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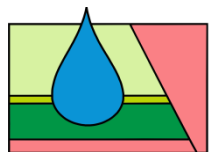


Ahoj sousede. Hallo Nachbar.  
Interreg V A / 2014-2020

# Abschlussveranstaltung zum Projekt ResiBil

Resultate und Erkenntnisse aus 4 Jahren Deutsch-Tschechischer Kooperation

## Climate and usage-orientated scenarios and results



**ResiBil**

LANDESAMT FÜR UMWELT,  
LANDWIRTSCHAFT  
UND GEOLOGIE



Freistaat  
**SACHSEN**



ČESKÁ  
GEOLOGICKÁ  
SLUŽBA



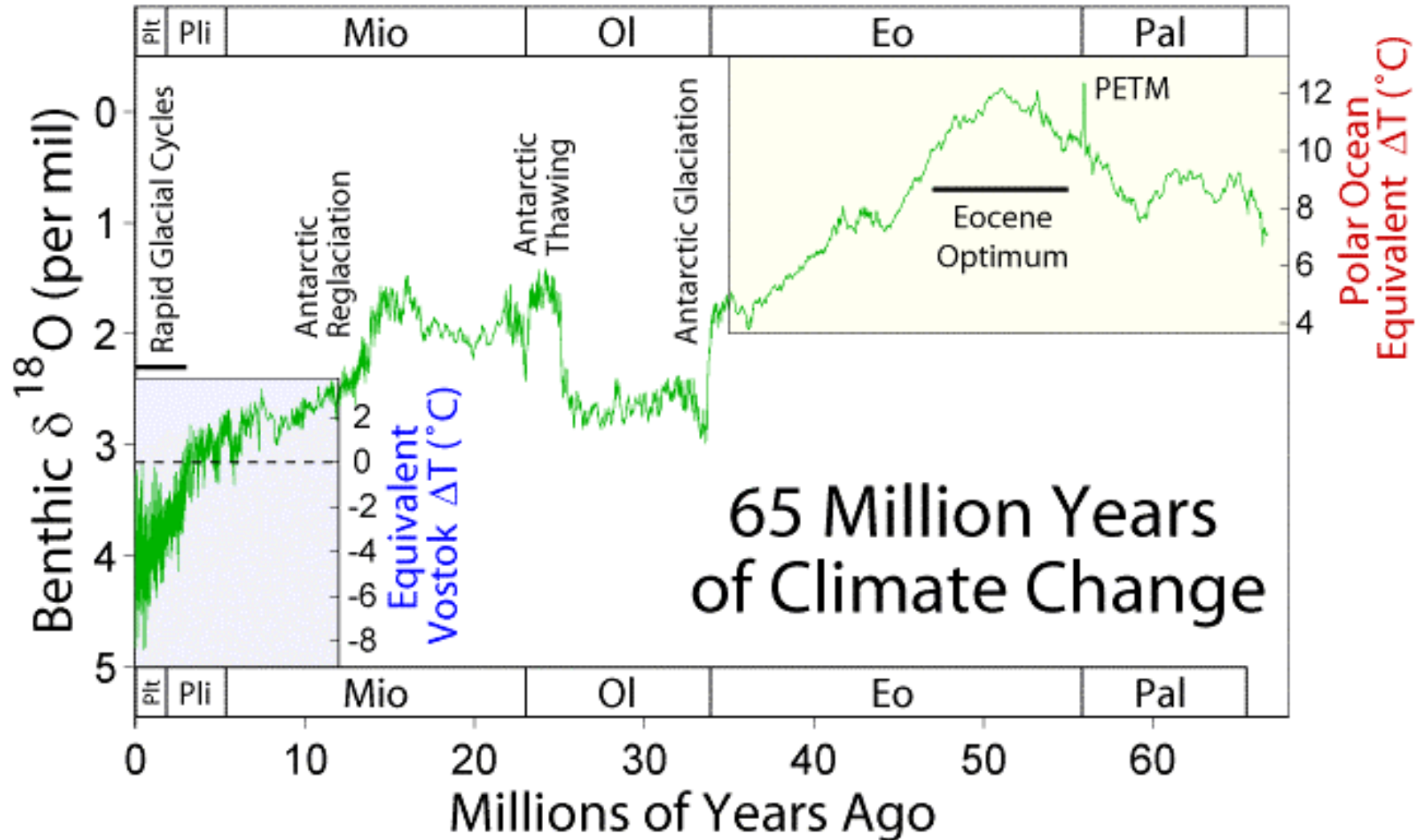
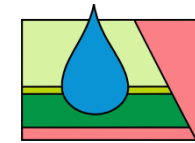


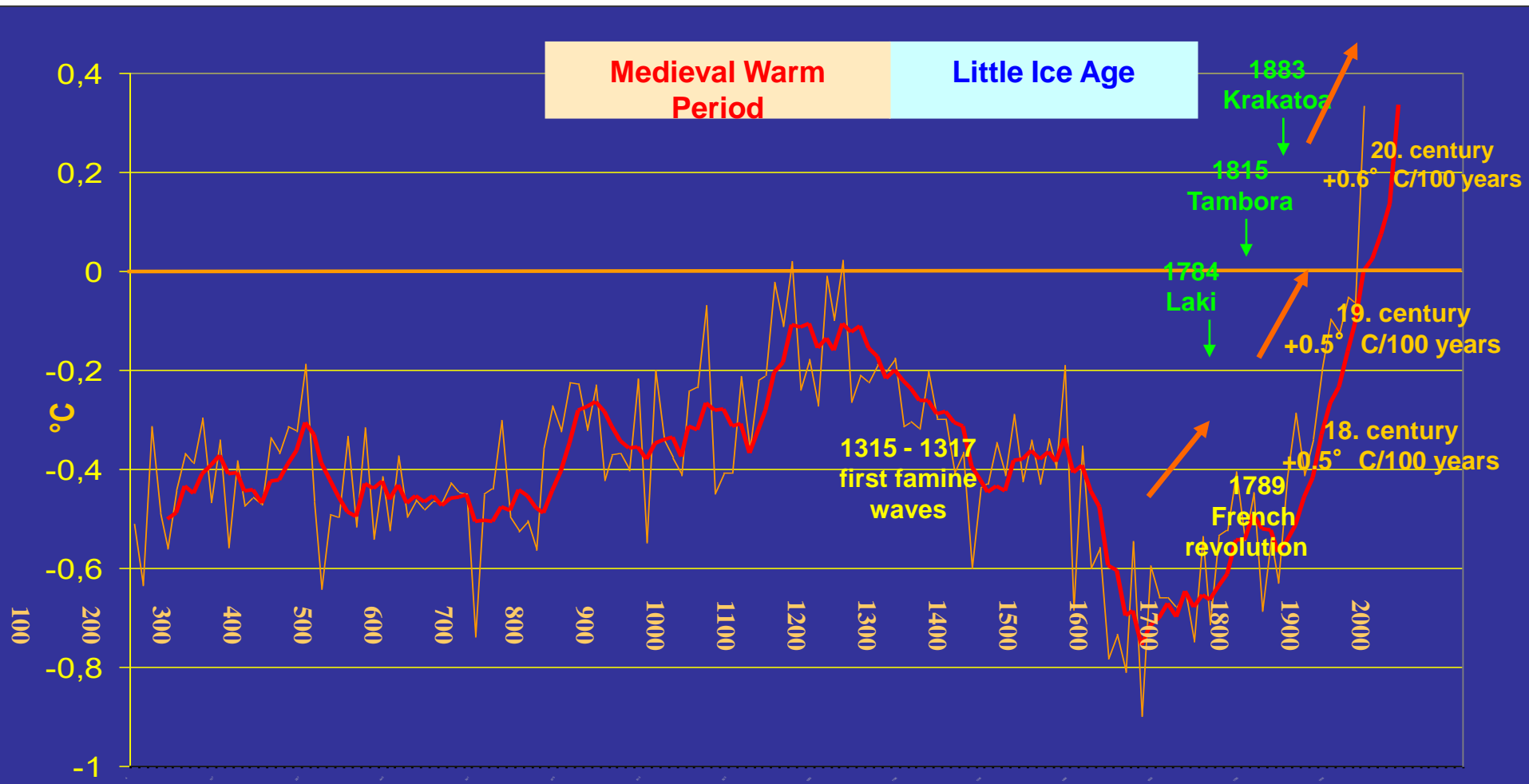
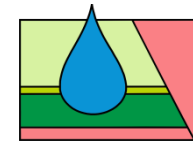
Two factors contribute to fluctuations in groundwater levels - groundwater abstraction and changes in infiltration.

While withdrawals are an easily definable factor due to pumping registration, the actual infiltration over time can be determined with limited accuracy



problem of climate simulation





**Temperature change over the past 2 000 years**  
(according proxy data Moberg et al. 2005 )



1. Scenario 01 – default state for scenarios 02-06, average infiltration, consumption in 2017;;
2. Scenario 02 – average infiltration, which decreases by 2 mm/year every year, ie by 60 mm in 30 years, withdrawals in 2017;
3. Scenario 03 – average infiltration, which decreases by 3 mm/year every year, ie by 60 mm in 90 years, withdrawals in 2017;
4. Scenario 04 – annual infiltration 2013 - 2017 reduced by 5 mm for each year, ie the infiltration is 201 mm lower in 2019 than in 2013, in 2020 the infiltration is 5 mm lower than in 2014, etc., withdrawals in 2017;
5. Scenario 05 – average infiltration, maximum allowed withdrawals
6. Scenario 06 – annual infiltration 2013 - 2017 reduced by 5 mm for each year, ie the infiltration is 201 mm lower in 2019 than in 2013, in 2020 the infiltration is 5 mm lower than in 2014, etc., maximum allowed withdrawals
7. Scenario 07 – default state for scenarios 08-10, average infiltration, withdrawals in 2017;
8. Scenario 08 – average infiltration, pumping of maximum allowed withdrawals;
9. Scenario 09 – average infiltration, pumping of 85% of maximum allowed withdrawals;
10. Scenario 10 – average infiltration, pumping of 115% of maximum allowed withdrawals.



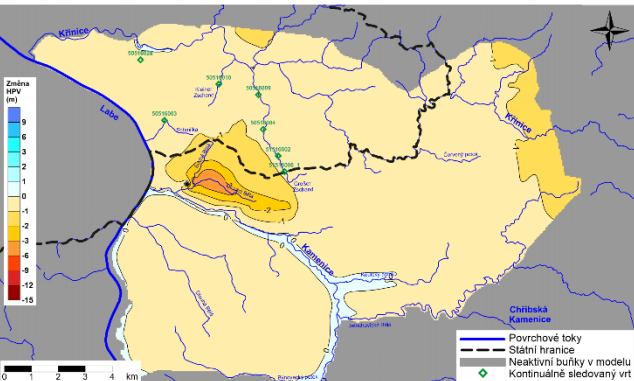


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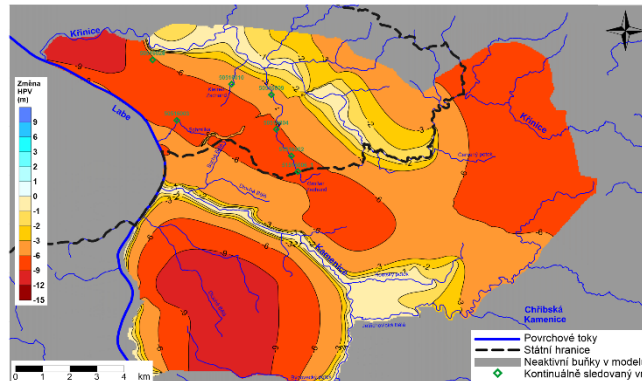


## Map simulations of groundwater level development in selected model scenarios of the Hřensko area

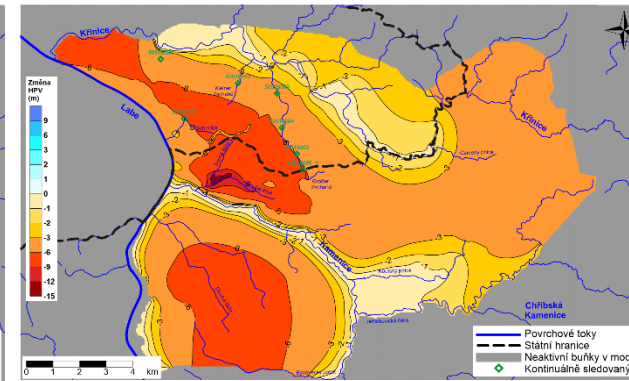
Scenario 01 – default state



Scenario 03



Scenario 06



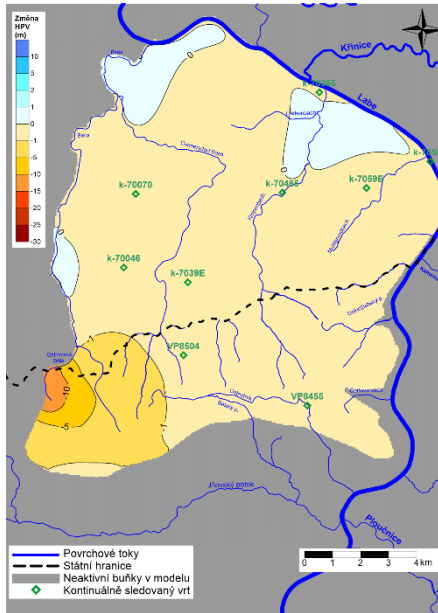


- ◆ Natural resources in the Hřensko area were verified by a model at 1481 l/s. The exploitable resources, which ensures that the hydrogeological structure is not overloaded, is 623 l/s. With current consumption of 105 l/s, the reserve is 518 l/s.
- ◆ The model stress test proved that in the area of Hřensko it would be possible to increase the pumping of the maximum permitted consumption up to 115%, ie on the Czech side to 125.9 l/s and at the same time on the German side to 80.5 l/s, including dry periods.

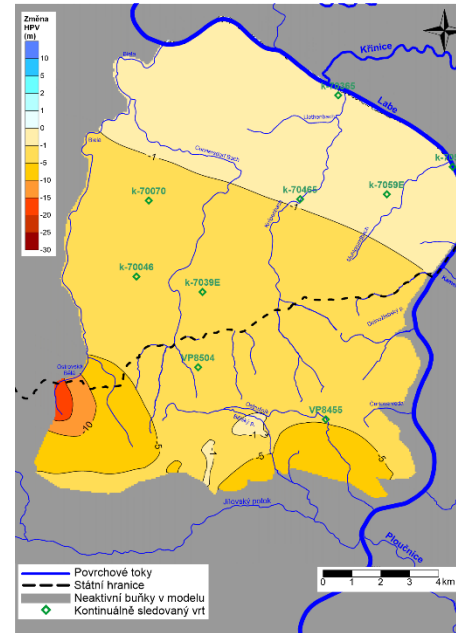


# Map simulations of groundwater level development in selected model scenarios of the Děčínský Sněžník area

## Scenario 01 – default state



## Scenario 03







- ◆ Natural resources in the Děčínský Sněžník area were verified by a model at 724 l/s. The exploitable resources, which ensures that the hydrogeological structure is not overloaded, is 321 l/s. With current consumption of 78 l/s, the reserve is 243 l/s.
- ◆ The model stress test proved that in the area of Děčínský Sněžník it would be possible to increase the pumping of the maximum permitted consumption up to 115%, ie on the Czech side to 106.8 l / s and at the same time on the German side to 13.8 l / s, including dry periods.



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Auf Wiedersehen!!  
na shledanou!!