

Difference between the temperature changes in Serbia and the Europe

In my project, my goal was to find out about average temperature changes per decade in Serbia and to compare it with average temperature slope in Europe. It's not globally significant but it was interesting to me because it's my homeland. Also, it may be the interesting guideline for some other projects in the future.

Temperature trend in Serbia

At first I use the data from all 19 meteorological stations in Serbia. Some of them don't have data for all the years during the period (1970-2012). But after the combining all data I was able to calculate the average temperature changes per decade. Between 1970-2012. the average temperature trend for Serbia was 0.33 °C per decade, with significant impact of human activity on it.

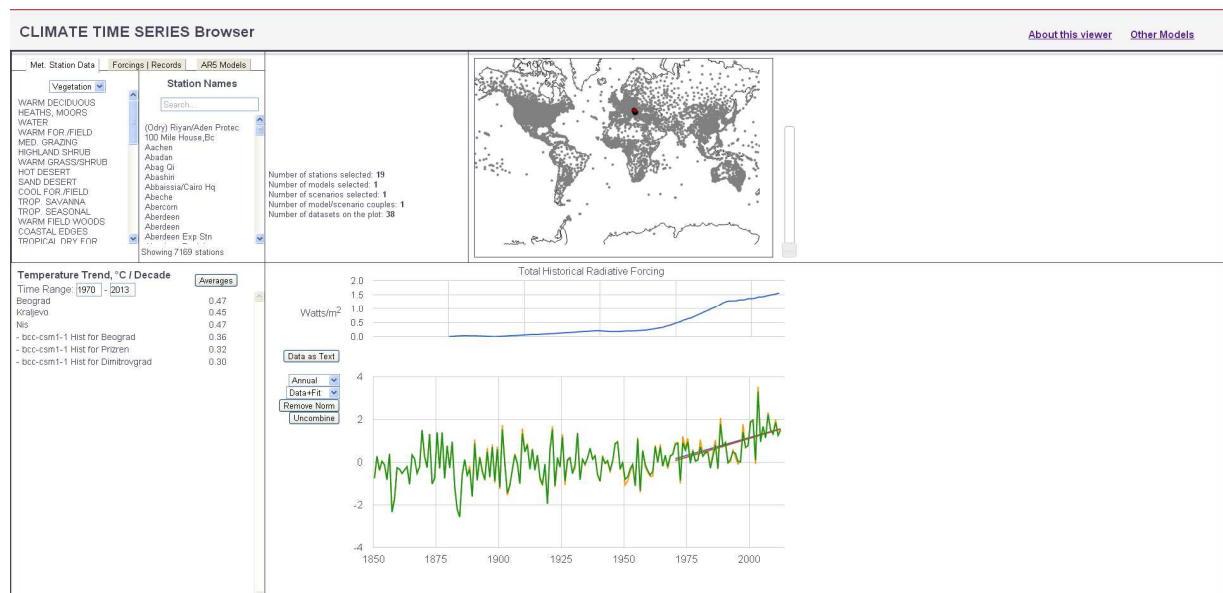


Figure 1 Temperature trend - Serbia

The link for the page with data from meteorological stations from Serbia is <http://climatemodels.uchicago.edu/timeseries/#KatBBBBBBBBBBBBBBBBBBBB>

Temperature trend in Europe

After that, I picked 19 different meteorological stations in Europe to get data for calculating temperature trend. I tried to get data from different parts of the Europe, but I was limited with the number of stations that I wanted to use. My idea was to get data from the same number of stations as I did in Serbia. After analyzing data, I find out that the average temperature trend in Europe was 0.38 °C per decade.

If someone is interested, the link for the page with these 19 station selected is <http://climatemodels.uchicago.edu/timeseries/#JffOBuPBjHBqCbBoBgBtEmYBwByTMBwNl>

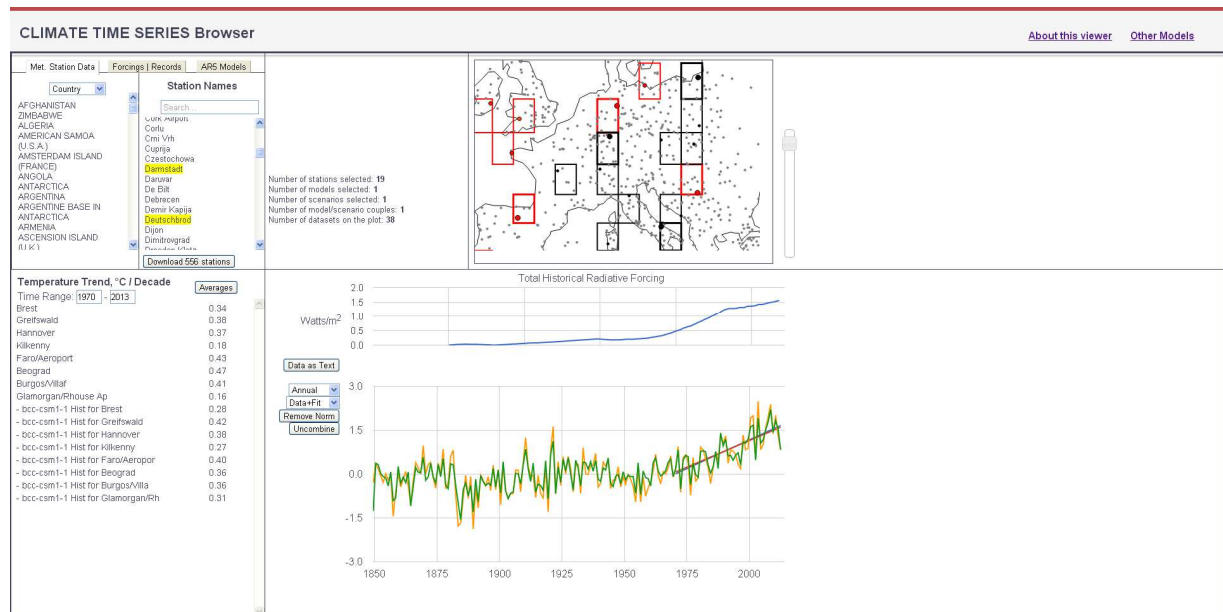


Figure 2 Temperature trend - Europe

So, the difference between these two temperature trends was $0.05\text{ }^{\circ}\text{C}$ per decade. Furthermore, I calculated the p-value in order to determine if the difference is significant. P-value=1.0000 so the difference isn't significant.

Conclusion

In summary, we can say that even with a slightly higher temperature rate in Europe, there is no significant difference in temperature changes between Serbia and Europe. So maybe we can expect that this part of the world will have the similar destiny due to the climate changes in the future. Of course, this project covers a small amount of data, so it can just give us ideas for the future projects.