Time of buddburst and dynamics of leaf growth in *Tilia cordata* Mill. at Varaždin and Belišće

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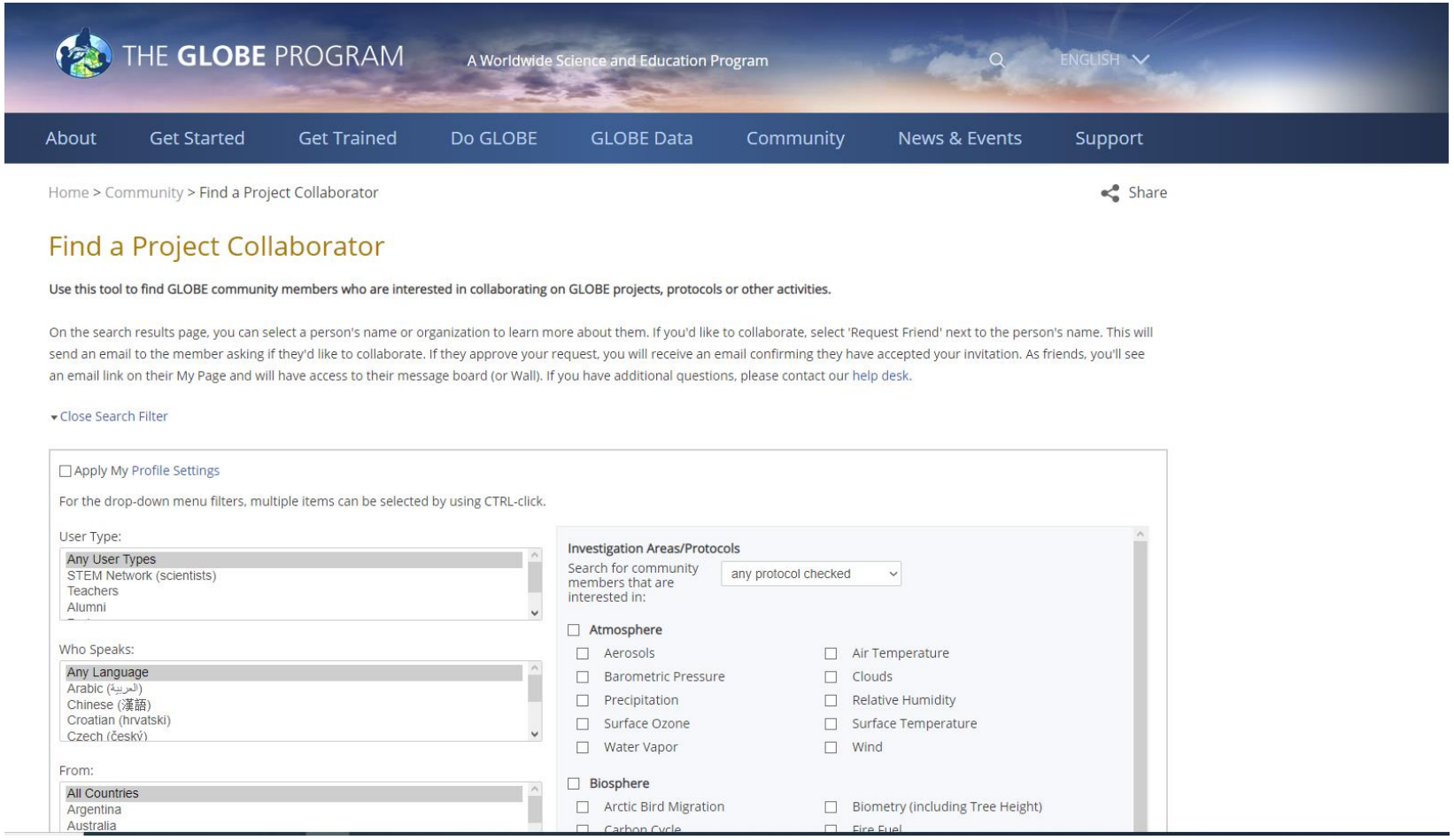
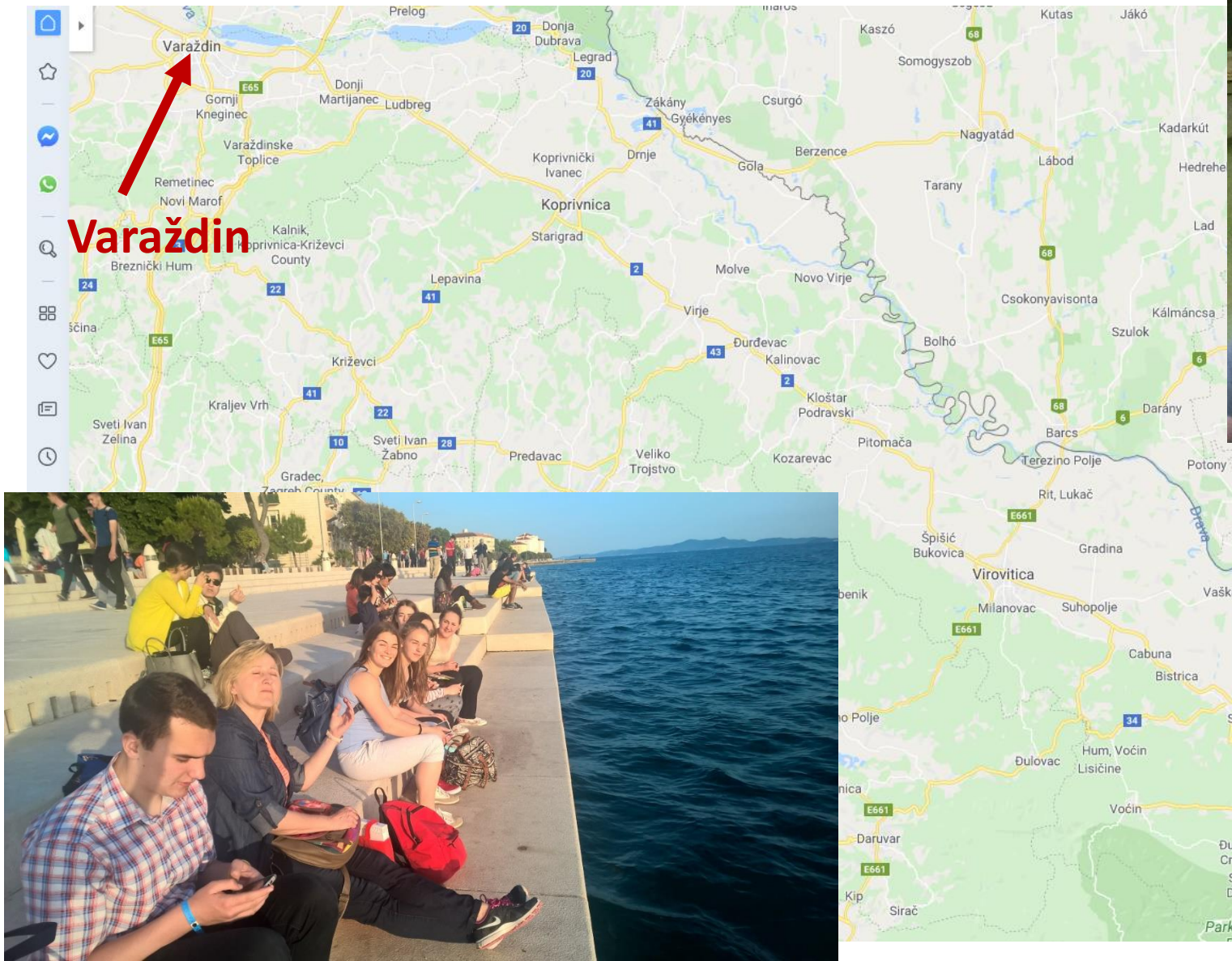
All started with…*Find a Project Collaborator* tool



And after 5 years of collaboration and friendship between two 300 km distant schools...



...Two awarded projects...

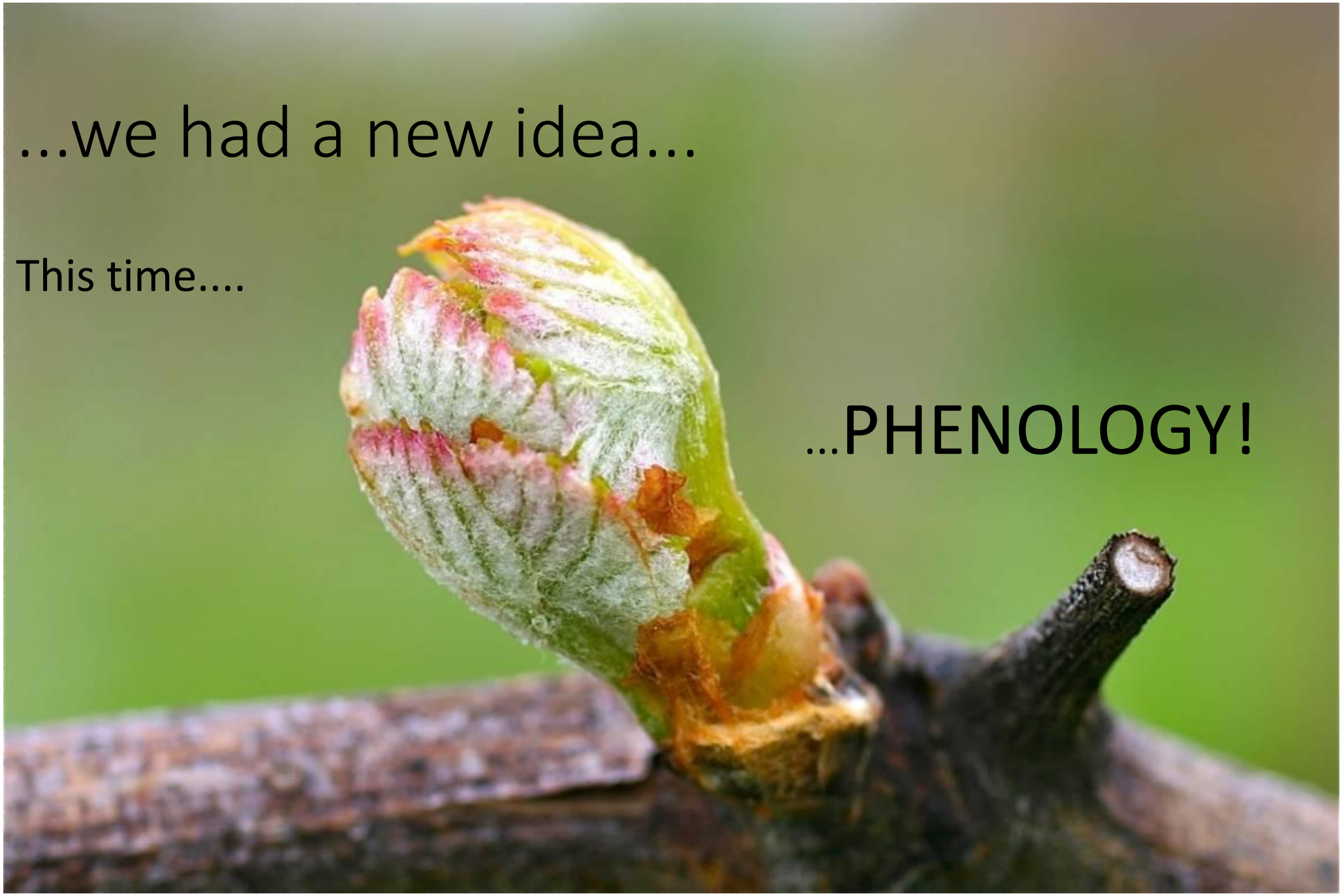
The Drava River through miles and seasons 2016.

Research focuses on comparation of water temperature, water level and transparency in 300 km distant station on river Drava

Influence of air temperature and percipitation on decomposition of organic matter and release of carbon dioxide 2018.

This research focuses on the study of the rate of decomposition of organic matter and the amount of carbon dioxide released during this process on two geographically distant stations with varying precipitation and air temperature (Varaždin and Belišće)

Tea time 4science

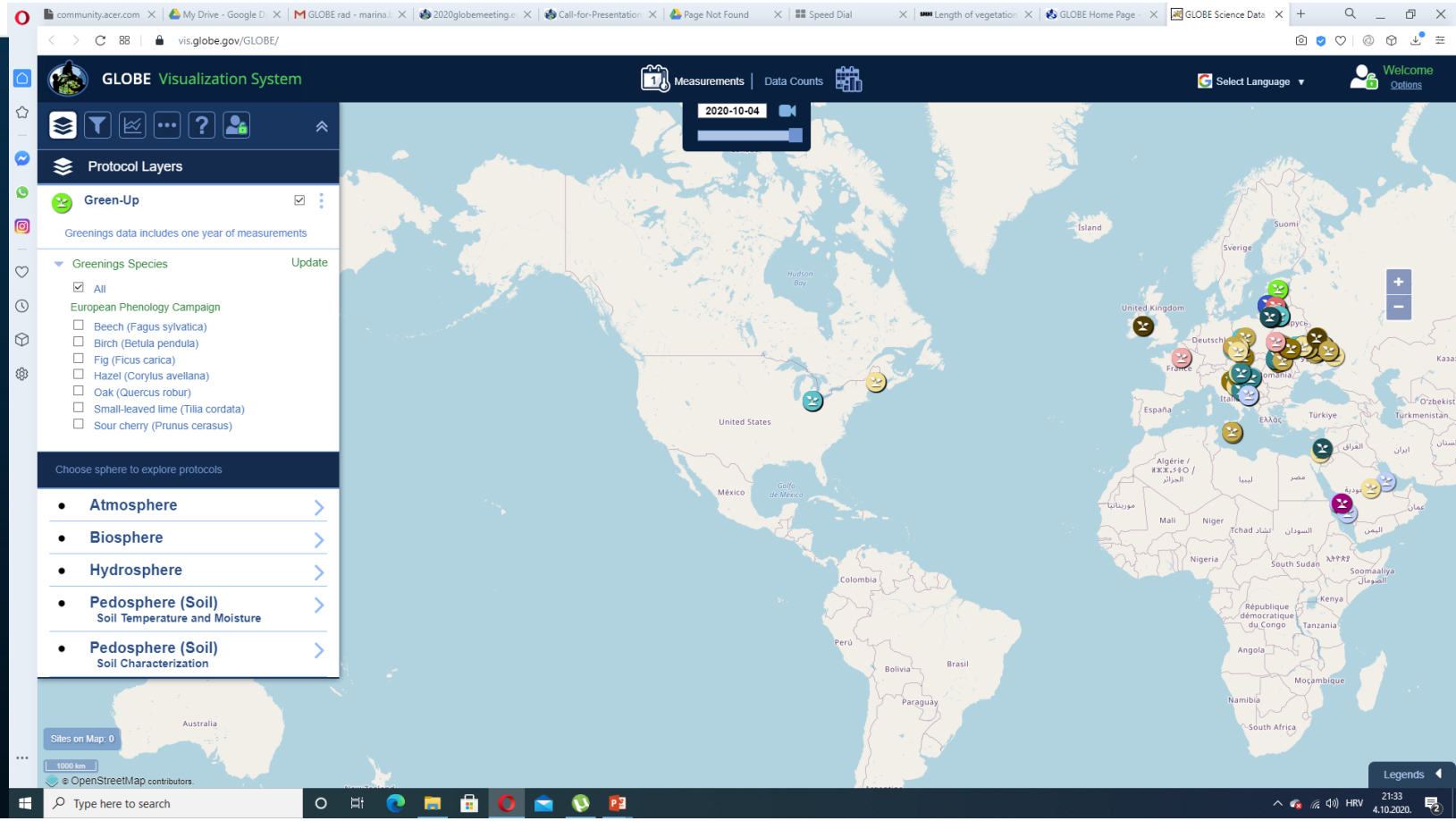

...we had a new idea...
This time....
…PHENOLOGY!

Why phenology measurements?

Vizual Interesting, **help detect climate change,** **Get to do real science!**

How we did it?

Lots of LOVE for GLOBE… … **AND….Visualization system!**



After 5 years measuring **we asked ourselves…**

- ***does the geographical location affect the time of budburst and the Green up period?***

- ***Which microclimate conditions have the greatest impact on time of budburst and the Green up period?***

Hypothesis

- budburst starts **earlier in Belišće** due to the lower altitude and **warmer microclimate** but **lasts longer in Varaždin** due to **percipitation**

- **soil temperature** has the greatest influence **on time of budburst**

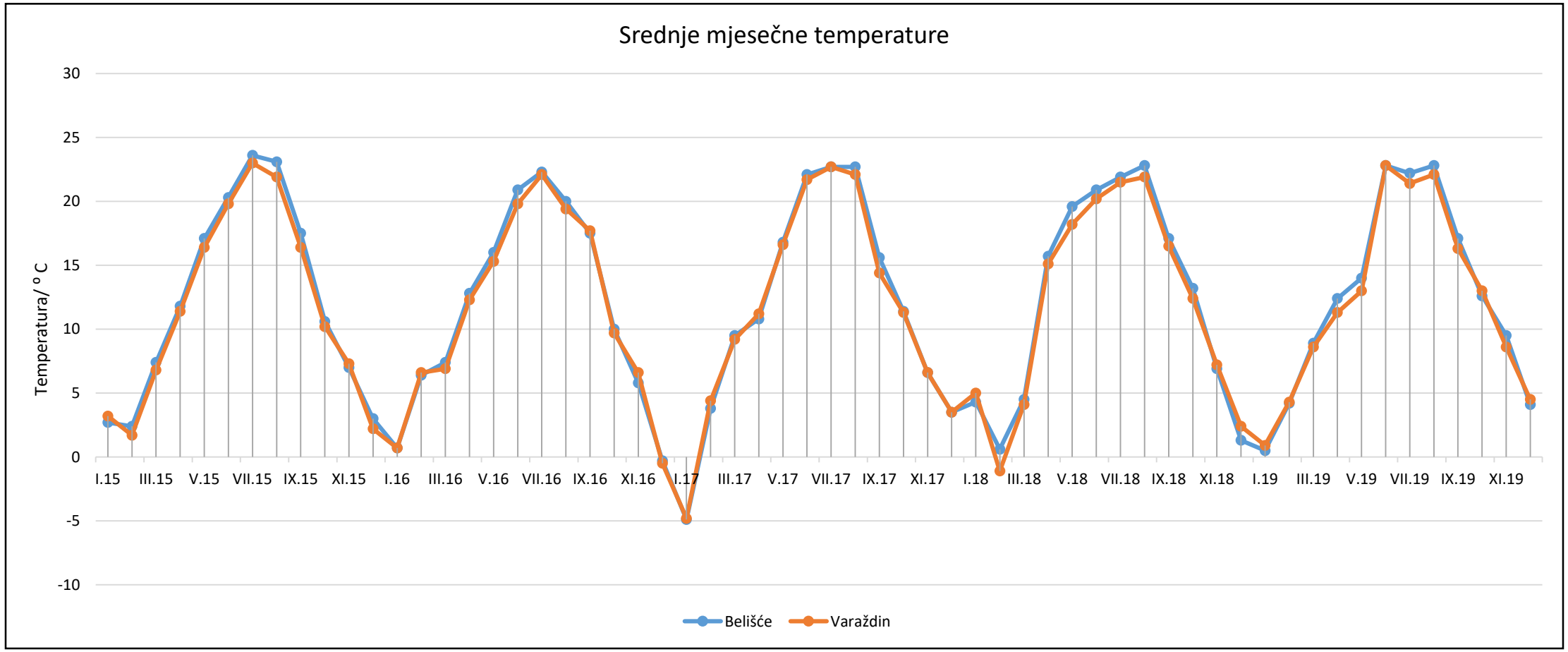
- **precipitation** has the greatest **on green up period**

Data

year	Time of budburst Varazdin	Time of budburst Belisce	End of vegetation seasion Varazdin	End of vegetation seasion Belisce	Duration of vegetation season Varazdin	Duration of vegetation season Belisce
2015.	6.4.	7.4.	25.5.	19.5.	61	42
2016.	30.3.	24.3.	27.5.	4.5.	58	42
2017.	27.3.	28.3.	25.5.	8.5.	59	42
2018.	29.3.	13.4.	9.5.	8.5.	41	26
2019.	21.3.	28.3	21.5.	23.5.	61	57

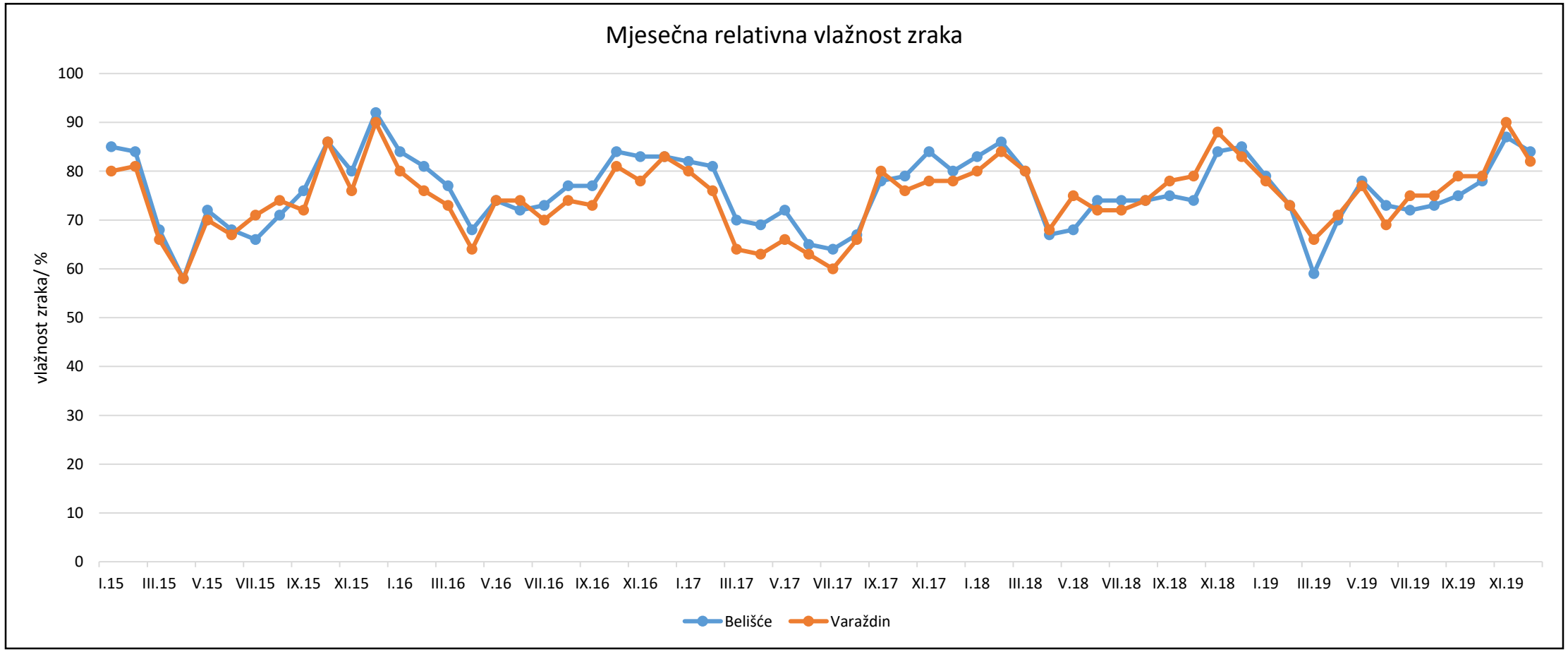
Air temperature at station B and VZ since 2015.

legend: red – Varazdin, Blue - Belisce



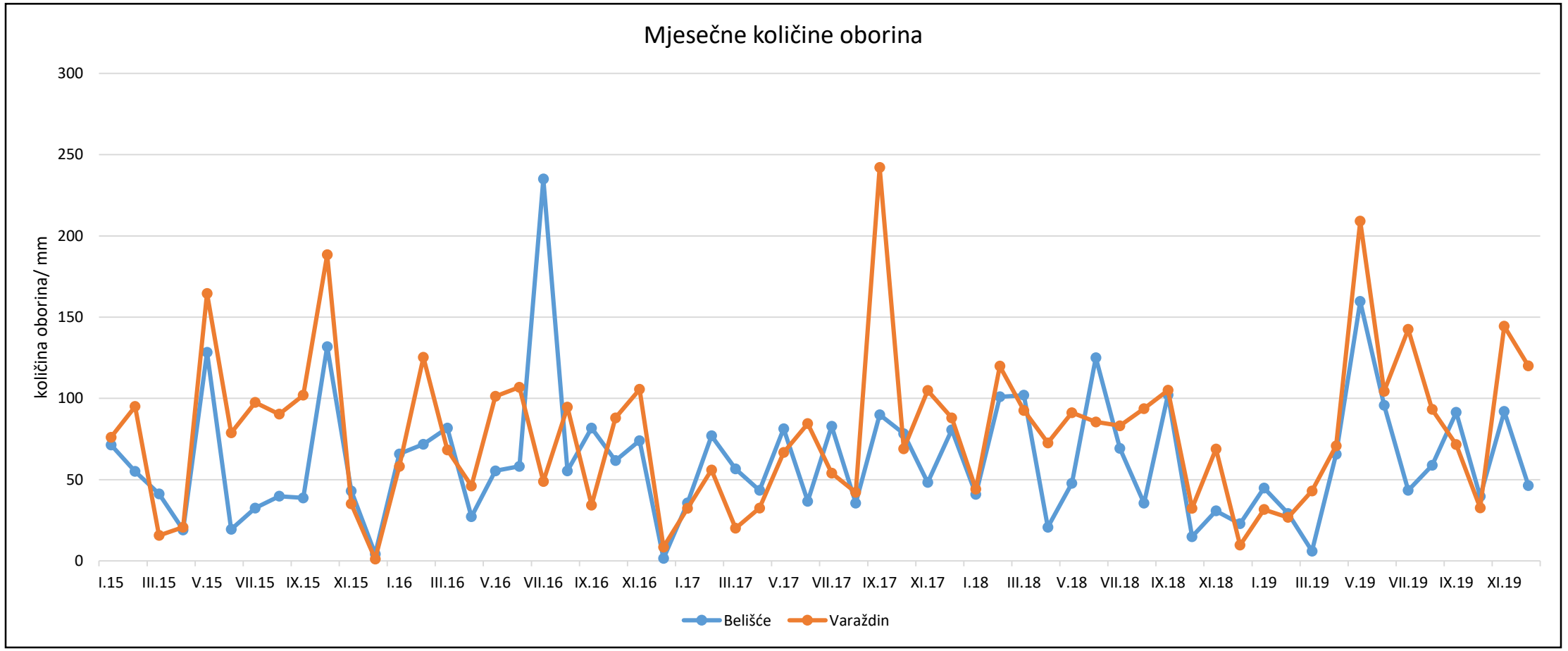
Air Humidity

legend: red – Varazdin, Blue - Belisce



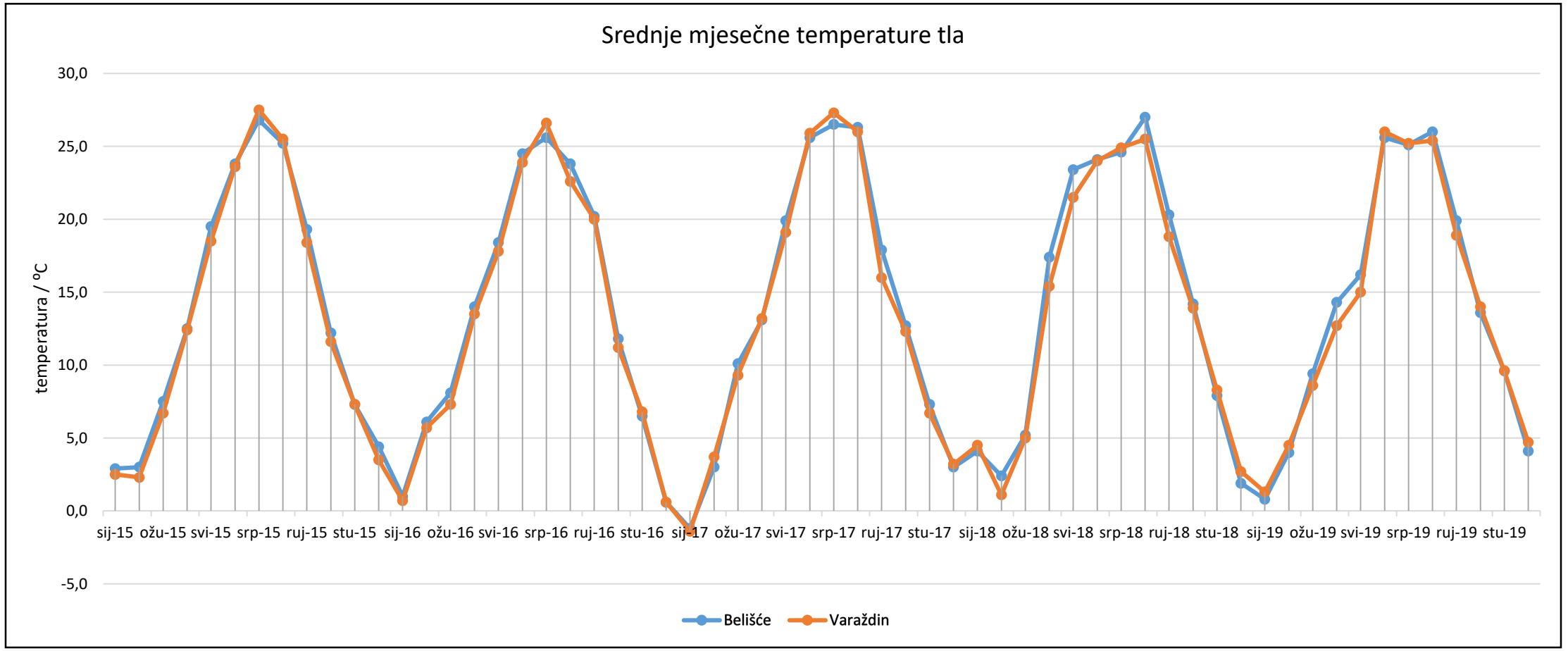
Percipitation

legend: red – Varazdin, Blue - Belisce



Soil temperature at 5 cm

legend: red – Varazdin, Blue - Belisce



Conclusion

- ***Time of budburst is similar in both station***
- ***Vegetation season is longer in Varazdin because of higher humidity***
- ***the main factors influencing the time of budburst is air and soil temperature***