



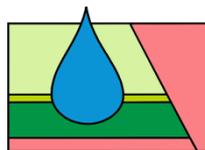
Europäische Union. Europäischer
Fonds für regionale Entwicklung.
Evropská unie. Evropský fond pro
regionální rozvoj.



Ahoj sousede. Hallo Nachbar.
Interreg VA / 2014 – 2020

Abschlussveranstaltung zum Projekt ResiBil

Resultate und Erkenntnisse aus 4 Jahren Deutsch-Tschechischer Kooperation



ResiBil



ČESKÁ
GEOLOGICKÁ
SLUŽBA

LANDESAMT FÜR UMWELT,
LANDWIRTSCHAFT
UND GEOLOGIE



Freistaat
SACHSEN

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Hydro(geo)logical basic data



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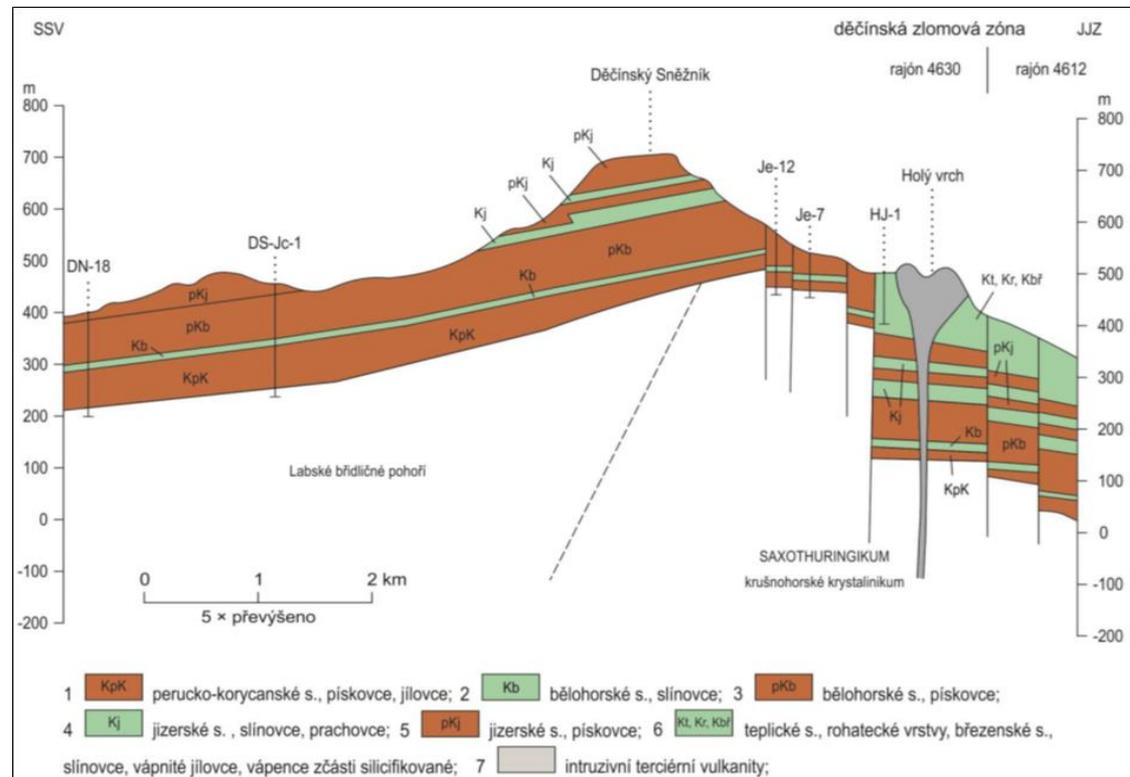


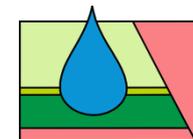
Hydrogeological conditions

The study area is characterised by Cretaceous sedimentary rocks:

- Various sandstones (aquifers)
- Siltstones and marlstones (aquitards)

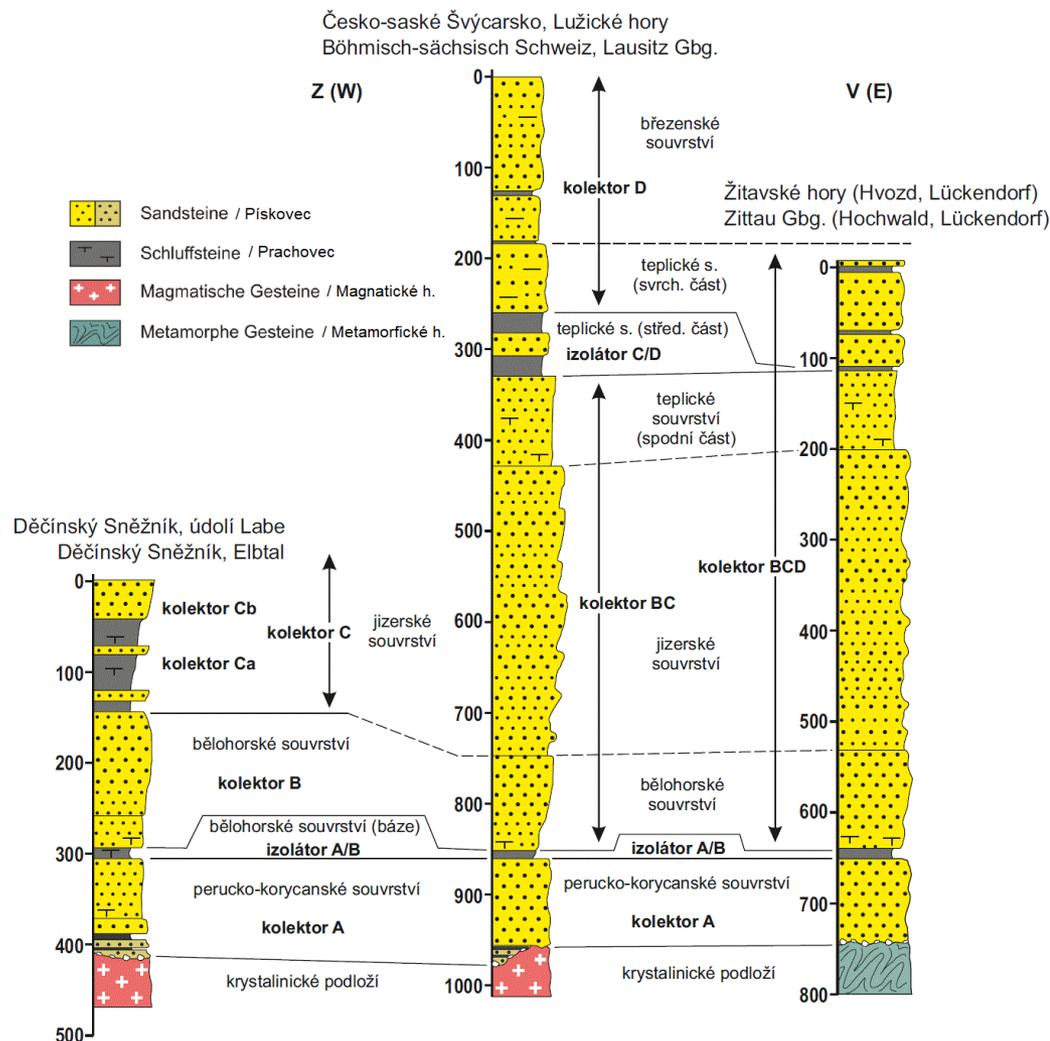
Schematic geological cross-section of Děčínský Sněžník SSV-JJZ (Burda – Venera et al. 2016)





Hydrogeological conditions

Schematic geological profile
of the three pilot areas, with
indication of hydrogeological
function of the particular
formations (Nádaskay, Valečka)





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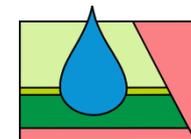


Field research

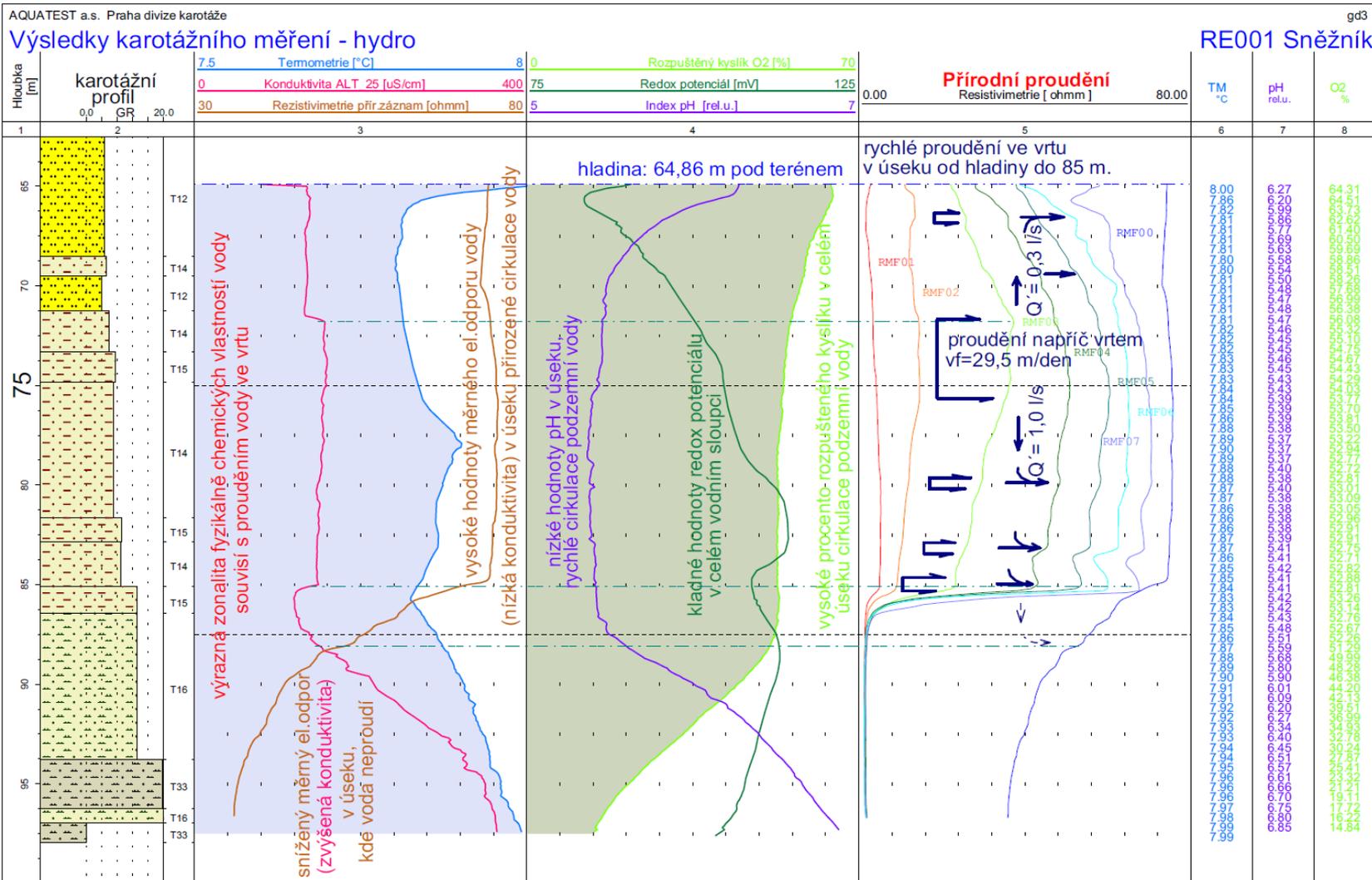
Two new boreholes were drilled in the area of Děčínský Sněžník:

- Geophysical well log
- Pumping tests
- Groundwater level monitoring





Field research



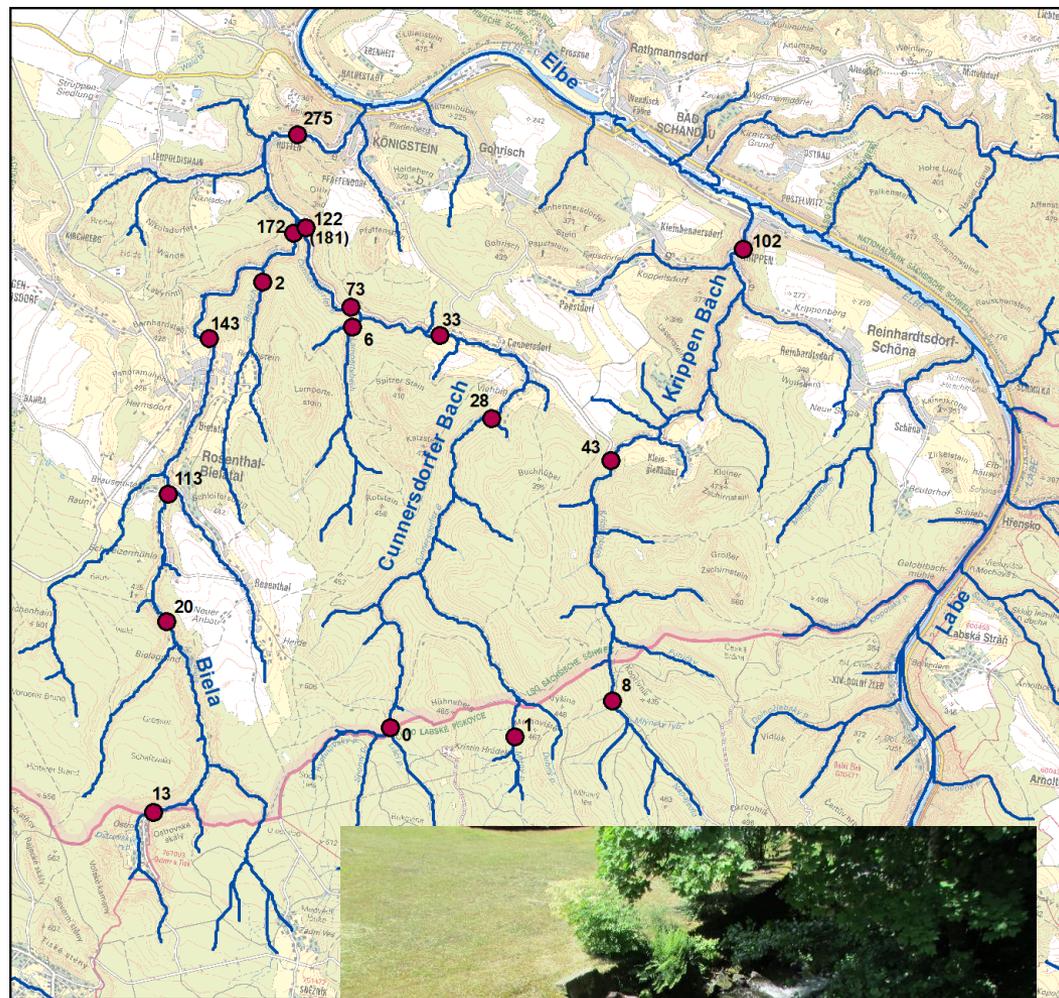


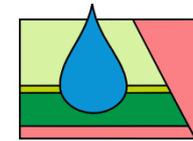
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Field research

Discharge measurements:

- Sectional longitudinal profiles
- Dry periods without surface runoff
- Finding sections of streams with intensive groundwater interaction
- Overall drainage in DS
= 400 l/s
- Specific runoff
= 3 l/s/km²

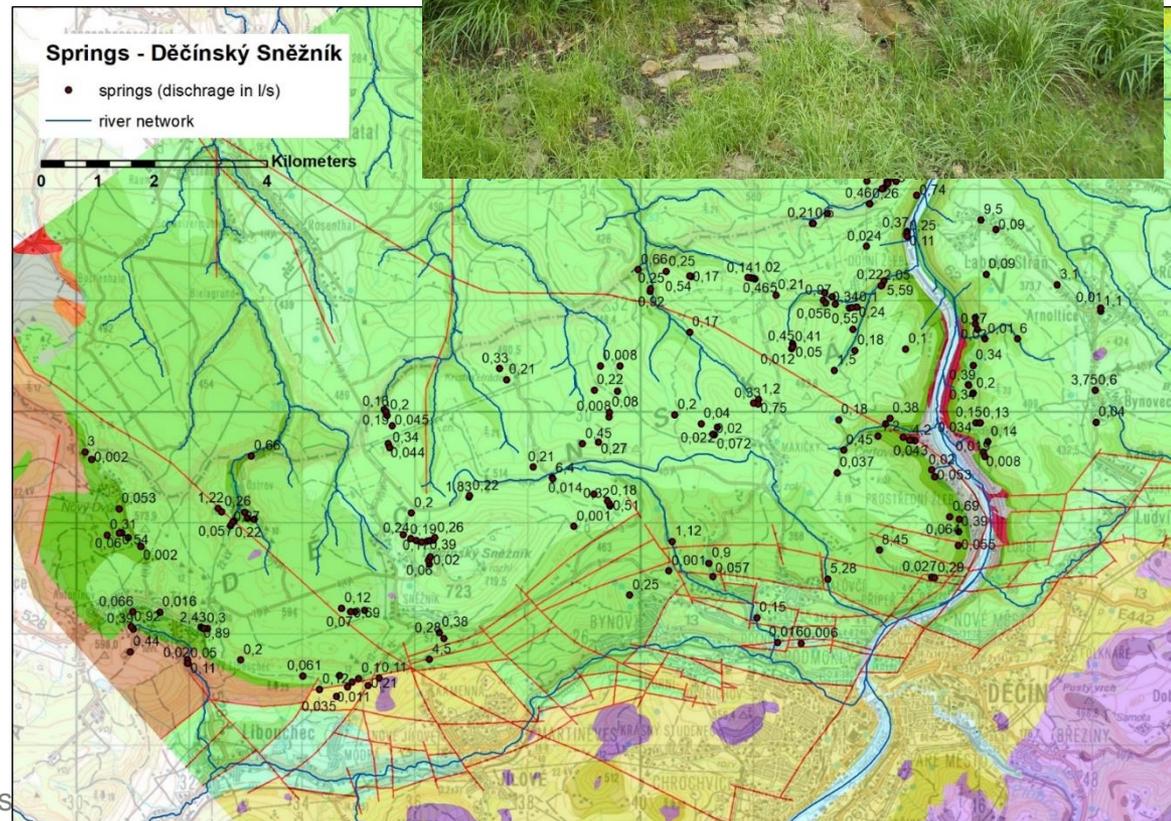


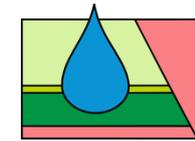


Field research

Springs measurements:

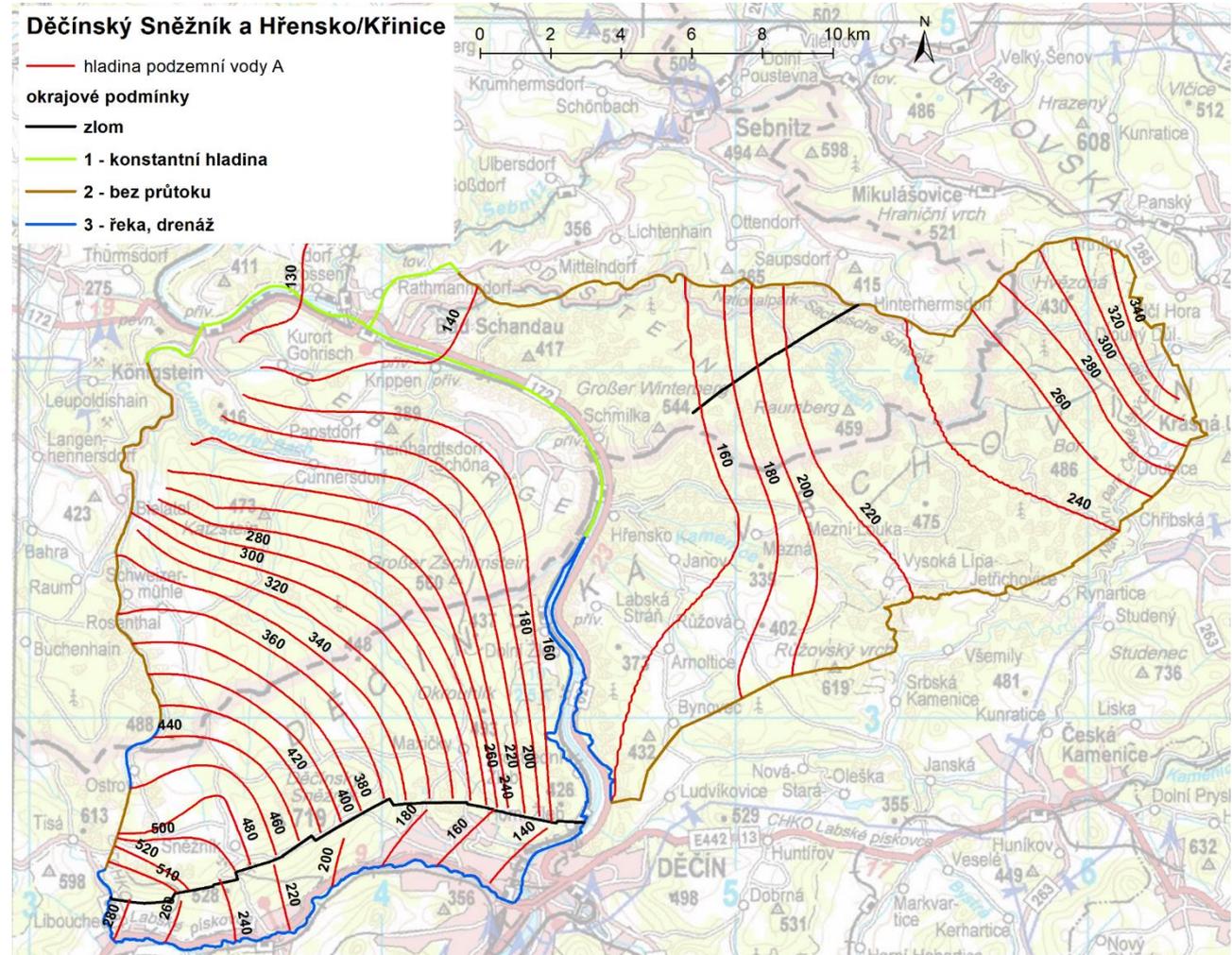
- Discharge, temperature, electric conductivity
- Springs are locations of drainage of the particular aquifers
- Spring discharge reacts on changed conditions (drought, pumping)

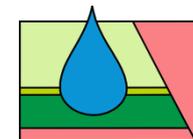




Conceptual model

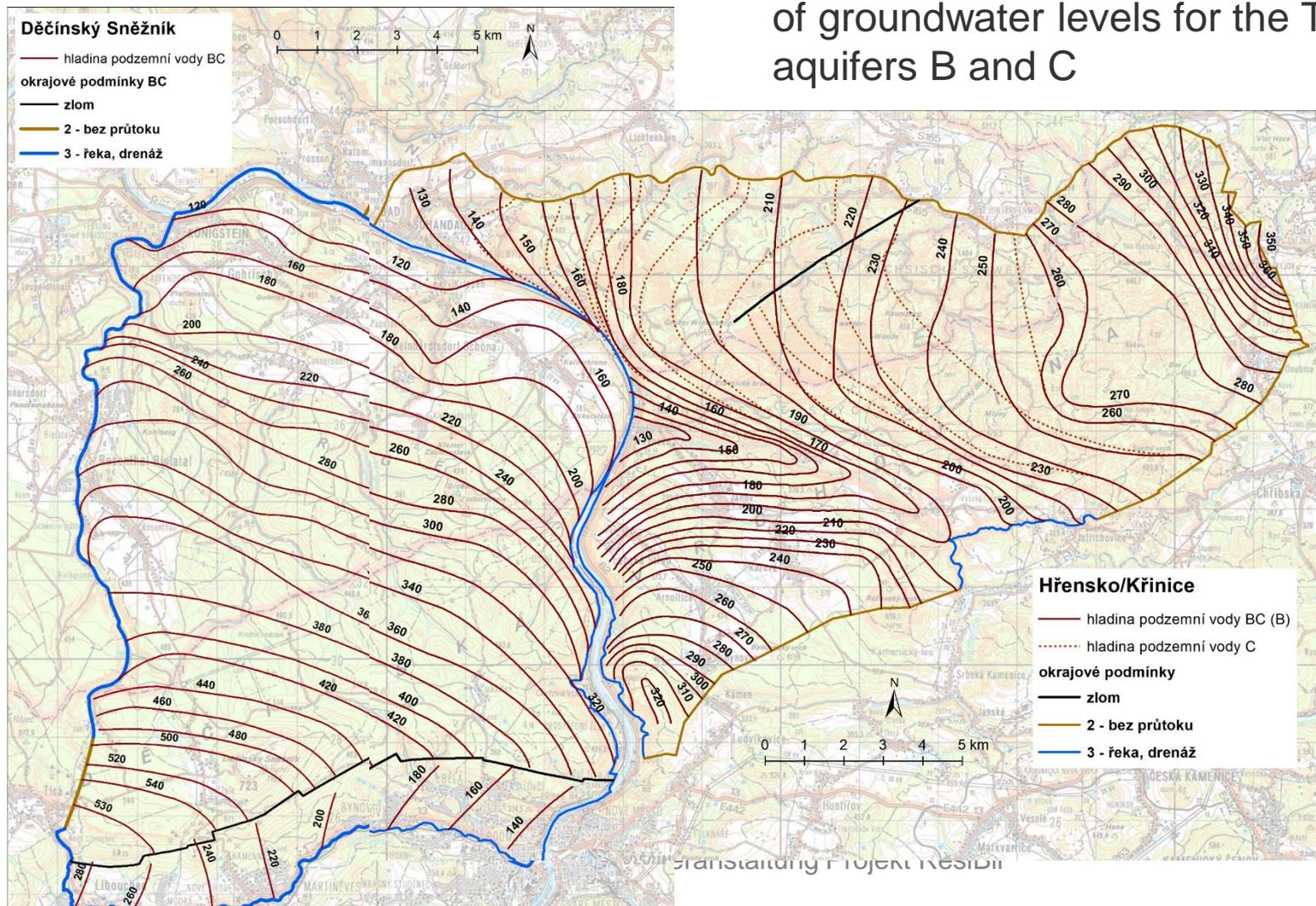
Definition of boundary
conditions and map of
groundwater levels for
the Cenomanian
aquifer A

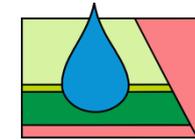




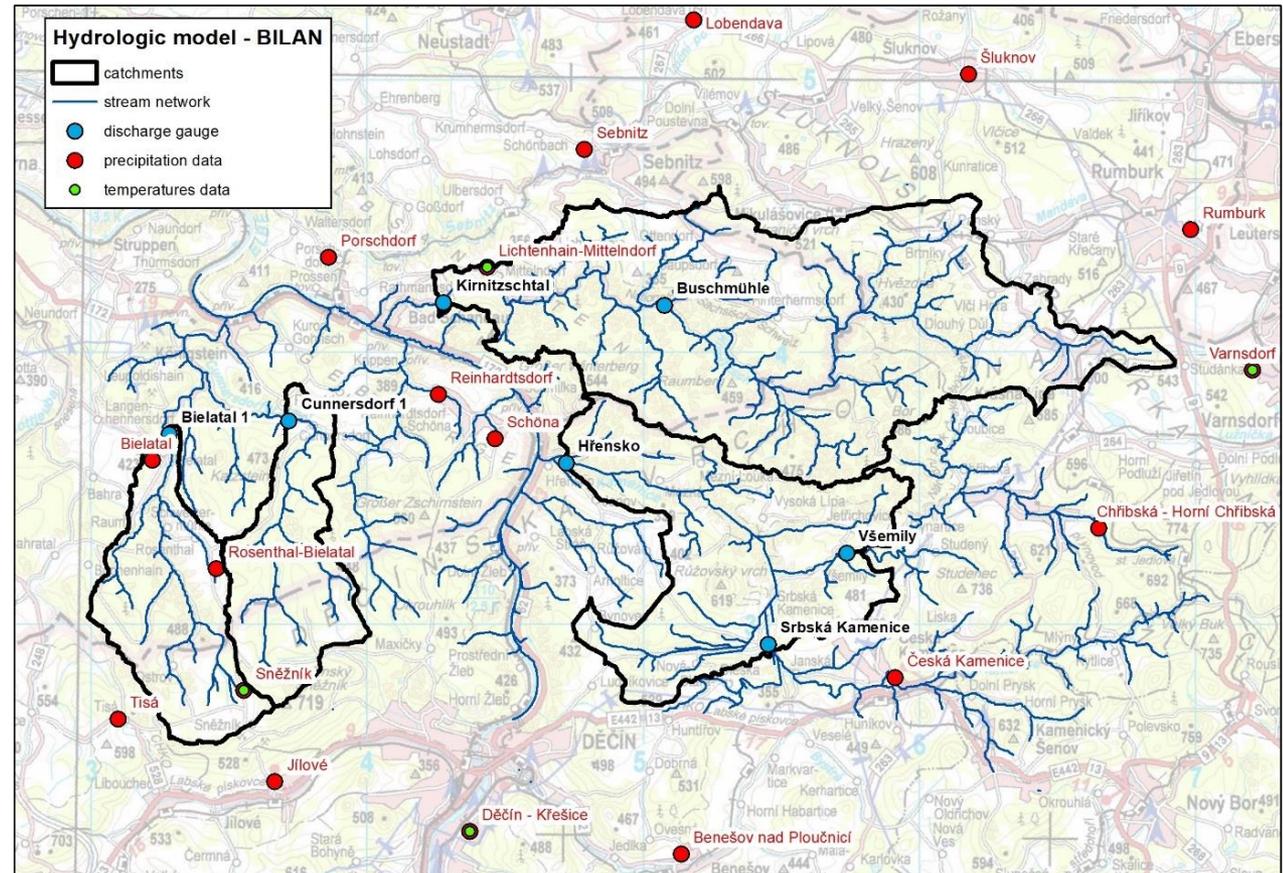
Conceptual model

Definition of boundary conditions and map of groundwater levels for the Tournonian aquifers B and C





Conceptual model



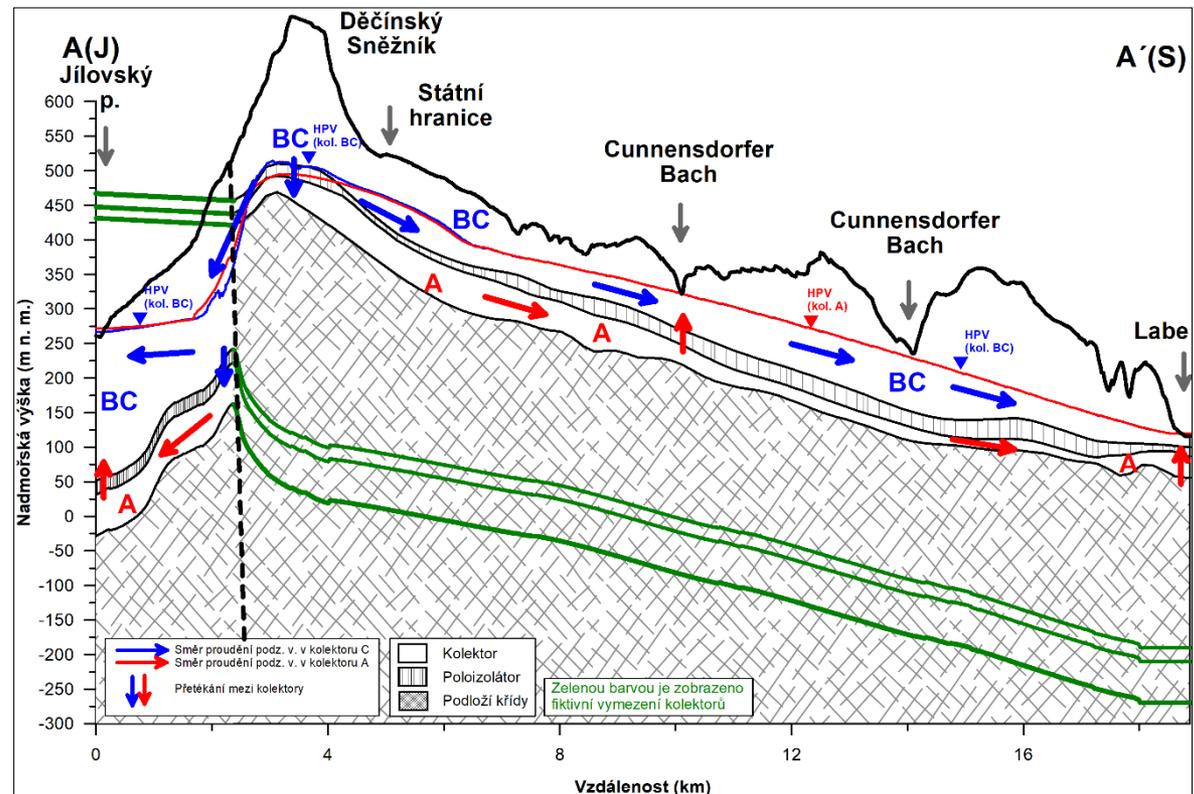
Hydrologic model:
Infiltration of precipitation
and aquifer recharge are
assessed by run-off
numeric model BILAN.



Groundwater hydraulic model

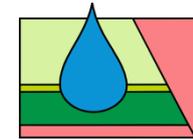
Numerical models were constructed based on collected data and knowledge of the system.

It is a complex 3D system of equations and hydraulic parameters, which mathematically defines the model areas and enables simulations of groundwater flow.





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ResiBil

**Auf Wiedersehen!!
na shledanou!!**

