

Title: Community Standards for Genomic Resources, Genetic Conservation, and Data Integration

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Genetics and genomics are playing an increasingly important role in forestry management and conservation. The Hardwood Genomics Project (<http://www.hardwoodgenomics.org>) and TreeGenes Databases (<http://treegenesdb.org>) are community resources for forest tree genetics research. These web-based repositories host a variety of data types, including: genome sequences, transcriptomes, genetic maps, and supporting marker information. Recent development has focused on the organization and integration of phenotype and environmental data for georeferenced tree accessions originating from studies around the world. In addition to focused efforts on the collection of this data, interfaces have been developed to accommodate data retrieval. The Hardwood Genomics Project and TreeGenes Database are collaborating to offer increased connectivity and analytical capabilities. Interfaces such as CartograTree (<http://cartogratree.org>) allow users to interact with map-based utilities to select forest tree accessions, integrate complex environmental and phenotypic data, and perform association genetics through high-performance computing resources on the Cloud.

Efforts to expand offerings through these resources is coordinated with the Forest Health Research and Education Center (<http://www2.ca.uky.edu/Forestry/fhrec/index.html>). This center represents the intersection of participating Forest Service research stations, academic institutions, and related organizations. The goal to improve sustainability and address forest health concerns is met through coordinating outreach activities, information resources, and research objectives.

In this workshop, we would like to solicit input on the following topics:

1. Best practices to establish connections between genomic resources and seed conservation banks through existing resources and organizations
2. Community standards for developing (and using) genetic markers to assess variation in forest trees