

## Some Peculiarities of Structure and Growth of Larch Stands in Western Mongolia

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**Abstract :** In this paper we have introduced some results of study on stand growth pattern and stand structure of larch forests which are located in selected forest sites of Khangai and Gobi-Altai mountain ranges of Mongolia.

Our investigations showed that growth intensity and stand structure in western Mongolia are very specific from the other forest vegetation zones of Mongolia. Studies on the stand structure and growth trend indicate that tree types of stand structure and different types of growth of *Larix sibirica* are very common in Western Mongolia. These peculiarities of stand structure and growth of larch stands in Western Mongolia could be used for forest inventory work and an improvement of the forest management in Western Mongolian region.

The larch tree is the dominant tree species in Western Mongolia. Forest cover of the region is about 15%, which is two times higher than the country's average. In this region forest area is divided into 4 forest sub-regions: the Central Khangai, Western Khangai, North Eastern Khangai and South Eastern Khangai sub-regions including taiga, pseudo taiga, sub taiga, sub-alpine and forest steppe belts.

Silviculture practices and forest research management request to study forest growth trends in local and general conditions, which means to indicate a change of taxonomic characteristics of a stand from time to time including diameter, height, basal area, growth stock etc. The forest management practice mostly uses tables of forest growth and yield based on the results of long term research on forest growth.

Forest yield tables and other relevant forest standards of Russia are used for the forest inventory and forest management. They are not able to determine forest structure and growth peculiarities of Mongolian forests.

Studies on forest resource assessment in Mongolia indicate that after logging operations and forest fires the natural regeneration of desired species such as pine and larch often does not succeed. This situation forces to take a different approach of forest management and silviculture practice depending on the stand structure and growth rate of the forest stands.

According to our investigation in last years, forest growth pattern of larch forest depends mostly on stand structure, stand age and growth condition including forest soil, climate and location in different slopes. Due to improve environmental function of forest ecosystem in the region, it is needed to conduct very comprehensive study of high mountain forest ecosystem in selected sub-regions.