

## **Role of tree growth active periods in dendroecological research**

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The target of this study is to work out methodology of determination of tree growth active periods and to substantiate the role of their use in dendroecological research. For reaching it there are too tasks to do - firstly, the explanation of conception of active periods and secondly, outlining in details the steps of the recognition of active period and giving of examples of the usage of them. The hypothesis of the research is based on fact that impact of several factors changes during the tree life; it can be different in intensity aspect (more or less intensive) and mode of action (positive or negative). It is advantageous to describe the idea of tree active growth periods connecting it with Shelford's law of tolerance. If particular environmental factors (e.g. temperature, precipitation etc.) are in the zone of insufficiency or satiation growth and development of the biological object is limited.

There are tree ring width survey data and data of meteorological observations needed to design the special matrix. Next step includes calculation of Pearson's correlation coefficient ( $r$ ). Zones where phenomenon of interest is statistically significant (factor of study impacts tree growth substantially) are determined by critical values of correlation coefficient  $r_{\alpha;n}$ .

If it is possible it is recommended to strive to increase favourable impact during the positive active growth periods and to reduce it during the negative ones.

The temporal drift of active periods is interpreted as a criterion for global warming reflection.