

***Climate change and drought impacts and adaptation
- available tools for decision making***

Mendel
University
in Brno



Faculty of AgriSciences,
Institute of Agrosystems and Bioclimatology



Academy of Sciences of the Czech Rep.
CzechGlobe
Global Change Research Institute

**Introduced by: Petr Hlavinka
(results from wide team led by Prof. Trnka and Prof. Žalud)**



Leaders of our group:

Zdeněk Žalud

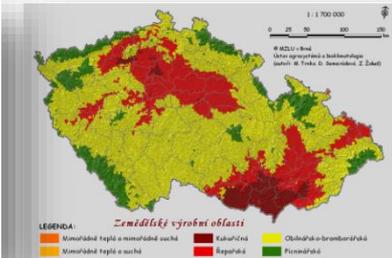
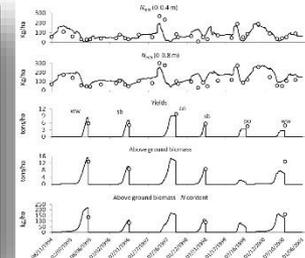
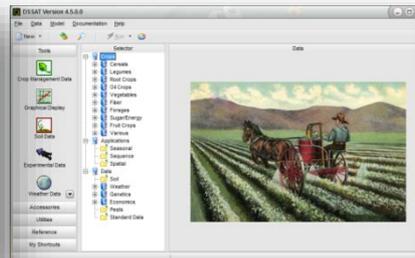
Miroslav Trnka

- About 20 internal members
- Cooperation within Czech Republic and foreign partners



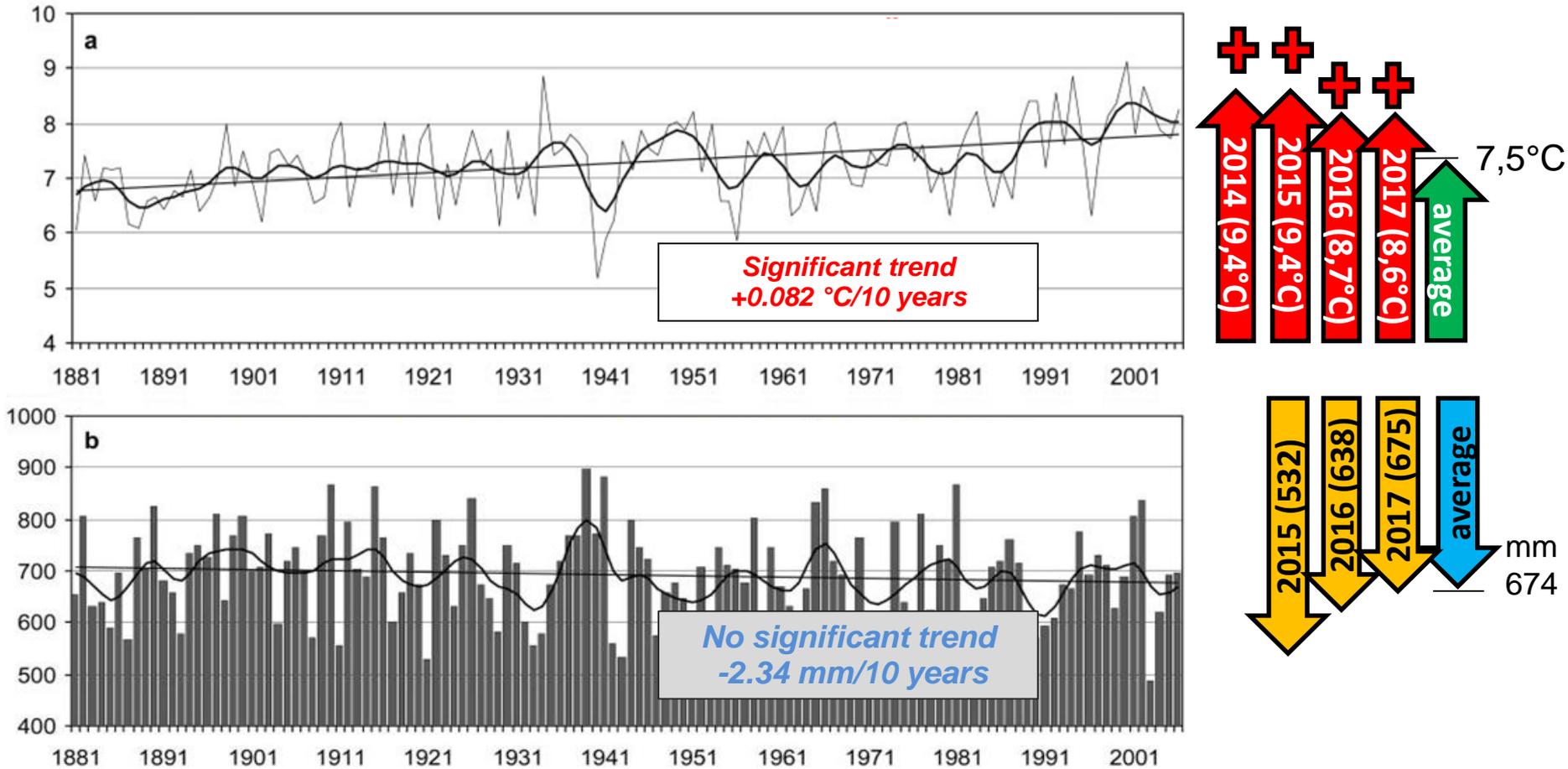
Main research topics:

- Agrometeorological aspects for crop production
- Impact of climate change on crop production
- Impact (and assessment) of extreme events (especially drought) on crops
- Decision support tools
- Remote sensing
- ...



MOTIVATION:

Air temperature and precipitation trends:

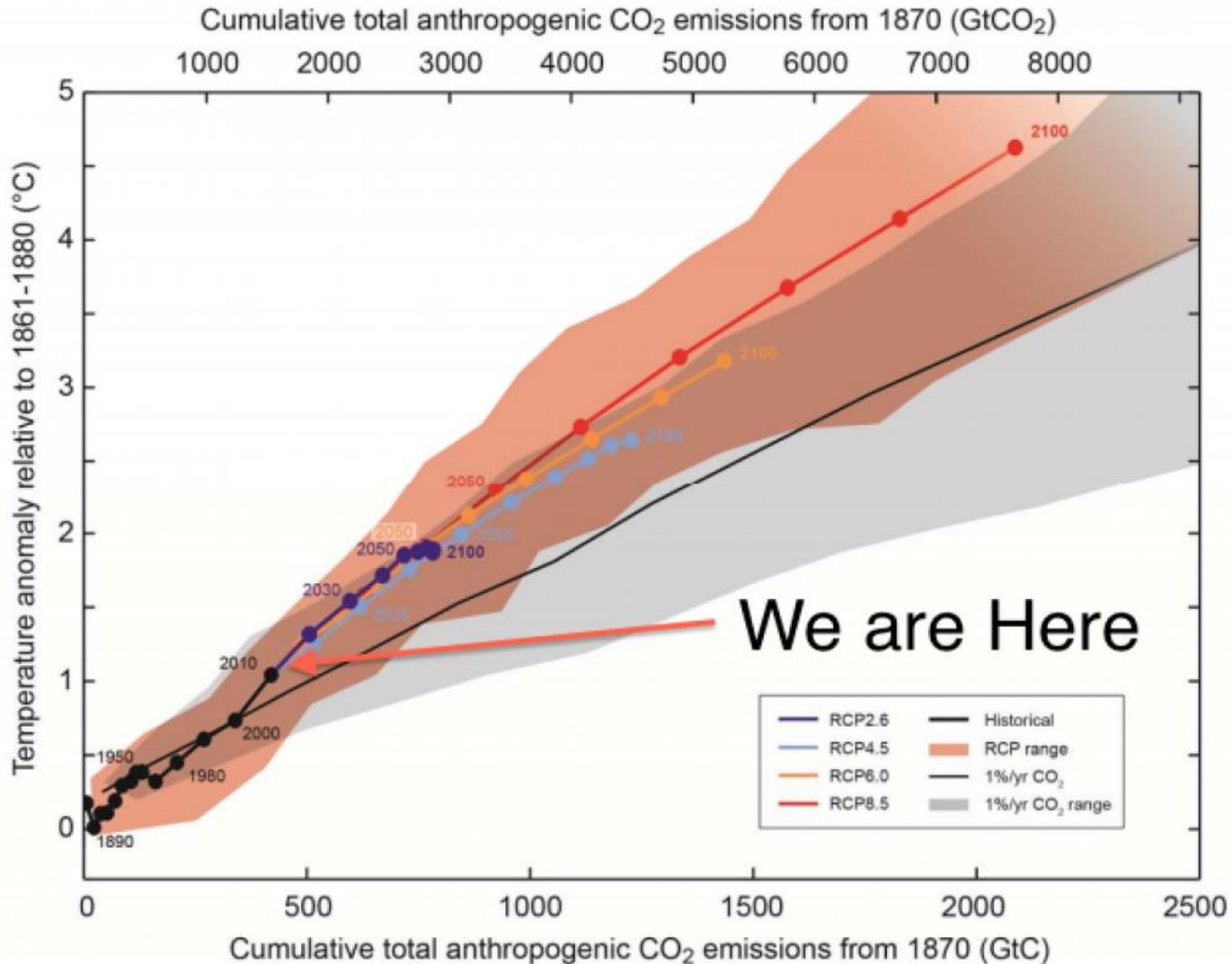


Brázdil et al. (2008, Theoretical and Applied Climatology)

source: www.chmi.cz

Spatial and temporal distribution in case of precipitation is crucial.

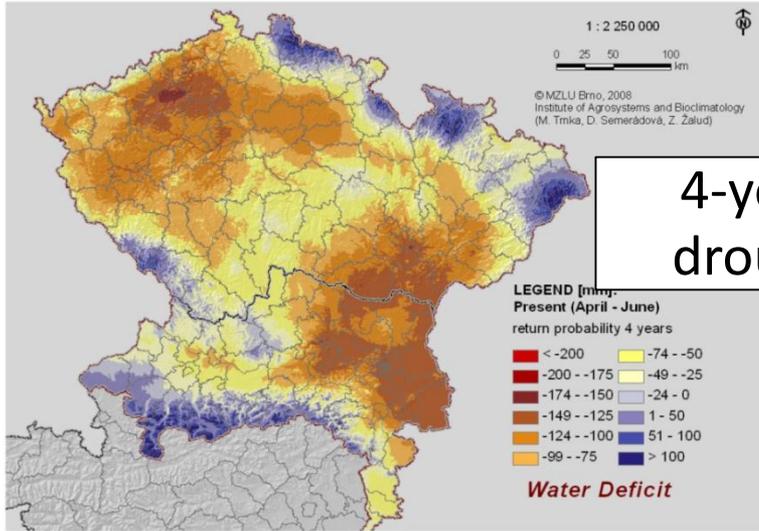
What about future?



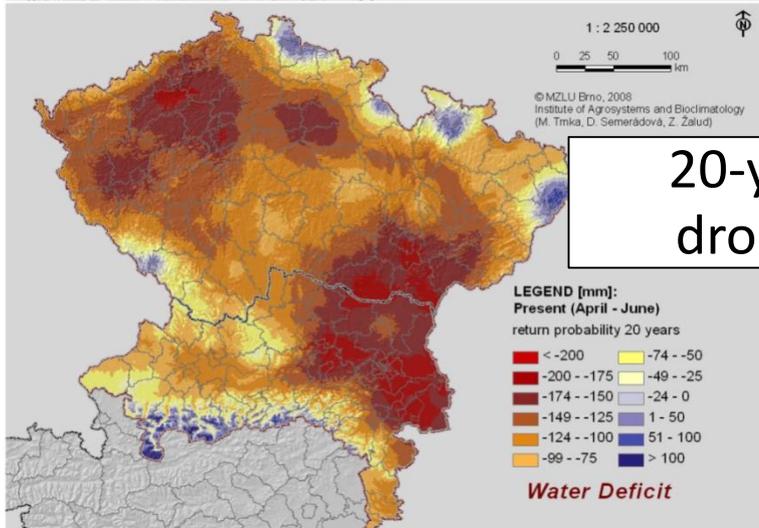
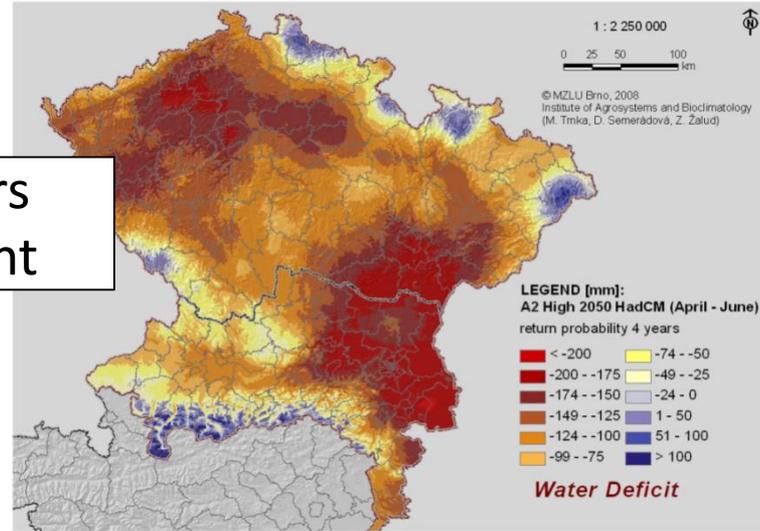
TREND: deeper water deficit April - June

(1961-2000)

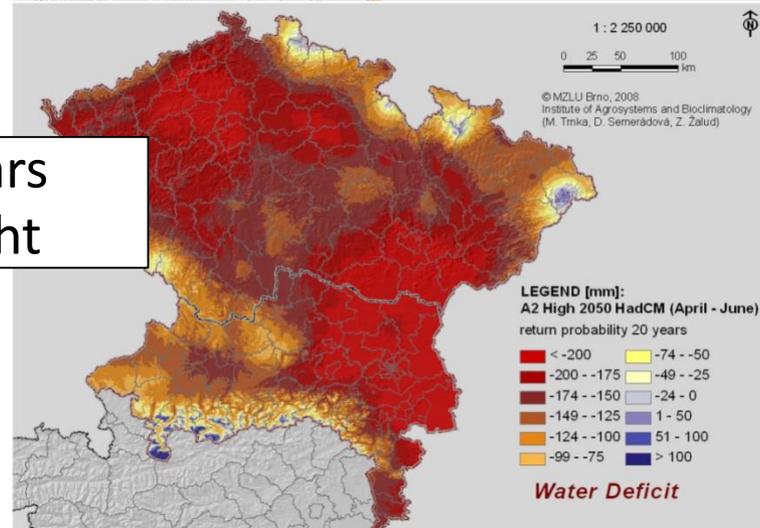
+2,0 °C



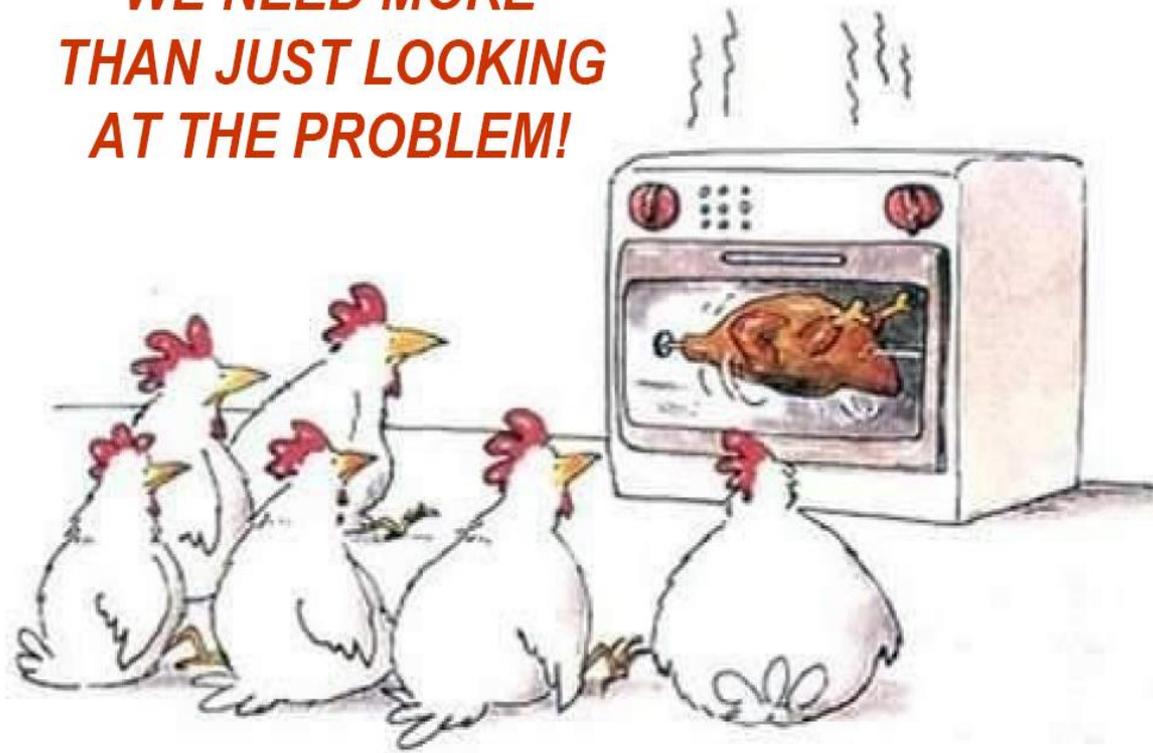
4-years
drought



20-years
drought

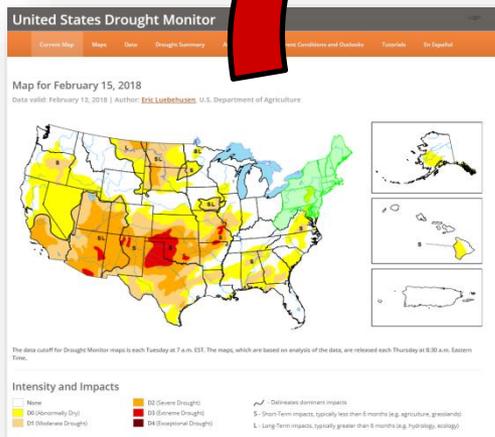


***WE NEED MORE
THAN JUST LOOKING
AT THE PROBLEM!***

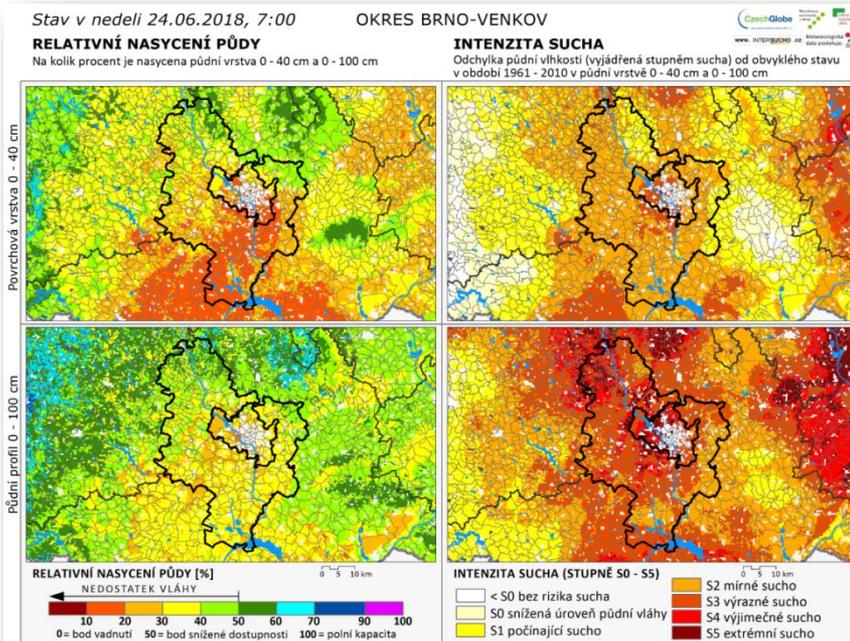


U.S. Drought monitor

www.intersucho.cz



Districts situation and weather forecast



CZECH REPUBLIC SLOVAKIA CENTRAL EUROPE

INTERSUCHO Current state of drought Predictions Drought in regions cz sk

Předpověď sucha Agrometeorologická předpověď

Drought intensity prediction

10 denní přehled

[Podrobné srovnání pěti modelů](#)

Denně aktualizované mapy intenzity sucha na příštích 9 dní oprávcí se o 5 předpovědních modelů.

[Předpověď 1 - 3. den](#)
[Předpověď 4 - 6. den](#)
[Předpověď 7 - 9. den](#)

Soil saturation prediction

10 denní přehled

[Podrobné srovnání pěti modelů](#)

Denně aktualizované mapy nasycení půdy na příštích 9 dní oprávcí se o 5 předpovědních modelů.

[Předpověď 1 - 3. den](#)
[Předpověď 4 - 6. den](#)
[Předpověď 7 - 9. den](#)

☰ Gmail Hledejte v poště

Nová zpráva

Doručená pošta 22

Odeslané

Koncepty 1

Spam 4

Kategorie

- Boomerang-Outbox
- Cestovní
- chorv_2017
- LIFE

Petr - +

Daniela Semeradova
Vy: Ahoj Dany, muzes se mi prosim oc

Gabriela Poznikova
Vy: bezva - diky za doplneni, bude se

Predpoved pro Polkovice (25.06.2018) Doručená pošta x

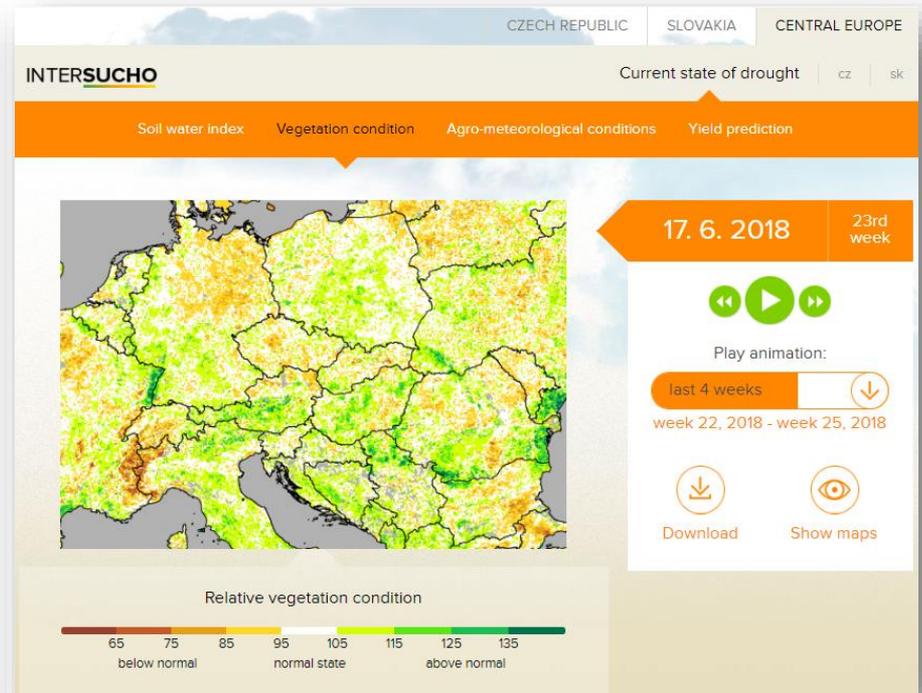
v12_servis@cezchglobe.cz [rostlednictvím domény](mailto:v12_servis@cezchglobe.cz) uvoz onmicrosoft.com
komu: mirek_tmka, ja, g.poznikova, orsag.matej, pohankova.e, farpol, halenka.m

(toto je automaticky generovaná zpráva z EOS3 - 172.20.3.3, neodpovídejte na ni)

4 přílohy

[Odpovědět](#) [Odpovědět všem](#) [Přeposlát](#)

Impacts at various levels



Interactive climate change predictions



Maps and graphs

About us

CS

Climate change impacts

Actual situation

Time series

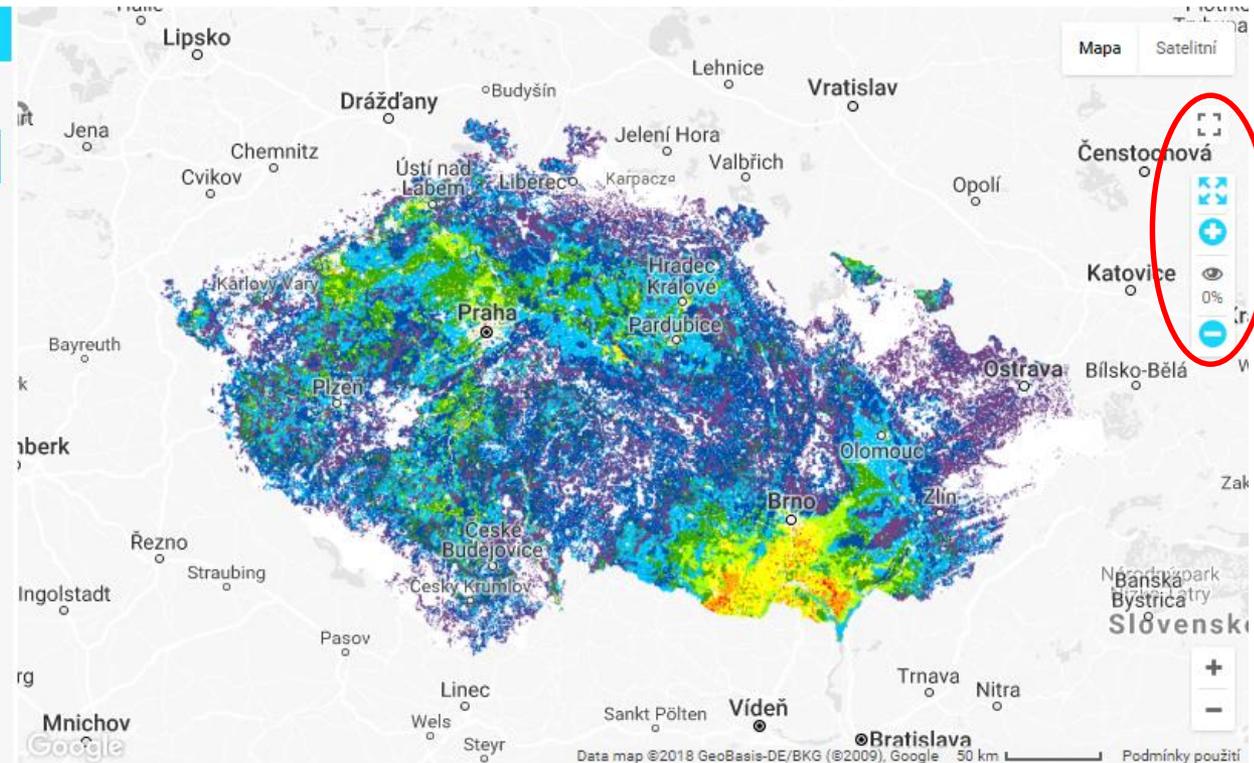
Drought stress in topsoil (year)

MAP LAYER DESCRIPTION

CHANGE THE MAP LAYER



[days]



Conclusions:

- Drought is not the only problem
- Sharing of knowledge among scientists, politicians, decision makers, business and public (media incl.) is crucial
- There is need of complex adaptation measures development (for various spatial and temporal perspective)
- Decision support tools will be crucial for its implementation and evaluation

Thank you for your attention !

Contact in case of questions or comments:
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