Deep Dive into the Seedlot Selection Tool

Co-Author and Climate Change Impacts Scientist Dominique Bachelet shares her thoughts

A recently published **paper** shows practical applications of the **Seedlot Selection Tool** in implementing climate adaptation projects in the Western United States. The authors share how the SST was developed, steps for using it, and three case studies that utilize the tool in selecting climatically appropriate stock for restoration.

Since Brad St. Clair, lead author of the Ecosphere paper, always likes to quote famous scientists, I thought I would follow his footsteps to introduce the Seedlot Selection Tool and illustrate what it means for a climate change impacts scientist like me. William Arthur Ward once said: "The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails."

Given the various weather events Pacific Northwesterners have been challenged with in the last few years (extreme fires and smoke in 2020, heat dome in 2021, late frost in 2022, heat records broken every summer, drought conditions lingering), we have heard many complaints about loss of revenue and extensive mortality in various industrial timber operations. The climate scientists who predicted such events 30 years ago are amazed they are occurring so early in the 21st century since these conditions had not been expected before mid-century. The seedlot selection tool was designed to help forest managers prepare for the reality check from these latest weather events and ultimately the ongoing changes in local climates. The web tool does not show the temperature extremes the region has already been confronted with, but it does allow the users to look at the expected and verified trends for their area of concern. It is about time people start realizing that in a few years, Portland weather will be that of central California, and that what needs to be planted today to prepare forests and woodlands of the future is not what their ancestors had chosen but what their southern neighbors grew up with. It is almost past time to adjust the sails.



The orange area on the above map indicates suitable seed sources for Sitka spruce that will be planted at a site in the foothills of the North Cascades in Washington. Darker colors indicate a better match for the future climate of the planting site.