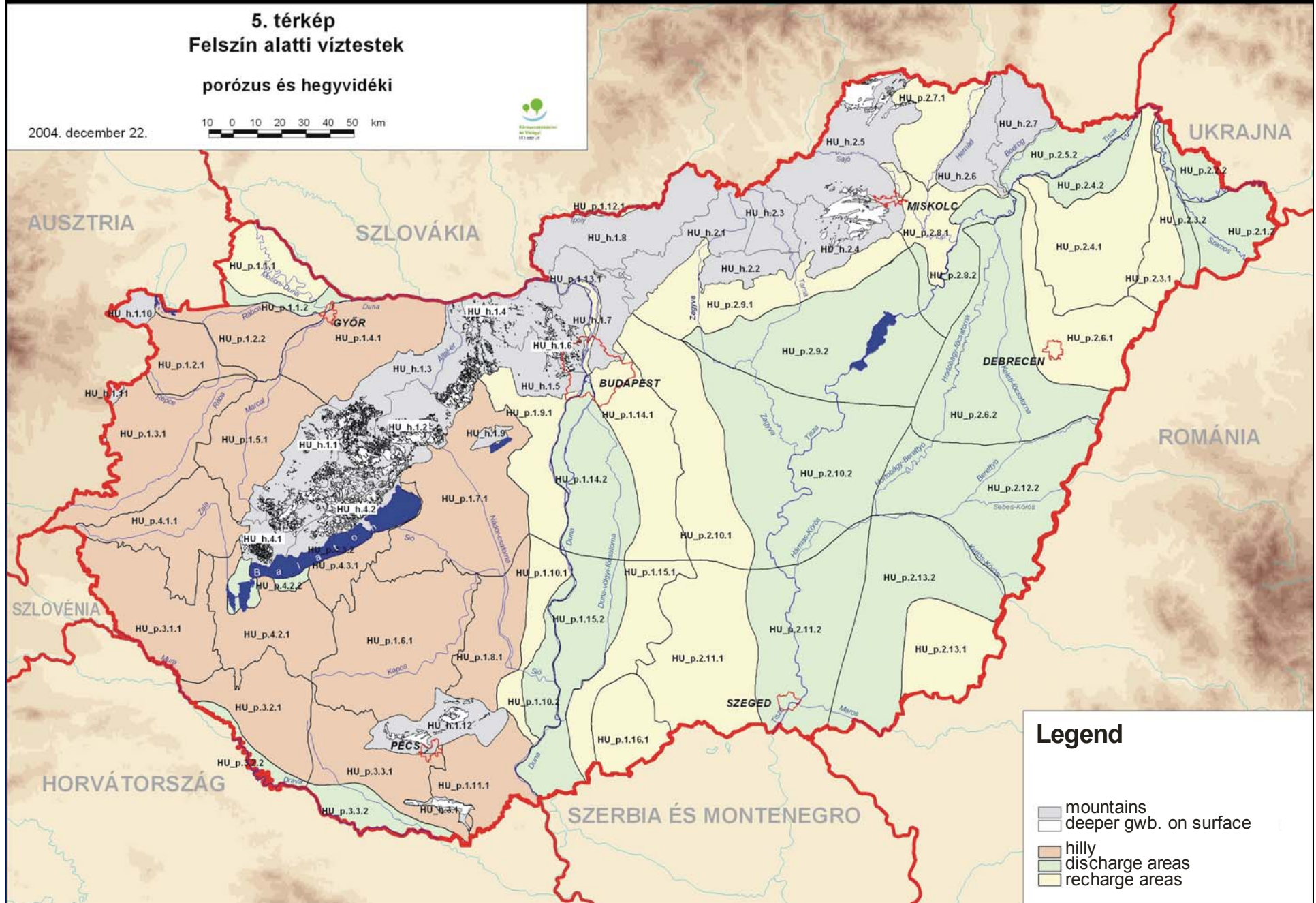
Cold groundwater bodies – porous and mountainous (52+22)

5. térkép Felszín alatti víztestek

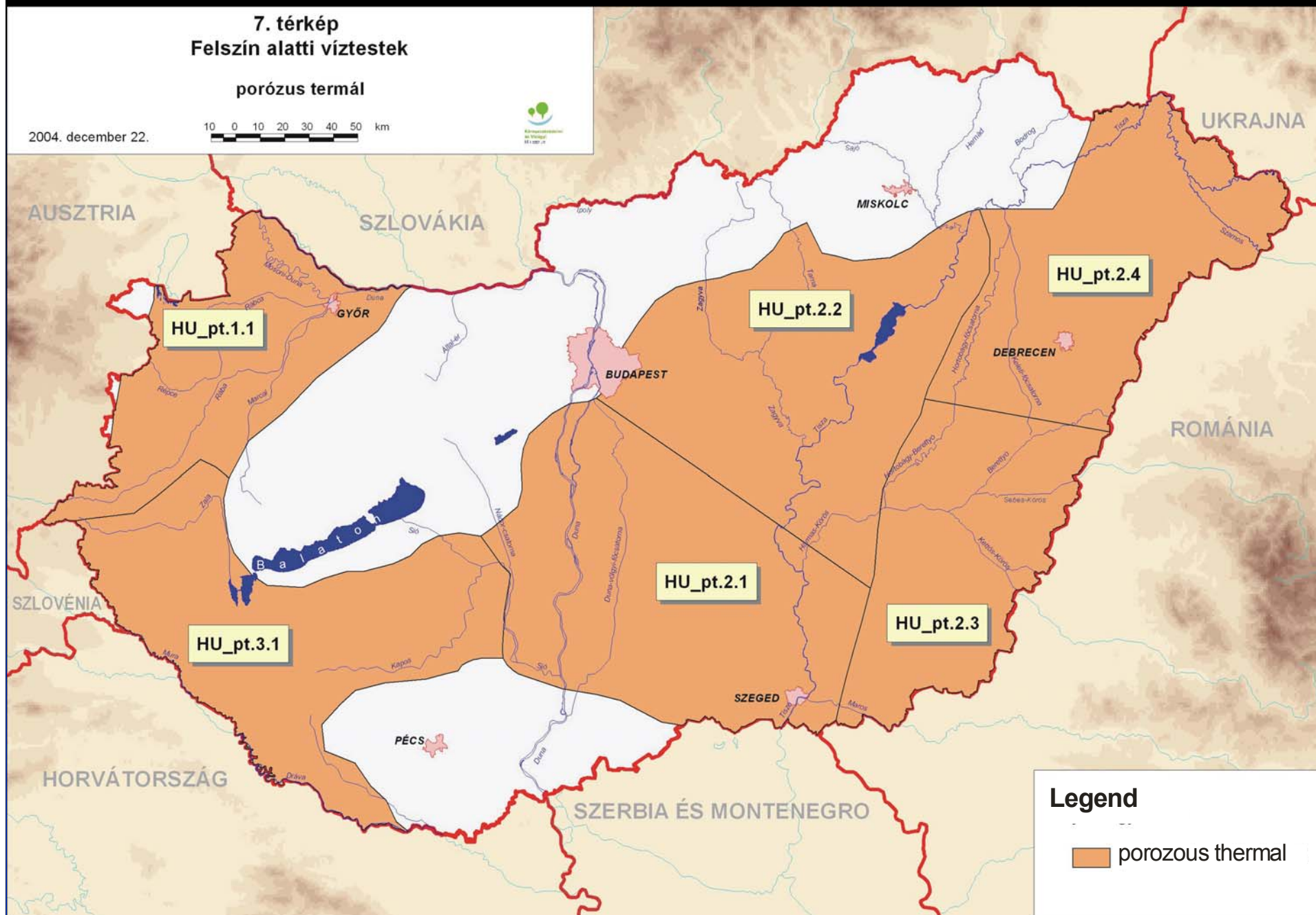
porózus és hegyvidéki

2004. december 22.

10 0 10 20 30 40 50 km



Groundwater bodies – porous thermal (6)



Man-made impacts on surface water

■ Pressures on surface waters:

- ◆ Significant **point sources contamination**
 - ★ by settlement sewage systems
 - ★ by industry
- ◆ Significant **diffuse sources contamination**
 - ★ by agriculture (pesticides & nutrients)
 - ★ by infiltration from settlement without sewage channels
- ◆ Significant **water abstraction**
 - ★ irrigation
 - ★ drinking water supply
 - ★ industrial water uses
 - ★ water reservoirs on or next to the river flows
 - ★ sharing of the water resources
 - to energetic ways
 - to other ways (water resources replacement)
- ◆ **Hydromorphological alterations**

Hydromorphological alterations (the main cause of heavily modified state)

- Permanent reservoirs with inflow
- Damming in river bed
- Dikes
- River bed crossing/transposition
- River flow regulation
- River bed regulation
- River/lake shore-lines protection

Designation of risky surface water bodies

- Risky state = if the good ecological state can not reach until WFD deadline (2015)

Risky categories by different pressures

- ◆ Organic pollutions (it shall be resolve by rules/law)
- ◆ Nutrient pollutions (it shall be resolve by rules/law)
- ◆ Hazardous substances pollutions (it shall be resolve by rules/law)
- ◆ Hydromorphological alterations (it might be resolve by the demand of society)

Risky, possibly risky and non-risky states are showed on the next slide maps.

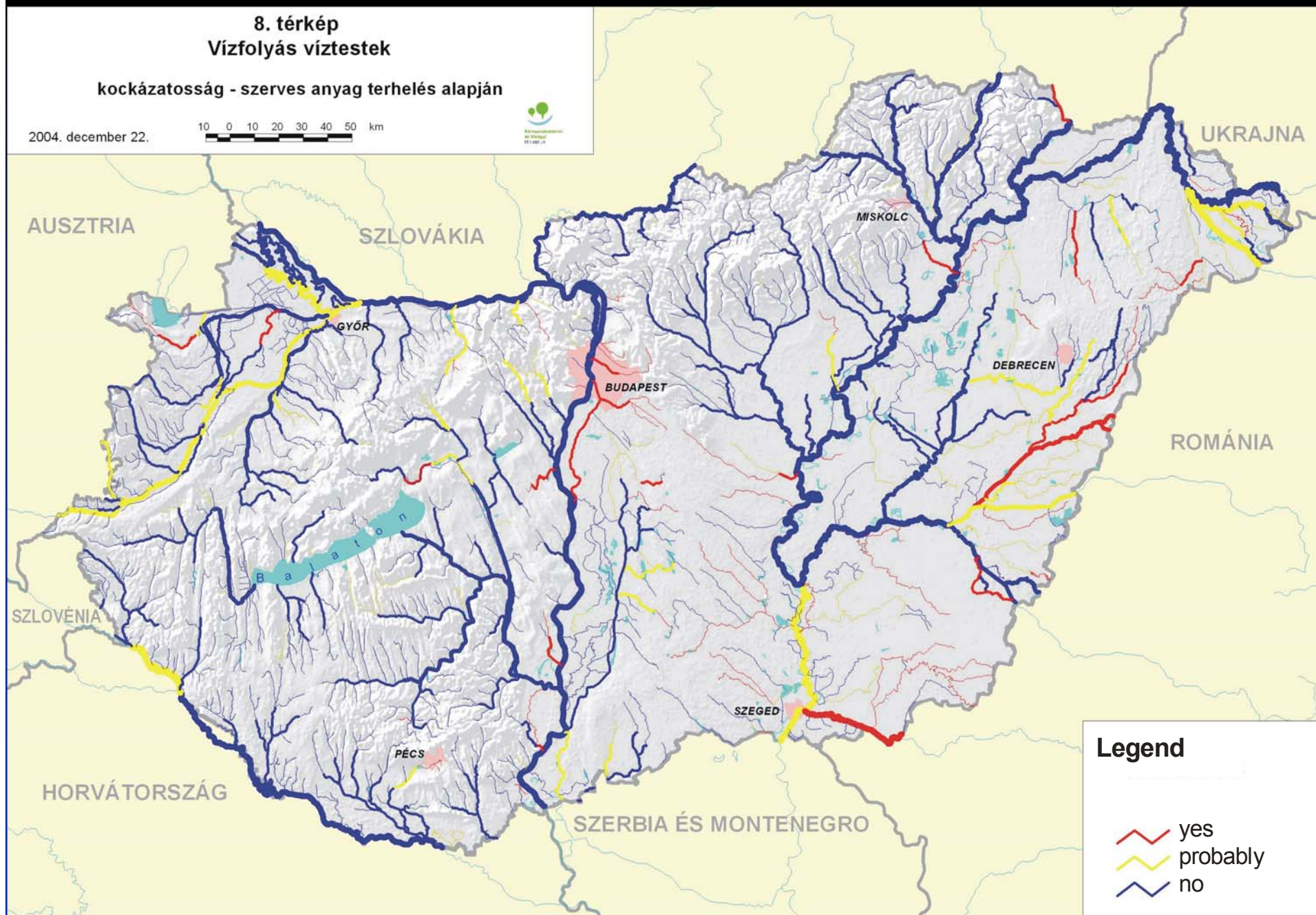
River water bodies risk of failure to reach the environmental objectives – organic pollution

8. térkép Vízfolyás víztestek

kockázatoság - szerves anyag terhelés alapján

2004. december 22.

10 0 10 20 30 40 50 km



Legend

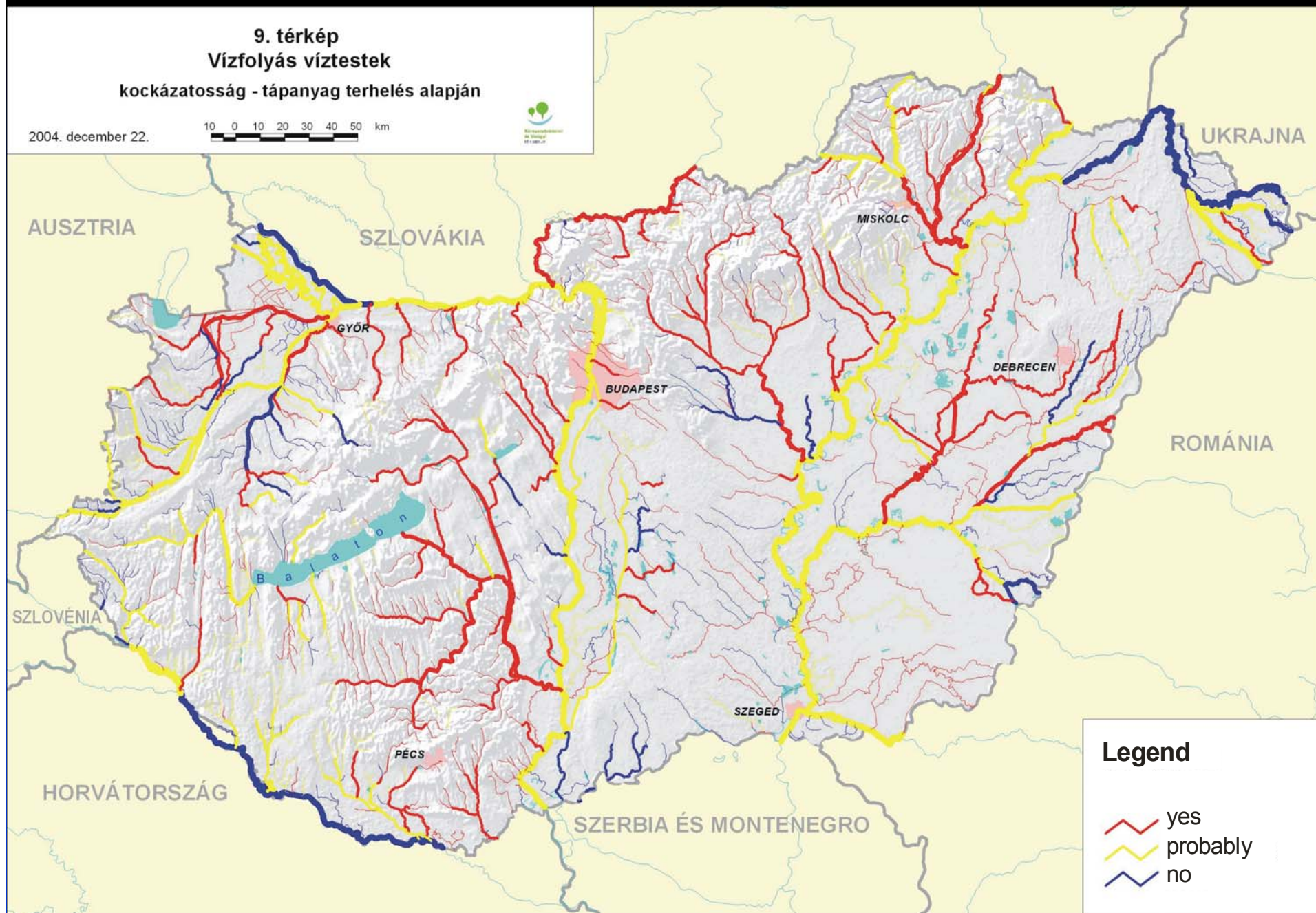
- yes
- probably
- no

River water bodies risk of failure to reach the environmental objectives – nutrients

9. térkép
Vízfolyás víztestek
kockázatosság - tápanyag terhelés alapján

2004. december 22.

10 0 10 20 30 40 50 km



Legend

- yes
- probably
- no

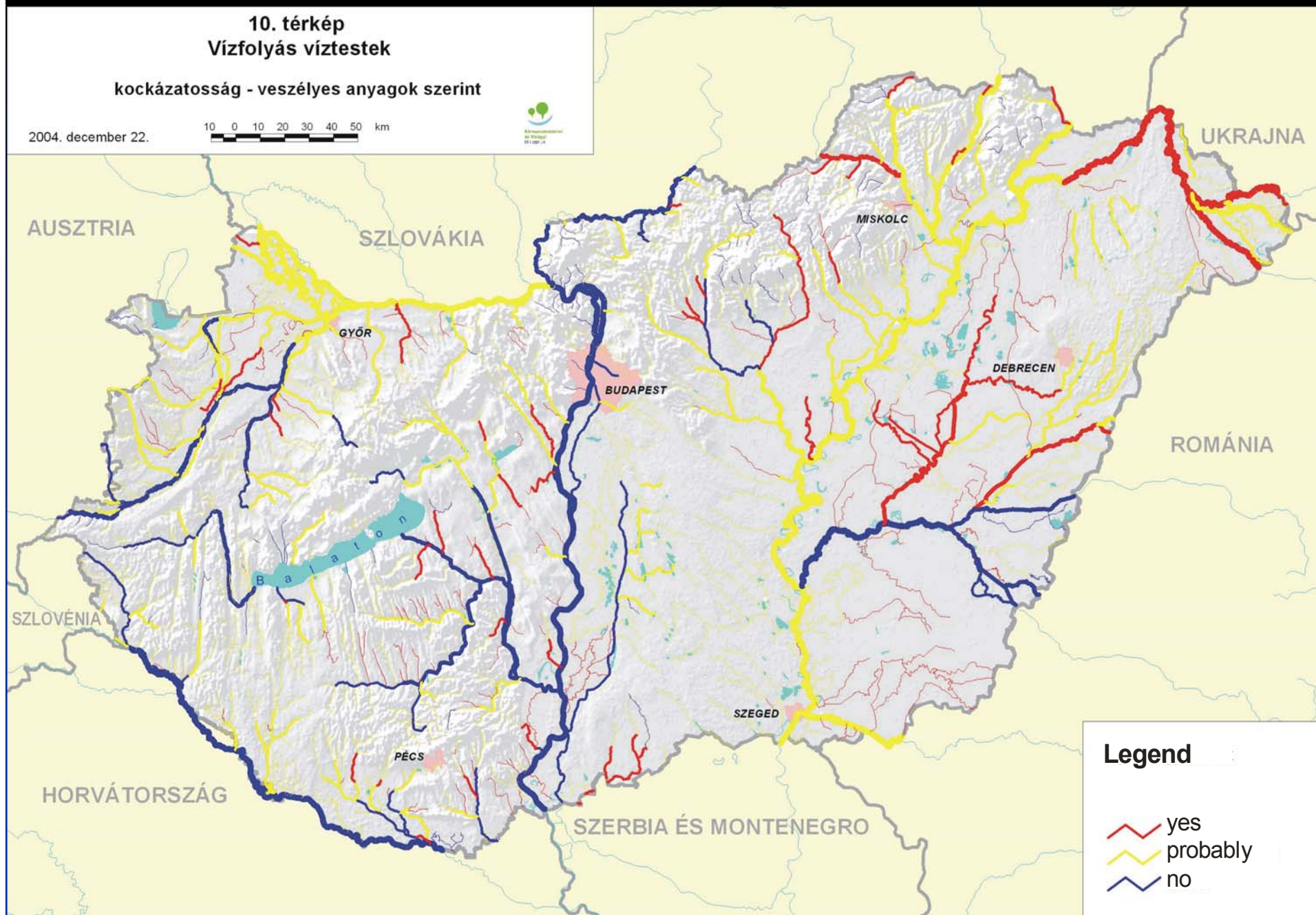
River water bodies risk of failure to reach the environmental objectives - hazardous substances

10. térkép Vízfolyás víztestek

kockázatoság - veszélyes anyagok szerint

2004. december 22.

10 0 10 20 30 40 50 km



Legend

- yes
- probably
- no

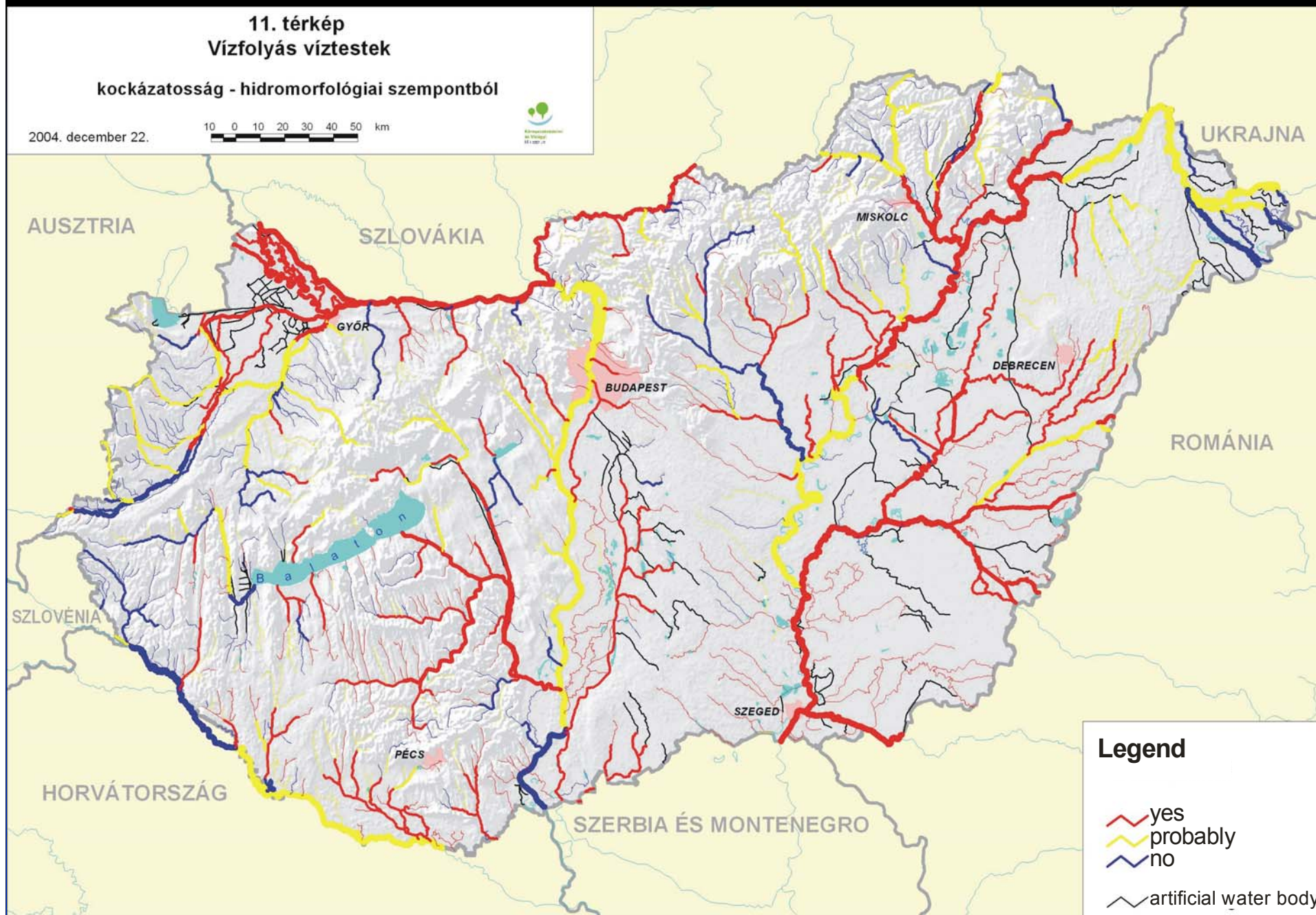
River water bodies risk of failure to reach the environmental objectives – hydromorphological alterations

11. térkép Vízfolyás víztestek

kockázatoság - hidromorfológiai szempontból

2004. december 22.

10 0 10 20 30 40 50 km



Legend

- yes
- probably
- no
- artificial water body

Man-made impacts on groundwater

■ Pressures on groundwater

- ◆ Significant **diffuse sources contamination**
 - ★ by agriculture (pesticides & nutrients)
 - ★ by infiltration from settlement without sewage channels
- ◆ Significant **point sources contamination**
 - ★ by leakage out of settlement sewage channels
 - ★ by industrial contamination
 - ★ by solid waste deposits
 - ★ by former contaminated areas
 - ★ by mining activities
- ◆ Significant **groundwater abstraction**
 - ★ By agriculture
 - ★ By drinking water supply
 - ★ By industry
 - ★ By mining dehydration activities
 - ★ Thermal water abstraction for different purposes
- ◆ **Artificial water recharge to groundwater**
- ◆ **Other activities**

Designation of risky groundwater bodies

- Risky state = if the good quantity & chemical state can not reach until WFD deadline (2015)
- Risky categories:
 - ◆ In view of quantity state:
 - ★ Risky = 3 gwb.'s
 - ★ Possibly risky = 18 gwb.'s
 - ◆ In view of chemical state:
 - ★ Possibly risky = 46 gwb.'s

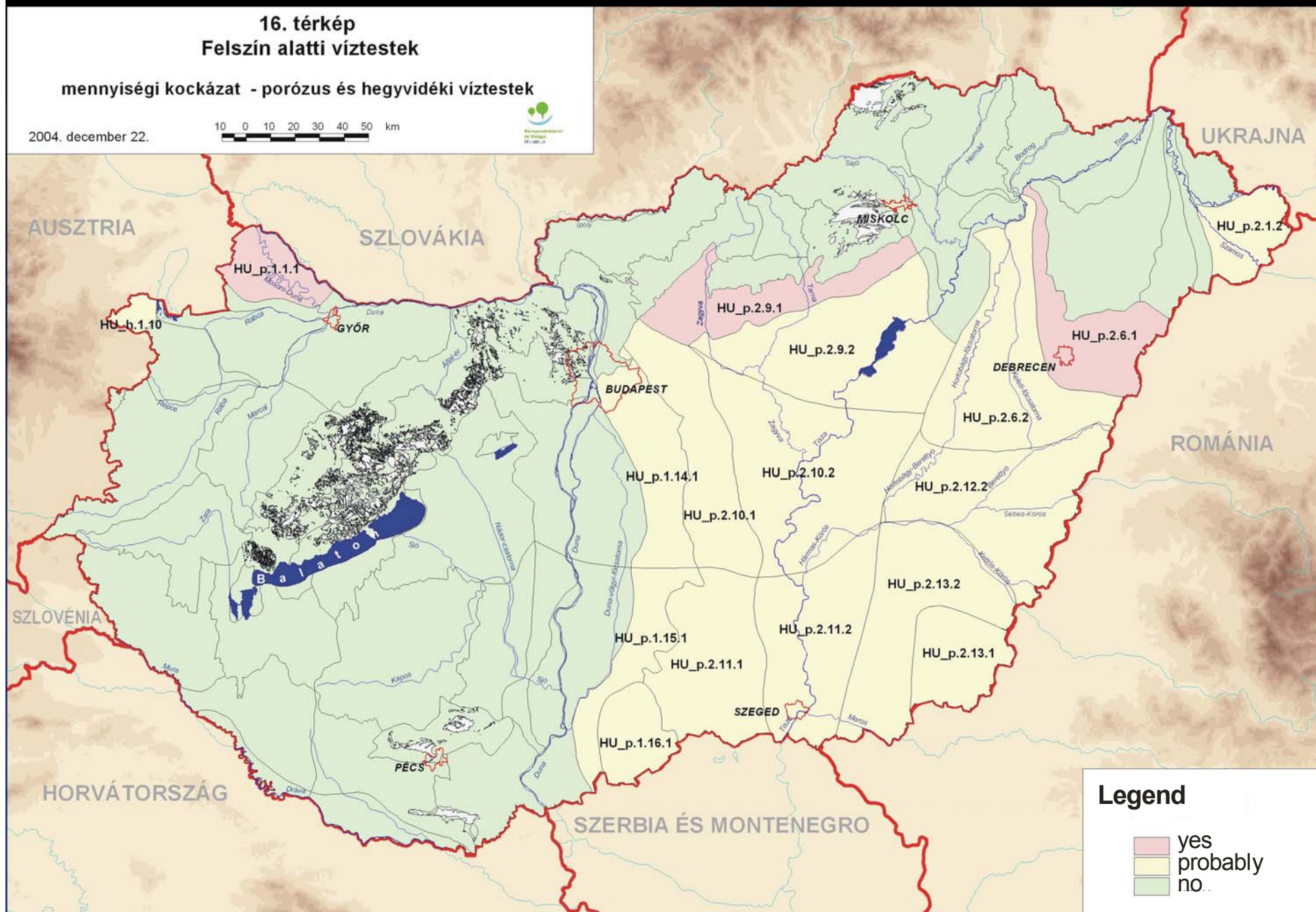
Porous and mountainous groundwater bodies risk of failure to reach the environmental objectives - quantity

16. térkép
Felszín alatti víztestek

mennyiségi kockázat - porózus és hegyvidéki víztestek

2004. december 22.

10 0 10 20 30 40 50 km



Next steps (professional works)

- Checking and amending data & maps
- Eliminate the uncertainties (possibly riskies)
- Revise the existing water related monitoring network (quantity & quality)
- Assess the monitoring measurement points and water bodies map layers to sufficient water bodies' status
- Planning the eligible (EU WFD relevant) monitoring network
- Planning the actually not-existing biological monitoring network
- Getting up the programmes of measure

Next steps (logistic works)

- Delineation of water management plan subunits (39) consist of many swb. catchments & gw. bodies
- With leading by water boards the regional authorities shall make ready wm. plans
- 39 wm. plans shall be allowed by public participations & Regional Water Councils
- Compiling the 17 wm. units by wm. plan subunits
- Compiling the 4 sub-river basins wm. plans by 17 wm. units
- Preparing the national report by 2009

Vízgyűjtő-tervezési alegységek



1-1-1 Duna (Rajka-Gönyü között)

1-1-2 Rábca (a Fertő-tóval együtt)

1-1-3 Marcal

1-1-4 Rába

1-2-1 Duna (Általér torkolata-Dömös között)

1-2-2 Duna (Általér)

1-2-3 Duna (Gönyü-Általér torkolata között)

1-3 Kapos

1-4-1 Észak-Mezőföld és Keleti-Bakony

1-4-2 Sió

1-4-3 Velencei-tó

1-4-4 Duna közvetlen (Sió torkolata alatt és a Karasica)

1-5 Ipoly

1-6 Duna (Dömöstől a Csepel sziget déli végéig)

1-7-1 Dunavölgyi főcsatorna

1-7-2 Felső-Bácska

2-1-1 Bodrog

2-1-2 Lónyai-főcsatorna

2-1-3 Felső-Tisza

2-1-4 Szamos-Kraszna

2-2-1 Sajó a Bódvával

2-2-2 Hernád, Takta

2-3-1 Hevesi-sík

2-3-2 Bükk és Borsodi-Mezőség

2-4-1 Zagyva

2-4-2 Tarna

2-5-1 Alsó-Tisza jobb part

2-5-2 Nagykőrösi-homokhát

2-6-1 Hármaskörös

2-6-2 Sebes-Körös (a Berettyóval)

2-6-3 Hortobágy-Berettyó

2-6-4 Kettős-Körös

2-7-1 Maros-hordalékkúp

2-7-2 Kurca


3-1 Fekete-víz

3-2 Dráva

3-3 Mura

4-1 Balaton közvetlen

4-2 Zala

 KöVízig működési terület

THANK YOU FOR YOUR KIND ATTENTION (and)

- FOR MORE DETAILS BROWSE OUR
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