

Identifying and Strengthening Civic Environmental Stewardship

CHALLENGE: Develop tools that visualize and provide access to the patterns, overlaps, and gaps in environmental stewardship efforts in order to identify local civic groups that support community quality of life and well-being, strengthen community resilience and emergency preparedness, and amplify positive outcomes.

PROBLEM: Worldwide and across the United States, cities and towns are grappling with aging infrastructure, fluctuating populations, and a changing climate. Public agencies cannot address these issues alone, which has led to involving a growing network of civic stewardship organizations and volunteers to take care of the city. Civic stewards ranging from NGOs to grassroots groups of neighbors engage in conservation, management, monitoring, education, advocacy, and transformation of local environments – through activities like forest restoration, storm water management, community gardening, and more. But better tools are needed to identify and track these groups, which often can be informal and hard to find. Although public maps show green infrastructure and open space (e.g. forests, parks, trees, gardens, and bioswales), there is no comprehensive map showing social infrastructure, like the civic groups that care for--or steward--these sites in U.S. cities.

Over the past decade, USDA Forest Service research has found that civic stewardship groups focused on different issues (e.g., tree care, clean water) can be working in the same neighborhood, yet unaware of each other. Also, we have found that some groups may be working on similar issues, but in different places and without coordination. In order for stewards to overcome this isolation and maximize the potential for productive collaboration, communities need digital resources to locate and connect stewardship groups, as well as community leaders and interested residents, across an entire town, city, or region.

WHY THIS PROBLEM IS IMPORTANT: Communities need maps of social infrastructure because civic groups are a crucial component of governing a city's environment. Public agencies know which lands they manage and tax maps document private property ownership, but civic groups that engage in stewardship can often be more difficult to identify and locate. [Research has found](#) that civic stewardship groups focused on different issues (e.g., tree care, clean water) can be working in the same neighborhood, yet unaware of each other. Some groups may be working on similar issues, but in different places and without coordination. In order for stewards to overcome this isolation and maximize the potential for productive collaboration, communities need digital resources to locate and connect stewardship groups, as well as community leaders and interested residents, across an entire town, city, or region.

To help solve this problem, the USDA Forest Service's Stewardship Mapping and Assessment Project (STEW-MAP) created a reliable, replicable survey methodology for identifying civic stewardship groups' presence, capacity, geography, and social networks. This method has been piloted and prototyped in 12 different locations globally, helping to identify thousands of civic stewardship groups. Collaborators with expertise in interactive mapping, data visualization, and database development can help to fully bring these new datasets to life for end users, providing digital resources to stewardship groups that are organized, but lack resources. Digital tools can leverage this data for social networking, emphasizing the importance of collaboration and flows of knowledge and resources. Tools could also combine STEW-MAP data with other publicly-accessible datasets to better understand the contributions and impacts organizations are having on the environment at local and landscape scales.

VISION: Primary data such as STEW-MAP are developed into digital tools and applications to visualize, recognize, and harness civic capacity, strengthening both our environment and our democracy. By recognizing and connecting the efforts of these groups, we gain a better understanding of existing civic capacity, create pathways for collaboration, and improve the distribution of resources in a city.

TARGET AUDIENCE: Public agencies, NGOs, designers, funders, researchers, students, neighborhood groups, and community organizers in locations TBD (may include NYC, Baltimore, San Juan, PR, and North Kona, Hawaii)

POTENTIAL DATASETS:

- Stewardship Mapping and Assessment Project (STEW MAP)
- [US Census datasets](#)
- [Urban Tree Canopy datasets](#)
- [National Land Cover Dataset](#)
- Orthoimagery
- [Enviroatlas](#)
- [TNC's Coastal Resilience Tool](#)