



GEOHEALTH LIFE+ Project Newsletter



July 2013

Foreword

After the first newsletter published in 2012, this is the second issue that brings you latest news, information and highlights about the project GEOHEALTH. You are cordially invited to visit our website for more information.

Project progress

The main action running within the project this year goes with the successful compilation and optimization of datasets of environmental and health indicators - *Action A3 Elaboration of Environmental and Health indicators*.

Compiled datasets of environmental and health indicators, were divided according to geological structure and contaminated areas in the Slovak Republic. The results of this action provide important data source for the follow-up research on relations between geological environment and health state of the inhabitants of the Slovak Republic.

Works focused on statistical analysis of these relations are to be realized as next *Action A4 Linking of Environmental and Health indicators*.

Highlights

Dissemination activities

Publication in "Open Journal of Geology" 2013, 3, 101-112

[Read more >>](#)

Next issue ...

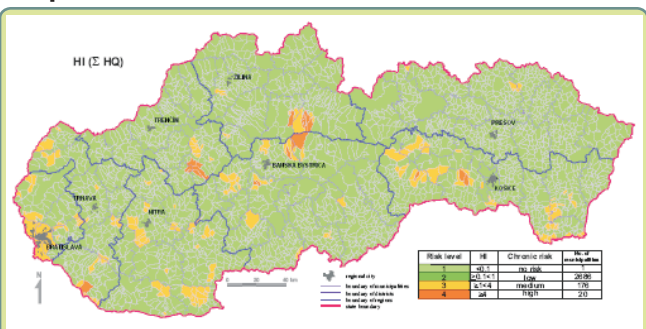
SEGH 2013, 8 - 12th, July, France
- presentation of project partial results

International conference SEGH 2015 is going to be held

[and more...](#)

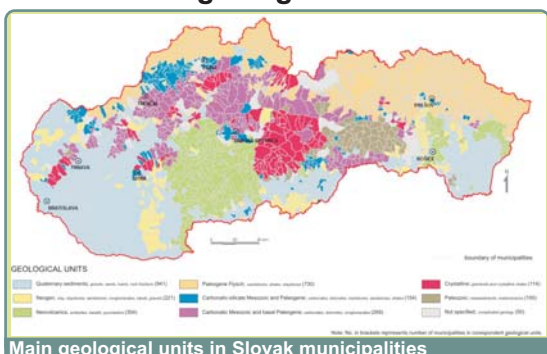
Partial results of the project

Health risk estimate for contaminated groundwater and soils in the Slovak Republic in numeric and map forms [Read more >>](#)



Chronic risk from groundwater contamination - municipalities

Division of geological structure of the Slovak Republic in main geological units [Read more >>](#)



Main geological units in Slovak municipalities

Selected contaminated and non contaminated regions of the Slovak Republic [Read more >>](#)



Example of region located in geological environment of Neovolcanic rocks

GROUNDWATER				SOIL			
element component parameter	unit	mean	max	element component parameter	unit	mean	max
Water reactions	pH	7.33	Aluminium	Al	%	1.90	
Total Dissolved Solids	T.D.S.	mg/l	459.75	Arsenic	As	mg/kg	12.47
Chemical oxygen demand	CO ₂	mg/l	2.18	Boron	B	mg/kg	392.78
Water hardness	Ca+Mg	mg/l	3.50	Barium	Ba	mg/kg	1.39
Sodium	Na	mg/l	20.34	Calcium	Ca	%	1.46
Potassium	K	mg/l	11.10	Chromium	Cr	mg/kg	0.60
Cadmium	Cd	mg/l	28.29	Cobalt	Co	mg/kg	11.71
Magnesium	Mg	mg/l	28.29	Chromium	Cr	mg/kg	87.57
Iron	Fe	mg/l	0.174	Copper	Cu	mg/kg	0.87
Manganese	Mn	mg/l	0.117	Fluorine	F	mg/kg	333.98
Ammonium	NH ₄	mg/l	0.099	Iron	Fe	%	3.71
Fluorides	F	mg/l	0.132	Mercury	Hg	mg/kg	0.24
Chlorides	Cl	mg/l	32.96	Nickel	Ni	%	1.70
Sulphates	SO ₄	mg/l	79.32	Magnesium	Mg	%	2.47
Nitrites	NO ₂	mg/l	0.112	Manganese	Mn	%	0.83
Nitrate	NO ₃	mg/l	39.74	Nickel	Ni	%	0.88
Phosphates	PO ₄	mg/l	0.0152	Sodium	Na	%	0.68
Bicarbonates	HCO ₃	mg/l	363.83	Nickel	Ni	mg/kg	0.83
Silica	SiO ₂	mg/l	12.21	Phosphorus	P	%	32.28
Copper	Cu	mg/l	0.00138	Lead	Pb	mg/kg	0.07
Selenium	Se	mg/l	0.00170	Antimony	Sb	mg/kg	29.62
Arsenic	As	mg/l	12.9728	Selenium	Se	mg/kg	6.26
Cadmium	Cd	mg/l	0.00152	Zinc	Zn	mg/kg	0.18
Strontium	Sr	mg/l	0.00097	Active soil reactions	pH _{soil}		79.07
Mercury	Hg	mg/l	0.00014	Exchange soil reactions	pH _{soil}		0.92
Boron	B	mg/l	1.01473	Carbonates	%	75.79	
Aluminium	Al	mg/l	0.02924	Radon	mg/m ³	21.70	
Antimony	Sb	mg/l	0.00094				
Radon	Rn	Bq/l	14.46				
Radon	Rn	Bq/l	0.003				

Reporting and dissemination activities [Read more >>](#)

Optimized datasets of environmental and health indicators [Read more >>](#)

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