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**Model of biodiversity on moraines  
of the Maly Actru glacier**

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Biodiversity is key to stability of ecosystems. Studying of changes of biodiversity during succession allow us to understand laws of its changing.

Understanding of the laws will allow to estimate stability of plant communities at different stages of development and predict their ability to withstand impacts and global changes. There is possibility that community which will be formed as result of global changes will be unstable and finally turns to wasteland.



Different stages of succession at Maly Actru young moraines

# Moraines of Maly Actru Glacier



Maly Actru moraines was selected for primary modelling because they are counted as representative for Altai Mountains.

They are studied from 1911 and provide valid chronosequence.

Our model is based around delayed logistical equation also known as Hutchinson equation, but value of variable of plant community development  $r$  is dynamic, and reflect as changes of conditions, caused by vegetation activities as climatic and other factors.

Community reactions is not momentary in most cases, their terms are comparable with life spans of edificator plants, except for catastrophic changes, like mass death of trees caused by degradation of permafrost. There is a reason to believe that global changes will block reproduction of many species through creating of conditions which are not suited for reproduction. Delay time is included in the model, but dependence of delay from different factors is also unclear, but correlate with life span of edificator plants..

Additional data and collaboration are needed to understand and clear dependance of variable of community development and delay from time, climate and other factors.

You are welcome!





**Thank you for attention!**