

ClimateWNA, consensus projections for BEC and a climate-based seed transfer system for BC

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Abstract

Dr. Tongli Wang will first give a brief update on the climate model ClimateWNA. He will focus on the improvement of predictions over the original baseline, historical data and GCM projections through downscaling by the program.

In the second part of his presentation, Tongli will introduce their recent progress on projections of the Biogeoclimatic Ecosystem Classifications for future periods – the “flying” BEC. A large number of climate change scenarios leave managers and policy-makers too many options in decision-making. In order to overcome this problem, Tongli and his coauthors have developed consensus projections by incorporating individual projections using 20 climate change scenarios. The consensus projections, together with the consensus strength for each pixel of the province, may provide better information for managers and policy-makers in developing adaptation strategies.

Tongli will also present their latest progress on developing a climate-based seed transfer system. A direct impact of climate change on forest ecosystems is the mismatch between the climate that trees have adapted to in the past and the climate that trees are going to experience in the future. A climate-based seed transfer system is probably the most effective approach to cope with this problem in practice. BC has established solid facilities and guidelines to avoid maladaptation based on the principle of “local is the best”. However, the “local climate” is moving away under a changing climate. Their approach to develop the climate-based seed transfer system is to put the current Seed Planning Units (SPU) on the “flight” of the “flying BEC” to chase the moving “local climate”.

Biography

Dr. Tongli Wang earned his M. Sc. in Forest Genetics from the University of Helsinki in 1992. His Ph. D. is in Forest Genetics from the University of Helsinki (1996). Tongli is the Associate Director at the Centre for Forest Conservation Genetics, Department of Forest Sciences, University of British Columbia. His research interests include ecological genetics, quantitative genetics, adaptation to climate change and climate modeling.