



Research &  
Development

# Héen Latinee Experimental Forest

## Background

Large-scale environmental and management issues are emerging worldwide as a result of climate change. The nationwide network of Forest Service experimental forests and rangelands form an extensive sampling framework. In 2009, the Forest Service established Héen Latinee Experimental Forest near Juneau, Alaska. This forest contains the landscape for study of the largest temperate rain forest in the world. Federal, state, university, and nongovernment organization (NGO) partners have come together in the Alaska Coastal Rainforest Center to address the challenges of climate change, and Héen Latinee Experimental Forest is their living laboratory. Héen Latinee (a Native Alaskan Tlingit name meaning “River Watcher”) contains ecosystems that span the range in elevation from temperate rain forests on the shores of Lynn Canal to glaciated alpine tundra bordering the Juneau Ice field.



## Key Outcomes

A challenge facing scientists is building networks of environmental sensors to collect essential measurements of the physical, biological, and chemical environments with minimal disruption of the environment. Héen Latinee Experimental Forest is an opportunity to implement a cutting-edge technological approach to monitoring. Using remote sensing technologies and state-of-the-art environmental sensor networks allow the needed characterization of the watersheds while minimizing disturbances from roads normally used to access scientific instrumentation. The environment at the forest provides challenges that will allow exploration of climate change effects on ecosystems and advance the technology available for monitoring environmental conditions.

## Current Activities

A plan for the new 25,000-acre experimental forest is prepared for instrumentation and facilities to support research and education. Nearby labs, offices, and classrooms at the Juneau Forestry Sciences Laboratory and University of Alaska campus minimize the need for onsite construction. A central focus of research is to investigate how climate change affects a variety of forest-related resources including timber production, carbon sequestration, water and carbon flux from land to ocean margins, salmon habitat and production, and recreation opportunities and the environmental needs and consequences.

### **Research, Education and Outreach Themes**

- Impact of climate change, including carbon cycling, on temperate rain forests, streams, fish and estuaries
- Terrestrial-marine interactions
- Education at levels from grade school to advanced university programs. Outreach to regional visitors, including tourists

### **Who Benefits Directly?**

- Universities, NGOs, federal and state agencies
- Educational institutions at elementary, secondary, and university levels
- Federal, state, private, corporate, and tribal land managers
- Forest managers needing information on carbon cycling, forest diseases
- Regional, state, and local hydrology agencies
- Regulatory agencies interested in climate change (Environmental Protection Agency, U.S. Fish and Wildlife Service, and others)

### **More Information**

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