

SUSTAINABLE URBAN FORESTS COALITION

Research & Development Platform

The Sustainable Urban Forests Coalition (SUFC) supports the advancement of urban and community forestry research and science through a collaborative process that engages all stakeholders. This document is not a list of goals or an action plan—but a collective effort to identify, define and guide SUFC urban and community forestry research interests. Further, the focal areas below are specific to urban and community forestry research; they do not address other forestry research areas or imply a prioritization relative to those areas. This document provides the foundation upon which SUFC members will develop targeted action plans and effectively advocate.

The SUFC urban and community forestry research and development focal areas build from our common belief that vibrant, vital communities grow from healthy natural systems. We are continually discovering that urban and community forests are more important than imagined and can play an even greater role in mitigating climate change impacts in our urban areas. In addition to improving air and water quality and helping to cool our cities, we are now learning that the quality and extent of urban and community forests are linked to human health and well-being in ways not previously understood. At the same time, urban and community forests face unprecedented threats from invasive pests and are stressed by weather extremes and changing environmental conditions associated with a changing climate.

For all these reasons and more, research into the benefits of urban forests and the threats they face is more important than ever before. Research that allows for adaptive science and bridges the gap to implementation is especially needed by public managers, private industry, and individuals alike seeking to expand and protect their urban forest resources and improve quality of life in their communities. We recognize the complex environmental, economic and social factors that are involved in an adaptive and applied (delivery) process for urban and community forestry research and development. To that end, we encourage and support a long-term perspective toward the following research:

URBAN FOREST BENEFITS

ECOSYSTEM SERVICES

- Quantify the benefits that urban forest ecosystems provide to support human well-being.
- Services include regulation and maintenance of our natural environment, such as air quality, stormwater management, temperature mitigation and carbon cycles, and cultural and social benefits, as well as providing energy and wood products.

HUMAN HEALTH

- Develop science to better understand the health impacts of urban tree cover and other green infrastructure.
- Increase information and knowledge of physical, mental, and societal impacts of urban forest ecosystems and the services they provide.

COMMUNITY WELL-BEING

- Develop science to better understand how urban forests—their quality and extent—affect local culture and economies.
- Increase information and knowledge of trees' impact on landscape aesthetics and character, providing recreation opportunities, community activities, and social equity, as well as fostering stewardship and a sense of place.

FOREST PRODUCTS & WOOD UTILIZATION

- Develop inventory protocols, quantification methods, harvesting techniques, and markets for urban forest products, wood utilization and other technologies.
- Investigate and demonstrate the capacity of urban forests to provide ecosystem goods derived from non-timber forest products including food resources.

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URBAN FOREST ASSESSMENT

INVENTORY & ANALYSIS

- Develop national strategy and protocol for inventorying and monitoring urban forest extent, condition, and ecosystem services.
- Create framework for systematic urban forest assessment and reporting to support urban forest health.

PESTS, CLIMATE & OTHER THREATS

- Create the models and decision tools to support urban forest threat forecasting and management.
- Quantify and predict pest invasions, land-use development, and climate change scenarios and their impacts on urban forests and the ecosystem services they provide.

URBAN FOREST MANAGEMENT

TREE PLANTING & PRIORITIZATION

- Create the models and decision tools to support optimal urban forest and other green infrastructure configurations that maximize desired ecosystem services.
- Manage urban forest structure to meet regulatory requirements and solve environmental concerns through tree selection, placement, and timing.

CIVIC STEWARDSHIP & GOVERNANCE

- Use evidence based strategies to enlist, support, and engage citizens and private property owners (particularly in residential areas) to plant trees, restore forests, and be involved in effective resource management.
- Understand and develop more effective, comprehensive stewardship networks and governance systems to engage private and NGO sectors in managing and sustaining urban forests.

SCIENCE DELIVERY

- Improve the usefulness of urban forest research through synthesis, technology development, and delivery.
- Create a strategic national framework to support urban forest resource management, policy development, and stewardship through applied research and technology transfer.

SUSTAINABLE STANDARDS & PRACTICES

- Develop and establish standards and practices that define and guide sustainable community forest management.
- Define elements of sustainability, their measures, and local application.

ENVIRONMENTAL MARKETS

- Establish market-based approaches for urban forest conservation and management that are robust, accessible, and scientifically credible.
- Develop uniform standards and market infrastructure for monetizing ecosystem services.



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www.urbanforestcoalition.org