The Global Institute of Sustainable Forestry

Since its founding in 1900, the Yale School of Forestry & Environmental Studies has been in the forefront in developing a science-based approach to forest management and in training leaders to face their generation's challenges to sustaining forests.

The School's Global Institute of Sustainable Forestry continues this tradition in its mission to integrate and strengthen the School's forestry research, education, and outreach to address the needs of the twenty-first century and a globalized environment. The Global Institute fosters leadership through dialogue and innovative programs, creates and tests new tools and methods, and conducts research to support sustainable forest management worldwide.

Forestry at Yale is broadly defined to include all aspects of forest management and conservation. The Global Institute works primarily through faculty-led programs and partnerships with other Yale centers and forestry institutions in the United States and abroad. Students participate as research assistants, interns, and School Forests field crew; are encouraged to take on high levels of leadership in planning activities and events; and regularly contribute to published documents that emerge from program activities.

The Global Institute coordinates the School's participation in regional, national, and international forestry events such as the Society of American Foresters and IUFRO (International Union of Forest Research Organizations) Conferences and the World Forestry Congresses, and coordinates activities with other institutions throughout the world.

Yale Forest Forum (YFF)

The Yale Forest Forum (YFF) serves as the dialogue and convening function of the Global Institute of Sustainable Forestry. YFF was established in 1994 by a diverse group of leaders in forestry to focus national attention on broader public involvement in forest policy and management in the United States. In an effort to articulate and communicate a common vision of forest management to diverse stakeholders, the first initiative of YFF was to convene the Seventh American Forest Congress (SAFC). After a series of local roundtables, the SAFC culminated in a 1,500-person citizens' congress in Washington, D.C. The principles discussed during the congress remain part of YFF's core philosophy of how forest policy discussions should take place: “collaboratively, based on the widest possible involvement of stakeholders.”

YFF's activities are centered on bringing individuals together for open public dialogues to share experiences, explore emerging issues, and debate varying opinions constructively. In that light YFF sponsors issues forums and leadership seminars throughout the academic year. YFF forums and seminars not only focus on emerging issues in forest management, they also give students exposure to leaders in the NGO, industry, landowner, and government sectors in forest conservation and sustainable forestry. They provide an opportunity for diverse parties to meet and exchange ideas and have led to ongoing dialogue concerning forestry problems and solutions. YFF publishes the YFF Review to disseminate to a wide audience the outcomes and lessons learned from its work.

Ucross High Plains Stewardship Initiative

The Ucross High Plains Stewardship Initiative (UHPSI) is a research program at Yale F&ES, with a field station at the Ucross Ranch, a 22,000-acre working cattle and sheep operation in northern Wyoming. Providing a comprehensive resource for Western studies at Yale F&ES, UHPSI specializes in science-based solutions to issues of rangeland management. Working in close coordination with a network of ranchers, nonprofits, government organizations, and academics, UHPSI hosts devoted faculty and doctoral and master's students, supported by a full-time research staff. While much of our research takes place through the lens of spatial ecology and remote sensing, we are engaged in projects ranging from grazing-system analysis to hydrology and biogeochemistry, to best practice development for wool markets, to K-12 education.

Student education and experiential learning are the top priority of UHPSI. Our staff specialize in connecting students across all disciplines with applied research and learning opportunities in the high plains of the Northern Rockies. On campus, UHPSI students work throughout the academic year to bring in exemplary Western speakers and top educators for lectures, short courses, and workshops. Over the past four academic years, students have worked on more than twenty projects (not including WRF products) with as many Western partner organizations across nine Western states.

Led by postdoctoral, doctoral, and research staff, UHPSI has become a hub for geospatial analysis at F&ES, offering expertise in GIS, remote sensing, spatial statistics, and cartography. In addition to our strong emphasis on master's student education, UHPSI staff researchers work on long-term cutting-edge research and publication relevant to the management of large landscapes in the American West and beyond.

UHPSI is run by a staff director, program and research staff, and a team of student project and research assistants. Programming is supported by grant writing and generous alumni contributions.

Western Research Fellowship

Begun in summer 2016, the Western Research Fellowship (WRF) funds F&ES and Yale College students interested in issues pertinent to land management in the Rocky Mountain West, targeting high-impact biophysical or social questions. In addition to a generous financial award, fellows are given access to a broad network of partner organizations and properties across the West, as well as technical, logistical, and publication support. Great emphasis is placed on a final deliverable at the end of the summer field season, with the WRF cohort required to take part in a publication methods course in the fall term following their fellowship. To
date, we have awarded fellowships to support more than thirty projects over thirteen Western states, producing fourteen white papers, seven popular articles, and seven peer-reviewed publications.

Ranch Crew Begun in summer 2017, Ranch Crew is a two-week rangeland practicum held across the state of Wyoming. This is an ongoing collaboration between Yale F&ES, the University of Wyoming, Sheridan College, and the Plank Stewardship Initiative. Divided into two sections, Ranch Crew provides crew members with an intensive dive into rangeland ecology and ranch management before sending them out to complete a rapid assessment on a working ranch. The 2017 Ranch Crew completed a rapid assessment of Currant Creek Ranch, a 2,100-acre ranch, and 90,000 acres of adjacent federal land in Sweetwater, Wyoming. The rapid assessment was done in coordination with Currant Creek Ranch, Trout Unlimited, and Wyoming Game and Fish. In 2018 the team will be learning about fire, rangeland management, and implications for wildlife habitat on a recently burned collection of ranches in northern Wyoming and southern Montana.

Quick Carbon Started by WRF 2016 alum Dan Kane (a current F&ES Ph.D. student), Quick Carbon is a low-cost protocol for rapidly measuring soil carbon across large landscapes at fine spatial resolutions. The inexpensive nature of this methodology allows land managers to look at impacts of management decisions on below-ground carbon at broad extents and frequent time intervals. For these reasons we believe that Quick Carbon has the ability to change the way we understand and manage for carbon in rangeland systems. Collaborative field work will take place in 2018 across Montana, Wyoming, Colorado, California, Oklahoma, Texas, Connecticut, and New York, building the fundamental research necessary for broad applicability of this tool.

For more information about UHPSI, visit http://highplainsstewardship.org.

PROGRAM ON LANDSCAPE MANAGEMENT

Ecosystems can be defined at a variety of scales—a stand, a landscape, a region, a continent. At all scales, they are dynamic, constantly changing from one condition to another. Ecosystems contain forests and other resources that interact both competitively and synergistically. Managing ecosystems requires an understanding and appreciation of the biological, social, and economic dynamics of ecosystems.

Experience in forest management has shown that managing at small scales is difficult, because many different values need to be provided. Consequently, diverse conditions need to be coordinated across the landscape. This is the basis of the landscape approach to forest and other resource management.

The Program on Landscape Management works cooperatively with other organizations throughout the world. It develops the scientific basis, concepts, and tools needed to help people provide a wide range of resource values, including commodities, wildlife habitat, fire safety, employment, and carbon sequestration.

The program applies local knowledge, science, and technical tools to achieve practical results (see D.E. Stokes, Pasteur’s Quadrant, Brookings Institution Press, 1997). Ongoing projects include developing open-source, online access software that allows landowners throughout the world to manage forests sustainably and to demonstrate that their forests are sustainable with regard to sustainable development goals (SDGs); this project builds on the Landscape Management System (see http://landscapemanagementsystem.org) and is cooperative among the General Directorate of Forestry of Turkey, the United Nations Development Programme, Yale Global Institute of Sustainable Forestry, and the University of Washington College of the Environment. Another ongoing project is examining the potential of expanded wood use to substitute for steel and brick construction, and thus reduce greenhouse gas emissions and fossil fuel consumption. Recently completed projects include developing a sustained harvest level for Connecticut state forests; mitigating the wildfire danger in the irradiated forests around the Chernobyl nuclear reactor, Ukraine; developing ways to increase habitats for the Amur (Siberian) tiger in northeastern China; and developing a decision tool for conversion between agriculture and forest land in Mississippi.

SUSTAINING FAMILY FORESTS INITIATIVE

The Sustaining Family Forests Initiative (SFFI) is a collaboration among the School of Forestry & Environmental Studies, the U.S. Forest Service, and the Center for Nonprofit Strategies, aimed at gaining and disseminating comprehensive knowledge about family forest owners throughout the United States. SFFI conducts research on U.S. family forest owners and has developed a practical set of tools to help conservation and forestry professionals reach these landowners with effective stewardship messages and to develop programs that serve the needs and values of the landowners. The basis of SFFI’s work is to apply a social marketing approach—the use of commercial marketing techniques to affect positive social change—as a promising means by which to influence family forest owners to take steps to conserve and sustainably manage their land. Since 2010 SFFI has trained more than twelve hundred natural resource professionals in landowner outreach. These professionals work in thirty-five states and represent more than 350 organizations, primarily state forestry agencies and their conservation and stewardship partners. More information about SFFI is available at http://sffi.yale.edu.