Influence of Air Temperature on Water Temperature, pH, and Chemical Substance Content in Tršljavec Stream

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SUMMARY

This research project focused on the influence of air temperature on water temperature, pH value of water and nitrate and nitrite content in the Tršljavec stream.. Through field and laboratory work, we made repeated measurements of air temperature, water temperature, water pH value and nitrate and nitrite content. Based on the analysis of the data obtained, it was confirmed that air temperature has an influence on water temperature, while air temperature has no significant influence on the pH value of the water. We also found that the nitrate and nitrite content of the water is independent of the water temperature.

INTRODUCTION

Global warming is having a profound impact on life on Earth. Organisms are losing habitat and the ability to survive. The climate is changing and extreme weather events such as droughts, floods, etc. are occurring.

The impact of drought is seen every year in home gardens and nearby fields. We experience weather phenomena such as summer heat, winters without snow, winters with above-average temperatures, etc.

With the Tršljavec stream we wanted to investigate how air temperature affects the life in the stream.

HYPOTHESES

1) water temperature varies in correlation with air temperature.

2) water temperature has no effect on water pH

3) the nitrate and nitrite contents depend on water temperature

RESEARCH METHODS

Fieldwork

Tršljavec stream

Sample collection

Taking measurements

Laboratory work

Measurement case

Determination of nitrate and nitrite using a water analysis case

CONCLUSION

Our study of the Tršljavec stream and the analysis of the data obtained have led to some important conclusions which shed light on the influence of air temperature on water temperature, pH value of the water and the nitrate and nitrite content. Our findings underline the importance of further monitoring and investigating the impact of environmental parameters such as air temperature on the ecosystem of the Tršljavec stream. Understanding these dynamics is crucial for the conservation of the ecosystem. Future research could include human activities in the vicinity of the stream, a wider measurement period and more locations, and a more detailed analysis of other environmental parameters, which would further contribute to the understanding of the relationship between the environment and life in the stream.