

CLIMATE ACTION FIELD GUIDE

For ASLA Members



American Society of
Landscape Architects



The American Society of
Landscape Architects Fund

Contents



Jackson Street Reconstruction Project, Saint Paul, Minnesota, USA, designed by Toole Design / Bruce Buckley
Photography for Toole Design

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Land & Equity Recognition



ASLA 2017 Professional General Design Honor Award. Owens Lake Land Art. Inyo County, California, USA. NUVIS
Landscape Architecture / NUVIS

The American Society of Landscape Architects recognizes that Indigenous peoples are the original sovereign nations and the stewards of these lands. The work of the Society and its members occurs on the unceded lands of many Native nations and is built on displacement and dispossession. It is with respect that we seek to honor and collaborate with today's 574 federally recognized Native nations, 64 State-recognized Native nations, and the more than 200 non-recognized Native nations to better understand the relationship between Indigenous peoples and the land.

We also recognize that the United States has been built on the forced labor of African descendants. Our Society and its landscapes are the heirs and benefactors of their coerced struggle, which we recognize and seek to rectify.

Through our actions, we wish to move toward creating collaborative, accountable, and respectful relationships.

“We must shift our thinking away from short-term gain toward long-term investment and sustainability, and always have the next generations in mind with every decision we make.”

– Deb Haaland, Pueblo of Laguna,
Secretary, U.S. Department of the Interior

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We acknowledge the efforts of the International Federation of Landscape Architect's Climate Action Commitment, the Landscape Institute's Landscapes for 2030, and the Australian Institute of Landscape Architecture's Climate Positive Design Member Action Plan as key documents that have informed this work.

Introduction



An Opportunity for Positive, Lasting Change

The climate and biodiversity crises are the most pressing challenge facing humanity, causing interconnected and cascading environmental and economic crises. They are also a complex and often technical challenge that few people can viscerally comprehend through scientific data and reports. Most communities will come to understand the high stakes of the effects through increasingly negative impacts on their health, well-being, property, and infrastructure. Underserved and historically marginalized communities will experience disproportionately adverse impacts.

ASLA members can work collectively to transform these challenges into opportunities for communities, advancing climate action on multiple fronts at once.

What we design—landscapes—are at the core of future climate solutions. We can play a major role in addressing the impacts of the climate crisis by sequestering carbon, supporting biodiversity and providing critical habitat, reducing heat islands, protecting and managing water resources, and reducing the threat and impact of extreme

weather events. Through our planning and design work, we can create new services, green businesses and jobs, and act as a catalyst to transform markets for products and services.

Landscape architects work in the continuum of urban, rural, and wildland environments. The profession increases urban resilience and adaptability by designing dense urban areas with connected greenspace networks and transportation corridors to support public transit, bicycling, and pedestrian travel. It supports biodiversity through restoration of natural ecosystems. Working at both broad and detailed scales, landscape architects design equitable local places to live, work, and gather. Being uniquely qualified to process complex issues that lead to sustainable and equitable solutions, now is the time to collectively take action.

The ASLA Climate Action Plan Task Force and Advisory Group, along with ASLA Climate Action Committee, have developed this resource with the goal of expanding collective efforts. Climate advocacy, rooted in local climate issues, can plant the seeds for broader change.

The purpose of this Field Guide is to help landscape architecture professionals and students become better climate advocates individually, as well as through firms, public institutions, nonprofit organizations, community groups, and ASLA's chapters.

Framework

The Field Guide supports the three topics of the ASLA Climate Action Plan: Practice, Equity, and Advocacy. To further the International Federation of Landscape Architects (IFLA) Climate Action Commitment made at COP26 in Glasgow, Scotland, in 2021, of which ASLA was a signatory, the Field Guide is organized by the IFLA six key action areas. For each topic, there are action items you can take along with resources to further explore. Each area outlines top priorities for climate action and is supported by a more in-depth toolkit of strategies and techniques.



ASLA Climate Action Plan

The actions included in the Guide provide a menu of approaches that landscape architects are encouraged to take. The structure of climate action resources is as follows:

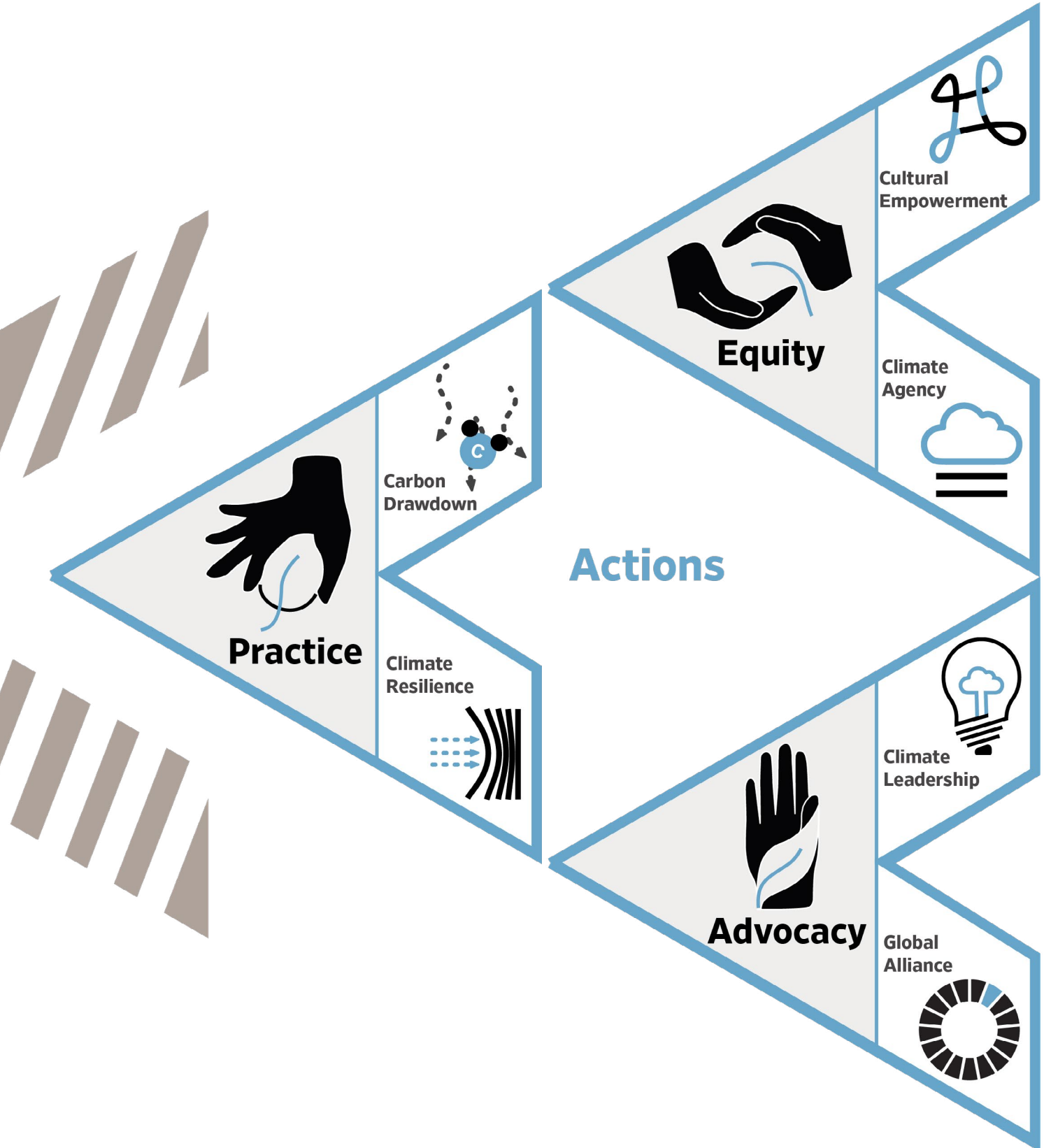
Field Guide for Members

ASLA Climate Action Plan

- Charts out the path of action for ASLA. Provides guidance and time frames to roll out initiatives for the organization and members.

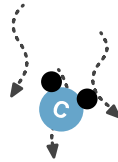
Climate Action Field Guide for Members

- Sets out steps for the design and planning of projects along with business operations to achieve equitable adaptation and mitigation goals.
- Outlines strategies to advance equitable policies, oversight, and collaboration.



Practice

Carbon Drawdown



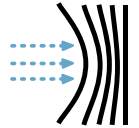
We commit to attaining zero emissions and doubling sequestration by 2040.

We will dramatically reduce operational and embodied carbon emissions produced by our work, harness the unique capacity of landscape to draw down carbon dioxide, and advocate for clean and multi-modal transport systems.

- IFLA Climate Action Commitment

Demonstrate your climate leadership by accelerating greenhouse gas emissions drawdown through nature-based solutions, smart design, transportation and land use decisions, and careful specifications. Landscape architects can hold each other and allied professionals accountable to take steps in both projects and business practices striving to keep global warming under the critical 1.5° C limit.

Climate Resilience



We commit to enhancing capacity, biodiversity, and resilience of livable cities and communities.

Implementing green infrastructure approaches, landscape architects will work to mitigate urban heat island effect and reduce the risks associated with fire, drought, and flood.

- IFLA Climate Action Commitment

Your work can help prepare communities to adapt to a changing world by decreasing their exposure to risk and increasing their capacity to recover quickly from disasters. Strategies, including project siting that protects and restores ecosystem services, attention to preservation of healthy soils and plant communities, and increasing habitat for pollinators while adapting to a changing climate, can all support future resilience. By learning about the expected climate impacts of today and the future, landscape architects can evolve practices to better respond through planning and design.

Equity

Climate Agency



We commit to advocating for climate justice and social well-being.

Landscape architects will increase support for equity and equality, rights of nature, food security, and the right to clean water and air, green spaces housing, and affordable and accessible transportation options for all.

- IFLA Climate Action Commitment

Advocate and invest time to build authentic relationships. Collect the appropriate data and research and inform affected communities, while supporting community needs to help shift policies that will invest in their health, safety, and welfare. Climate justice seeks fairness and equity.

Far too often, policy decisions about land use, zoning, transportation, and other planning changes result in negative health, safety, and economic impacts on Black, Indigenous, and People of Color (BIPOC) communities. Acknowledge and be informed about the historic (past and present) injustices that have occurred systematically within the landscape (race, politics, social cultural, economic) within the region and communities involved.

Cultural Empowerment



We commit to learning from cultural knowledge systems and practices of care.

Respecting and working with Indigenous cultural land management knowledge to mitigate climate crisis impacts and continue work toward reconciliation are our priority.

- IFLA Climate Action Commitment

We can support and respect Indigenous-led movements that aim to reclaim ancestral lands along with the cultural, spiritual, ecological, and healing values that come with the land.

As the climate crisis escalates, Indigenous cultures and underserved and underrepresented communities will be disproportionately affected. When working on projects and issues that intersect with underserved cultures, landscape architects can support community-led processes and self-determination, beginning with deep listening and knowledge sharing.

Advocacy



Climate Leadership

We commit to galvanizing climate champions.

Landscape architects are uniquely placed to galvanize and lead a built-environment response to this crisis. We will continue to collaborate with clients, suppliers, and allied professions to champion climate positive design.

- IFLA Climate Action Commitment

Through collaborations, leadership, and outreach, you can raise the visibility of the value of landscape architecture as a climate and biodiversity crisis solution. Your education and training make you uniquely qualified to be an effective leader for climate positive policies while also advancing equity and economic development.

By amplifying relationships and communicating how landscape architects mitigate carbon and adapt to a changing environment, our role can be elevated to higher levels of decision making. Through communications efforts that include specific examples of how Climate Positive Design can be achieved, you can build support for nature-based solutions to the climate and biodiversity crises.



Global Alliance

We commit to advancing the United Nations (UN) Sustainable Development Goals (SDGs) and expanding international collaboration.

Through each of the 77 nations represented by the IFLA, landscape architects within our member associations (including ASLA) accelerate our work to repair global ecosystems.

- IFLA Climate Action Commitment

The SDGs were adopted by the UN in 2015 as an urgent call to action for all countries with specific goals to be accomplished by 2030.

Although traditional landscape architecture is built on the philosophy of sustainability, it focuses on only a few of the SDGs, including clean water, sustainable cities and communities, life on land and water, and good health and well-being. As the profession evolves, landscape architects can also support the remaining SDG goals such as supporting equity, increasing food security, responsible consumption and production, and taking climate action to advance the global effort to create a more peaceful and just world, placing a priority on progress for those who are the most in need.

Note: These summary actions represent the intent of the IFLA Climate Action Commitment; however, minor modifications have been made to the language to add specificity for ASLA's commitments.

ASLA Field Guide

Actions Summary

The following goals were developed in direct response to survey member feedback. Beyond informing the framing of this document, many suggestions have been included within the specific actions in this Member Climate Action Field Guide.

Goal 1: Practice - Scale Up Climate Positive Approaches

Carbon Drawdown – *We commit to zero emissions and doubling sequestration by 2040*

Objective 1: Design climate positive landscapes

Objective 2: Design pedestrian, cyclist, and public transit-centric communities

Objective 3: Reduce energy usage and support renewables

Climate Resilience – *We commit to enhancing capacity, biodiversity, and resilience of livable cities and communities*

Objective 4: Expand ecological services to improve climate resilience

Objective 5: Protect, conserve, and enhance biodiversity

Objective 6: Incorporate ecologically-sound land management practices

Objective 7: Support regenerative local agriculture and increase food security

Goal 2: Equity - Empower Communities

Climate Agency – We commit to advocating for climate equity and social well-being

Objective 1: Build community

Objective 2: Understand climate injustices

Objective 3: Utilize communication tools and techniques

Objective 4: Share financial access guidance for communities

Cultural Empowerment – We commit to learning from cultural knowledge systems and practices of care

Objective 5: Learn from Indigenous communities through collaboration

Objective 6: Show respect through Land Acknowledgments

Objective 7: Plan and design project work with Indigenous peoples

Goal 3: Advocacy - Build Coalitions

Climate Leadership – We commit to galvanizing climate champions

Objective 1: Engage the public

Objective 2: Work with elected officials and public servants

Objective 3: Support employee health and well-being

Objective 4: Build climate coalitions

Objective 5: Guide policies

Global Alliance – We commit to advancing the United Nations Sustainable Development Goals (UN SDGs) and expanding international collaboration

Objective 6: Embed the SDGs into business plans and daily actions

Objective 7: Expand international and interdisciplinary relationships

Glossary

To understand the intent of this document, some frequently referenced terms include:

b

Biodiversity / Biological Diversity

Refers to the variation among all species and all forms of life on Earth. The three levels of biodiversity include genetic diversity, species diversity and ecosystem diversity.

c

Carbon Drawdown

Removing carbon dioxide from the atmosphere, ultimately to the point that global warming starts reversing.

Carbon Neutral

Describes an activity that removes as much carbon dioxide (CO₂) from the atmosphere as it emits.

Carbon Positive

Describes an activity that sequesters more carbon than it emits.

Climate Action

Taking steps to proactively help solve or lessen the impacts of the climate crisis.

Climate Equity

Ensuring that those affected disproportionately by the climate crisis—in particular underserved, underrepresented, or historically marginalized communities—will benefit the most from the transition to a zero-emissions society.

Climate Justice

Addresses the just division, fair sharing, and equitable distribution of the benefits, burdens, and responsibility of dealing with the climate crisis.

Climate Positive Design

Design that reduces emissions and increases sequestration over a project's life span while also providing environmental, cultural, and economic co-benefits such as biodiversity, equity, and resilience.

e

Embodied Carbon

Emissions released during the extraction, manufacturing, transportation, and construction of buildings, infrastructure, or landscapes.

m

Marginalized Communities

Individuals or groups that are ignored, excluded, pushed to the margins, given lesser importance, and stripped of power.

o

Operational Emissions

Carbon released from the ongoing operation of the building or site.

p

Project Emissions

Embodied and operational greenhouse gas emissions from a site.

s

Sustainable SITES Certification

SITES verifies the ecological performance and human health benefits of landscape design, construction, and operations within a site, administered by Green Business Certification, Inc. (GBCI), a third-party certification body.

Sustainable SITES Rating System

A complete set of prerequisites and credits used to measure site sustainability. It provides guidance on practices that conserve, restore, and improve the carbon storage capacity of landscapes and encourages project teams to minimize energy consumption and use low-carbon and renewable energy sources.

u

Underserved Communities

Harder-to-reach populations that have been consistently under-resourced, often due to linguistic, economic, and/or political barriers or racism.

Underrepresented Communities

Communities whose representation is not commensurate with its percentage of total population. "Historically underrepresented" refers to groups for whom this has become a pattern due to exclusion and discrimination over time.

n

Nature-based Solutions

Climate solutions that incorporate the processes and functions of nature.

Net Zero

An activity that removes as much greenhouse gases (inclusive to all, such as carbon dioxide, methane, or sulfur dioxide) from the atmosphere as it emits.

t

Transactive Engagement/Design

A process of give and take between community and landscape architects through which each learns and teaches the other while designing together.

z

Zero Emissions

An activity that releases no greenhouse gases to the atmosphere. As opposed to net-zero emissions, which allows for offsetting of emitted carbon to reach a balance of zero, the zero emissions approach focuses on the absolute emissions.

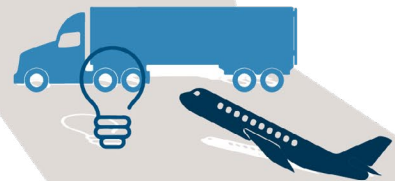
SCOPE 2

SCOPE 1

SCOPE 3

Emission Scopes

The term comes from the [Greenhouse Gas Protocol](#), which is the world's most widely-used greenhouse gas accounting standard.



owned or controlled by a company

are indirectly responsible for

Scope 2 emissions are those that a company causes indirectly when the energy it purchases and uses is produced. For example, energy purchased to heat and cool offices.

Scope 1 emissions come from sources that an organization owns or controls directly – for example, from burning fuel in company Vehicles.

Scope 3 emissions are not produced by the company itself, but by those that are indirectly responsible for. Project emissions fall into the Scope 3 category.

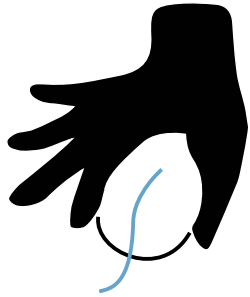
Climate

Action

Initiatives

ASLA 2017 Professional Research Award of Excellence. Fluid Territory: A Journey into Svalbard, Norway. New Brunswick, NJ, USA. Kathleen John-Alder, ASLA; Rutgers University; The Tromsø Academy of Landscape and Territorial Studies part of The Oslo School of Architecture and Design. / Herta Lampert Archives; Museum, Norway





Practice

Goal 1: Scale Up Climate Positive Approaches

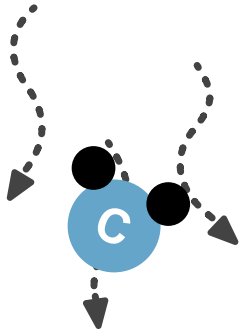
Metrics for Success

- Meet the [Climate Positive Design Challenge](#). This approach aligns with the Architecture 2030 COP26 Communique, of which ASLA is a signatory, and calls for achieving a 50–65 percent emissions reduction by 2030 and zero emissions by 2040.
- Achieve all [SITES](#) and [LEED](#) pilot credit points for reducing emissions and increasing sequestration on projects. For sites with or without buildings, meet SITES certification prerequisites and credits.
- For sites with buildings, meet [Zero Carbon Certification](#) through International Living Futures Institute.
- Plan and design communities where people can walk, bike or take transit as their first choice for trips to meet their daily needs and reduce travel demand and vehicle miles traveled (VMTs).
- Achieve the [Trust for Public Land Ten Minute Walk Score](#). Plan and design for every resident to have a park within a 5-minute walk, no more than a 10-minute walk to public transportation, and access to a range of facilities within 10 minutes of walking distance from homes.
- Meet standards from the Environmental Protection Agency (EPA) [Smart Growth](#) using guidelines such as LEED for Neighborhood Development.
- Aim for Biodiversity positive / 10 percent biodiversity net gain in support of the [UN Decade of Ecosystem Restoration](#).

3

Reduce energy usage and support renewables





Carbon Drawdown

We commit to zero emissions and doubling sequestration by 2040



ASLA 2010 Student Analysis and Planning Honor Award. Ecology as Industry. Gyoung Tak Park, Student ASLA; Haein Lee, Student ASLA and Soomin Shin, Student ASLA, Harvard GSD / Gyoung Tak Park

Key Climate Actions to Take

Yourself

Get Educated — Read ASLA climate action resources and [Regeneration: Ending the Climate Crisis in One Generation](#) by Paul Hawken.

Learn then Lead — Keep up with the UN Intergovernmental Panel on Climate Change (IPCC) guidance and incorporate it into your practices as the new “business as usual.”

Get to Know SITES — Review the SITES v2 Rating System, Scorecard, and Reference Guide and engage early in the development process.

With your firm / organization

Create a Plan — Create your own climate action plan to achieve zero greenhouse gas emissions by 2040 in your organization and with all projects. Links to examples are in the appendix.

Measure Progress — Set measurable climate performance standards for your organization and document through an existing rating or benchmarking system. Use Climate Positive Design and the Pathfinder carbon calculator to reduce embodied and operational carbon on projects while increasing carbon sequestration.

Invest in Climate Leadership — Designate a climate lead for your organization and grow climate experts who can provide guidance internally and to clients.

Commit to Meeting SITES Requirements

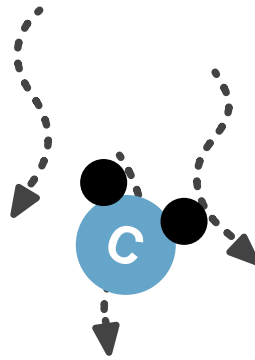
— Confirm your project(s) will meet the prerequisites by reading the guidelines for each in the reference guide. Start with those related to predesign and design. Use [presentation decks](#) from GBCI and ASLA to make the business case for green infrastructure, sustainability, and resilience.

Move the Marketplace — Request Environmental Product Declarations (EPDs) from product manufacturers, creating demand for zero-carbon and carbon positive alternatives within the landscape architecture industry.

With your community

Educate Every Client — Through advocacy by design, help clients understand how landscape planning and design strategies can sequester greenhouse gas emissions and increase community resilience to climate impacts.

Create Healthy Connectivity — Advocate for and design sustainable forms of transportation, such as walking, biking, and high-capacity transit, in your projects. Plan compact, mixed-use neighborhoods so that people do not need a car to get where they need to go.



Drawdown Toolkit

By improving the performance of our built projects and business operations and supporting walkable, bikeable, and transit-oriented communities, landscape architects can play a meaningful role in reversing the current emissions trajectory. And by creating performative landscapes, we can increase carbon sequestration through nature-based solutions that can also support other co-benefits such as biodiversity and creating a healthy environment.

To better understand how our work relates to the broader context, the UN estimates that [75 percent of global greenhouse gas emissions](#) are from the urban built environment—human-created places in which we work and live. Architecture 2030 has helped us break this down by clarifying that [39 percent of those emissions are coming from buildings](#). The remaining emissions are from the exterior built environment, including transportation, infrastructure, and landscapes—all areas that landscape architects plan and design.

How these numbers relate to the climate crisis is that as of July 2021, humanity can add [only an additional 340 gigatons of greenhouse gas emissions to the atmosphere](#) if we want a good chance of increasing temperatures by only 1.5° C (2.7° Fahrenheit), instead of 2° C (3.6° Fahrenheit). To keep within this carbon budget and stave off the most catastrophic effects of the climate crisis, we must work collectively to achieve [50–65 percent emissions reductions by 2030 and zero emissions by 2040](#).

In this toolkit, you will find key actions, why they matter, and a suite of strategies.



ASLA 2022 Professional Landmark Award. Crissy Field: An Enduring Transformation. San Francisco, California, USA.
Hargreaves Jones

01 Design climate positive landscapes



A Climate Positive Design outcome is where the project reduces emissions and increases sequestration over a project's life span (estimated at 50 years) while also providing environmental, cultural, and economic co-benefits such as biodiversity, equity, and resilience. Decisions that landscape architects make collectively with others at the planning stage, including land use and transportation, are as essential to achieving sustainability as those made at the detailed design phase.

Approximately 75 percent of landscape architecture project emissions comes from materials, and the other 25 percent is from site impacts and ongoing operations (CPD 2021). Most embodied carbon emissions come from the extraction, transportation, and manufacturing of concrete, steel, aluminum, and imported stone. We can reduce these emissions while still realizing their functions. Those emissions from built projects fall into Scope 3, which includes the embodied emissions in materials, construction, transport, and site machinery and ongoing maintenance emissions, all of which you will find strategies to address in the following pages. Maximizing carbon sequestration through living landscapes is a key factor to achieving Climate Positive Design.

Measure and Improve the Carbon Footprint of Your Projects

Gain alignment

Establish goals at the beginning of the project with the client and all parties involved. Identifying champions of Climate Positive Design at the early stages will help ensure follow-through and implementation. The [Climate Positive Design Challenge](#) sets advisable targets for how many years it should take for a project to offset its own carbon footprint—5 years for parks, residential, on-structure, mixed-use, or campus developments and 20 years for more urban projects like plazas and streetscapes. On average, this means doubling sequestration and cutting emissions in half from baseline “business as usual” practices.

Measure for success

Start early in the process and update your analysis at every phase of the project. Use the [Pathfinder](#) for your projects office-wide, which measures embodied carbon from materials, site impacts, operational emissions, and carbon sequestration. Use U.S. Forest Service [i-tree](#) for species-specific sequestration. If the project is at early planning stages, you can use [Carbon Conscience](#) to guide development.

Seek out guidance

For more resources, visit [Climate Positive Design](#) and download the [Toolkit](#) for a comprehensive list of strategies.

Achieve all [SITES](#) and [LEED](#) pilot credit points for reducing emissions and increasing sequestration on projects. For projects with or without buildings, meet SITES certification prerequisites and credits that restore soils, reduce landscape irrigation, optimize biomass, reduce building energy use, reduce risk of catastrophic wildfire, use recycled and regional materials, divert construction waste from landfills, recycle organic matter, and protect air quality during landscape maintenance.

Reduce Embodied Carbon Emissions from Materials

Plant more, pave less

Replace high-embodied carbon infrastructure, such as concrete systems, with green alternatives and maximize overall green connectivity at all scales. Reduce hard-paved surfaces and replace them with soft surfaces—aim for 70 percent softscape, 30 percent hardscape (or better).

Select low-carbon materials

Reduce or substitute high-carbon elements, such as concrete, steel, aluminum, kiln-dried lumber, plastics, and galvanized products. Maximize recycled content and reuse where possible and specify sustainably manufactured products and materials like bamboo, which are detailed in [ASLA's Low-Impact Materials Guide](#). For all structural needs, consult with your structural engineer to confirm it meets performance requirements. Source locally where possible.

Steel: Specify a minimum 50 percent recycled content and ideally 100 percent. Consider replacing steel with wood, such as pressure-treated softwoods and thermally modified woods. Where wood will not meet structural requirements, consider fiber-reinforced plastic as a support for decking systems and other lower-strength structural needs. Specify green steel and aluminum that substitute raw and fossil fuel-based materials (with recycled materials and fossil fuel alternatives such as hydrogen) and use renewable energy for processing.

Concrete: For specifying low-carbon alternatives to concrete, see [Rocky Mountain Institute \(RMI\) Concrete Solutions Guide](#), [Guide to Improving Specifications for Ready Mixed Concrete with Notes on Reducing Embodied Carbon Footprint](#), and [Top 10 Ways to Reduce Concrete's Carbon Footprint](#). Strategies include using a minimum of 50 percent cement substitutions, such as slag, fly ash, silica fume, glass pozzolan; changing

the 28-day concrete curing period to 56 days for 3,000 psi concrete; incorporating recycled and carbon sequestering aggregates; and specifying carbon sequestering concrete. [Zero carbon alternatives](#) are on their way to market using naturally occurring microalgae. Consider low-carbon alternatives for paving such as stabilized crushed stone, wood decking, and engineered wood fiber for play areas. Use rammed earth, gabions, or bio-based materials (such as live willow revetments) for walls and grade strategically to reduce the use of walls.

Encourage transparency

Request and require EPDs for products. EPDs disclose the Global Warming Potential for greenhouse gas emissions specific to a product. To find EPDs, check out [Building Transparency EC3 Tool](#) and [Better Materials from GBCI](#). For guidance on developing EPDs, see [ACLCA's PCR Guidance – Process and Methods Toolkit](#) and follow the [International EPD Standard](#). (See [SITES](#) Credit 5.9: Support sustainability in materials manufacturing and [LEED BD+C: New Construction v 4.1 - Environmental Product Declarations](#).) Encourage manufacturers to develop EPDs.

Eliminate Emissions from Site Impacts and Operations

Reduce, reuse, recycle

Minimize demolition of sites and buildings, and reuse demo materials, especially lumber, to retain its stored carbon. Conserve and protect topsoil to maintain soil's carbon storage that is released when exposed to air. Compost clippings on site and apply to the landscape to build soil carbon. (See [SITES](#) Credit 4.4 Conserve healthy soils and appropriate vegetation; Credit 4.5 Conserve special status vegetation; Credit 5.2 Maintain on-site structures and paving; Credit 5.3 Design for adaptability and disassembly; Credit 5.4 Reuse salvaged materials and plants; Credit 5.5 Use recycled content materials; Credit 5.6 Use regional materials; Credit 8.3 Recycle organic matter.)

Minimize management emissions

Reduce or eliminate intensively managed

lawns reliant on chemical fertilizer and gasoline-powered equipment. Specify electric maintenance equipment and ask owners and operators to switch to electric. Specify organic fertilizers, pesticides, and soil amendments as part of an Integrated Pest Management Plan. (Fossil fuels are used in the production of non-organic fertilizers and pesticides and some soil amendments and the negatively impact biodiversity and human health.) (See [SITES](#) Prerequisite 8.1 plan for sustainable site maintenance; Credit 8.4 Minimize pesticide and fertilizer use; Credit 8.7 Protect air quality during landscape maintenance.)

Support partnerships

Develop specifications and operations and maintenance manuals to ensure your low-carbon strategies are implemented and maintained. Provide clauses for contractors to competitively include low-carbon alternatives in their bids and consider using prequalified contractors or bringing contractors on early to successfully incorporate low-carbon alternatives. Offer to partner with manufacturers on low-carbon materials tests and trials and provide more time than typical for procurement. (See [SITES](#) Prerequisite 8.1 plan for sustainable site maintenance.)

Design with water

Use rainwater where it falls to save energy in pumping and treating water, including passive irrigation and gravity-driven systems. (See [SITES](#) Credit 3.4 Reduce outdoor water use.)

Increase Carbon Sequestration Through Nature-Based Solutions

Protect nature

Retain and protect existing ecosystems, particularly carbon-rich ones such as forests, coastal wetlands, mangroves, and seagrasses, and as many trees as possible, especially large ones, for their stored carbon. Restore and manage disturbed vegetated areas to remove invasive plants and reestablish diverse endemic plant communities. Do not specify landscape materials that are mined from natural ecosystems that

provide climate resilience and valuable ecosystem functions including carbon sequestration. Materials could include sphagnum peat moss, virgin topsoil and river gravel. (See [SITES](#) Prerequisite 1.2 Protect floodplain functions; Prerequisite 1.4 Conserve aquatic systems; Credit 1.5 Redevelop degraded sites; Credit 1.6 Locate projects within existing developed areas; Prerequisite 2.3 Designate Vegetation and Soil Protection Zones; Credit 3.6 Restore aquatic ecosystems; Prerequisite 4.2 Control and manage invasive plants; Credit 4.4 Conserve healthy soils and appropriate vegetation; Credit 4.5 Conserve special status vegetation; Credit 4.7 Conserve and restore native plant communities.)

Design carbon-smart plantings

As the climate changes, take into account variability in temperature, water availability, saline tolerance, and pest exposure when designing and managing plantings. Design naturalized plant communities that can sequester up to two times more carbon than traditional tree planting approaches and spacing. To maximize carbon sequestration, select plants that are fast-growing, long-lived, low-maintenance, have a long growing season, and have a high amount of biomass. Choose native or endemic species for greater carbon benefits. (See [SITES](#) Prerequisite 4.3 Use appropriate plants; Credit 4.7 Conserve and use native plants; Credit 4.7 Conserve and restore native plant communities; Credit 4.8 Optimize biomass.)

Build soil carbon

By maximizing the planted coverage of the land, you can increase soil carbon. To add soil organic carbon, consider the amendment called Biochar, which is a carbon-rich byproduct that improves soil quality. Leaving woody debris, snags, brush piles, and leaf litter also increases soil organic carbon. For more information, refer to [Landscape Design for Carbon Sequestration](#) by Deanna Lynn and [Planting Soils for Landscape Architectural Projects](#) by Barrett L. Kays.

Certify sinks

Consider partnering with organizations to serve as certified carbon market sinks. (See [SITES](#) Credit 2.4 Engage users and stakeholders.)

02 Design pedestrian, cyclist, and public transit-centric communities



Landscape architects can plan and design communities where people can safely and comfortably walk and bike to public amenities. These strategies are essential to reducing climate emissions and helping people lead healthier lives. We can also support widespread public transport that uses renewable and low-emission energy sources; reduces traffic; increases air quality; creates affordable options for accessing jobs, school, recreation, and services; and supports more equitable communities.

Our nation's current transportation system accounts for [27 percent of U.S. annual greenhouse gas emissions](#) and perpetuates dependence on private vehicles, which is unaffordable to many people. Although electric vehicle use continues to grow, the electricity used to power vehicles may not yet be from renewable energy sources. Private automobiles contribute to congestion and unhealthy, sedentary lifestyles, and every year, tens of thousands of people die or experience life-changing injuries on our [roadways](#).

Design for Walkability

Design and plan compact neighborhoods

They should be oriented around short and safe, direct, and convenient walking routes to city, town, or local centers, schools, community facilities, open space, and public transport. For more information, see ASLA's Guide to [Sustainable Transportation](#). (See [SITES](#) Credit 1.7 Connect to multi-modal transit networks.)

Break down barriers

Explore ways to break down barriers to pedestrian movement, such as natural features, topography, or major roads. Shortening crosswalks is an example but may require updating city codes or standards. Use [National Association of City Transportation Officials \(NACTO\)](#) guidelines for creating an accessible, legible, safe, and comfortable pedestrian environment.

Support Public Transit Communities

Help people get there

Provide direct, convenient, and safe pedestrian and cycle routes to public transport stations. When planning transit networks, consider distances people are willing to travel to access different types of public transport, for example, bus stops at frequent intervals, light rail stops at greater distances, and heavy rail stations can be even further. (See [SITES](#) Credit 1.7 Connect to multi-modal transit networks; Credit 6.9 Encourage fuel efficient and multi-modal transportation.)

Incorporate health and wellness facilities

Provide appropriate facilities such as shelters, restrooms, and safety features, including lighting at public transport stations, bus stops, and bike parking areas. (See [SITES](#) Credit 6.2 Provide optimum site accessibility, safety and wayfinding.)

Integrate Bicycle Networks

Plan at all scales

Plan at regional, urban, and neighborhood scales. Coordinate efforts among government agencies, bicycle advocates, and the community.

Create a network

Create connected, accessible, protected, and comfortable bicycle routes for cyclists of all ages and abilities.

Design as a team

Bicycle infrastructure and roadway changes require a multidisciplinary effort that includes planners and engineers. Use [NACTO](#) guidelines as well as local, state, and federal guidelines and standards. (See [SITES](#) Prerequisite 2.1 Use an integrative design approach.)

03 Reduce energy usage and support renewables



Energy accounts for 35 percent of global greenhouse [emissions](#). Through our daily practices and business operations, we can work toward reducing or eliminating emissions in our offices and homes. Landscape solutions can save energy use in building operations. We can also optimize the siting, planning, and designing of renewable energy systems in communities to speed the transition away from fossil fuels.

Reduce Building and Infrastructure Energy Usage

Consider green roofs

They can insulate buildings, reducing the need for air conditioning in the summer and lowering heating use in the winter, thereby reducing energy use and costs year-round. (See [SITES](#) Credit 4.10 Use vegetation to minimize building energy use.)

Cool it

Use high-albedo materials, trees, and structures to shade pavement and buildings. For reference to improving residential energy use, see ASLA's Guide to [Sustainable Residential Design: Increasing Energy Efficiency](#). (See [SITES](#) Credit 4.9 Reduce urban heat island effects.)

Support Renewables

Plan for photovoltaics (PV)

Integrate PV solar power facilities and panels on degraded lands and transportation and utility rights-of-way. (See [SITES](#) Credit 8.5 Reduce outdoor energy consumption)

Support renewable infrastructure

Incorporate space for electric vehicle charging stations on streetscapes. Plan space for localized energy grid systems (microgrids) that provide more equitable access to energy, lower cost for distribution, and reduce blackout durations in extreme weather events such as wildfires. (See [SITES](#) Credit 8.6 Use renewable sources for landscape electricity needs.)

Reduce the Carbon Footprint of Your Business Operations

Measure

Start by measuring to understand your organization's emissions, including electricity, fuel, and travel. Free and for-purchase carbon calculators are available, including the UN Greenhouse Gas Protocol [Climate Neutral Now calculator](#), small and medium-sized enterprises (SME) [Climate Hub Business Carbon Calculator](#), [Path Zero](#), and [Net Zero Cloud](#).

Reduce

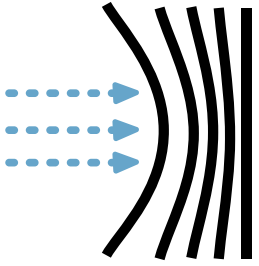
Develop a strategy to reduce the emissions that guide your organization. Many consultants are available to produce a greenhouse gas inventory. Look for consultants who can certify to the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.

Offset

The remaining emissions amount that cannot be reduced can be offset as a last resort.

Publish

Have your greenhouse gas (GHG) emissions account independently verified and certified, and openly publish your report. Viable and robust certifications include Climate Active, the UN's Climate Neutral Now initiative, and PAS 2060.



Climate Resilience

Enhance capacity, biodiversity, and resilience of livable cities and communities



ASLA 2019 Professional Analysis and Planning Award. Public Sediment for Alameda Creek. San Francisco, California, USA. SCAPE

Key Climate Actions to Take

Yourself

Dive Deep — Understand how a changing climate affects your community: how weather patterns have changed; the state of ecosystems and restoration opportunities; and the degree of climate risks, including flooding, storm surges, sea level rise, extreme heat, wildfires, and drought, where relevant. (See [SITES](#) Prerequisite 2.2 Conduct a Pre-design assessment.)

Talk About It — Share your knowledge with others, such as your family, friends, colleagues, clients, or local representatives.

With your firm / organization

Commit to Biodiversity Positive Design — Include endemic and native species in your projects and commit to 10 percent net biodiversity gain on your projects office-wide.

Be Productive — Incorporate food production in your projects and partner with local community organizations to support equitable distribution of the resources and food security. (See [SITES](#) Credit 6.7 Provide on-site food production.)

Protect — Do everything possible to protect existing ecosystems within your project areas, and advocate for the protection of those beyond. (See [SITES](#) Prerequisite 1.1 Limit development on farmland; Prerequisite 1.2 Protect floodplain functions; Prerequisite 1.3 Conserve aquatic systems; Prerequisite 1.t Conserve habitats for threatened and endangered species.)

Expand — Do everything possible to protect and

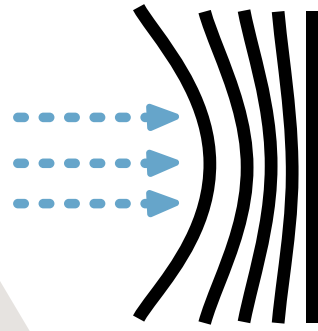
restore ecological integrity, ecological functions, and biodiversity impacted by climate change. Follow the sciences of landscape ecology and conservation biology to ensure climate resilient habitats at the site and regional scale.

With your community

Just Say No — Educate clients where possible, but also be ready to reject planning and design work that fails to account for climate risks and increase community security.

Go Biodiverse — Work with your local community to develop a [regional biodiversity action plan](#) to protect, support, and design for ever-increasing biodiversity.

Aim for Multiple Layers — Use multi-layered systems of protection, with diverse, scalable elements, any one of which can fail safely in the event of a catastrophe.



Resilience Toolkit

Biodiversity is at the root of resilient ecosystems that provide critical ecosystem services to humanity. Landscape architects can accelerate efforts to enhance biodiversity, coupled with [resilient land planning and design](#), thereby protecting communities from increasingly severe climate impacts, such as extreme heat, flooding, drought, and wildfires. We can also support regenerative agriculture and more localized food sources that reduce energy demand from shipping and increase food security. These efforts increase community wealth and create well-paying creative and green jobs.

In this toolkit, you will find key actions, why they matter, and a suite of strategies.



Implementing green infrastructure approaches, landscape architects will work to mitigate urban heat island effect and reduce the risks associated with fire, drought, and flood.

- IFLA Climate Action Commitment



ASLA 2022 Professional General Design Honor Award. West Pond: Living Shoreline. Brooklyn and Queens, New York, USA, Dirtworks Landscape Architecture P.C / Jean Schwarzwald/DEP

04

Expand ecological services to improve climate resilience

Our coasts, which cover many of the major U.S. cities, are threatened by rising seas, and the IPCC Sixth Assessment report highlights that existing temperature rise has locked in sea level rise for the next several hundred years. Landscape architects can help plan and design those places to adapt in the future.

To support a resilient future, we must plan for cities to be habitable as temperatures and waters rise by maximizing nature-based solutions and biodiverse urban places.

Think Ahead

Understand and use projections for future local and regional conditions. Plan and design for ongoing rapid change in temperature, water availability, and severe storms using [Climate Central Tools](#), [National Center for Environmental Information NOAA Climate Monitoring](#), [NOAA One Stop Data Search](#), [IPCC WGI Interactive Climate Atlas](#), [US Climate Resilience Toolkit](#). Include evaluation of future risk in planning and design. Reference ASLA guidance for [Resilient Design](#).

Manage Water Wisely

Adapt to and plan for extremes, including both flooding and drought, groundwater rise, and increased storm surges.

- Along waterways: Support managed coastal retreat or community realignment/relocation to adapt to rising sea and groundwater levels. Provide wetlands and vegetated systems that sequester carbon while reducing inland flooding and moderating wave action. Manage water to increase the climate resiliency for aquatic habitat. Oppose building in floodplains, limiting development to

floodable infrastructure such as parks. (See SITES Prerequisite 1.1 Limit development on farmland; Prerequisite 1.2 Protect floodplain functions; Prerequisite 1.3 Conserve aquatic systems; Prerequisite 1.4 Conserve habitats for threatened and endangered species.)

- Increase efficiency: Capture, use, and/or harvest all available stormwater and gray water. Account for increased water scarcity through landscape-scale catchment, aquifer replenishment, passive irrigation, and nature-based water systems management. Irrigation should be avoided or minimized to the greatest extent possible as moving water requires energy. (See [SITES](#) Prerequisite 3.1 Manage precipitation on site; Credit 3.3 Manage precipitation beyond baseline.)
- Improve Quality: Use water infiltration and phytoremediating water cleansing strategies, including wetland restoration.

Support Cool, Green Public Infrastructure

Create a publicly accessible network of connected green and blue areas. Design using low albedo materials, maximize pervious areas/permeable paving to increase infiltration, and provide ample shade to buffer against excessive heat. Design and construct [rain gardens and vegetated stormwater facilities](#) along streets and roadways to divert rainwater from the sewer system, using plants to capture pollutants and encourage water infiltration into urban soils. (See [SITES](#) Credit 3.5 Design functional stormwater features as amenities; Credit 4.9 Reduce urban heat island effects.)

05 Protect, conserve, and enhance biodiversity

Biodiversity is crucial to the functioning of systems that support life on Earth, including human life. Many flora and fauna will need to shift ranges as the climate changes. For this to occur, you can incorporate climate corridor planning and design into your work and protect and increase biodiverse landscapes through intentional planning and design at the site and regional scale.

Protect Existing Ecosystems

Protect existing plant communities and healthy soils from construction and development impacts. (See [SITES](#) Credit 4.4 Conserve healthy soils and appropriate vegetation; Credit 4.5 Conserve special status vegetation.)

Restore Disturbed Landscapes

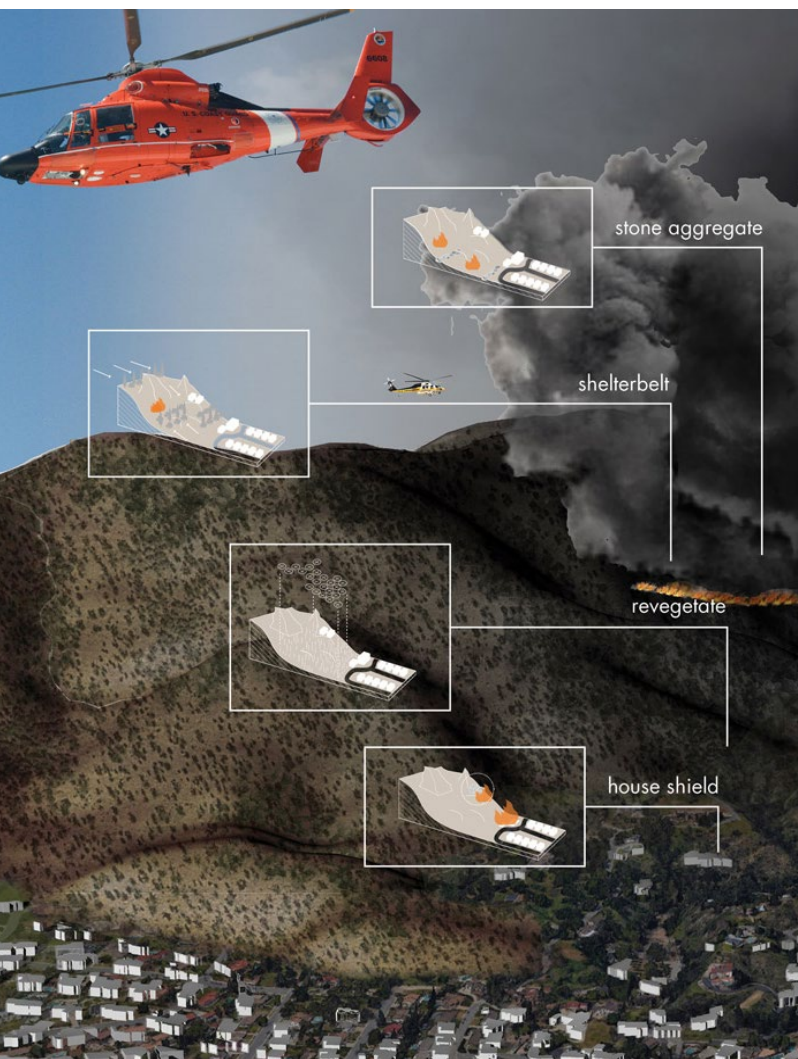
Regenerate disturbed soils, removing contaminants, adjusting organic matter content, and establishing healthy microorganisms and fungi systems as needed for local conditions. In disturbed areas, use endemic and native plants, and remove invasive species so that diverse plant communities are able to reestablish. Diversify plant selections to avoid diseases and pests. (See [SITES](#) Prerequisite 4.2 Control and manage invasive plants; Prerequisite 4.3 Use appropriate plants; Credit 7.4 Restore soils disturbed by previous development.)

Support Habitat

Provide food, shelter, and nesting places to support a variety of wildlife species. Provide habitat corridors to enable flora and fauna to move across the landscape as habitat conditions shift.



06 Incorporate ecologically-sound land management practices



Recognizing that humans have a profound impact on natural systems, landscape architects are well poised to manage the wild/urban interface to maintain ecosystem functions, biodiversity, and climate resilience. The United States cannot reach its GHG reduction targets if our urbanized areas continue to grow as they have in the past ([Brookings Institute](#)). And as sprawl continues to dominate growth in many cities, affecting agricultural and forest lands, more people are living in the urban-wildland interface, which is also at risk of increasing wildfires. Growth must be denser and increasingly make room for nature.

Landscape architects can design cities to be more resilient and liveable in the future. Today, 55 percent of the world's population live in cities, and by 2050, that number is expected to reach [68 percent](#). Those cities today contain existing urban infrastructure designed to older standards, which is more vulnerable to flooding, landslides, extreme heat events, seismic activity, and wildfires. Although urban tree canopies of cities have continued to decline, as species succumb to disease, drought, and pests, [extreme heat events](#) are more frequent, resulting in the deaths of the most vulnerable in our communities, especially older adults, people experiencing lower incomes, and BIPOC communities.

Avoid Future Risks

Support development patterns that protect wildlands and reduce risk from wildfire, landslides, and flooding disasters. Support rezoning that prioritizes public open space in high fire/mudslide risk areas. (See [SITES](#) Credit 4.11 Reduce the risk of catastrophic wildfire.)

Reduce Wildfires

Establish firebreaks through vegetation, including agricultural buffers. Reduce fuel loads (consider using animal partners for cost and carbon savings). Maintain road system interconnectivity (extensions vs. dead-ends) to allow for evacuation and access. Post-fire, consider the difficult land use decision to prevent future building in fire-prone areas. For fire management strategies specific to residential development, see [Firescaping: Protecting Your Home with a Fire-Resistant Landscape](#). (See [SITES](#) Credit 4.11 Reduce the risk of catastrophic wildfire.)

Prevent Landslides

Proper site selection is critical to reducing the risks of landslides. Work with the contours of a place, respecting vegetation and root systems that stabilize soil and prevent erosion. Reestablish stormwater corridors that connect natural watersheds, reducing potential mud/land/debris slides.

Facilitate Species Migration

Plants and animals are relocating as rapidly increasing temperature and water patterns change the places to which they are adapted. Create corridors for migration at all levels (cities, towns, and regions). Design wildlife/climate flow corridors that meet the latest [corridor science recommendations](#) in addition to creating multi-purpose trails, greenways, and roadsides that also enable the movement and migration of flora and fauna.

Manage Invasives

Avoid specifying known invasive plants and ones that have a high potential for

becoming invasive due to range shifts associated with climate change. Develop a pre-during and post construction invasive species management plan for sites with invasive species. (See [SITES](#) Prerequisite 4.2 Control and manage invasive plants; Prerequisite 4.3 Use appropriate plants.)

Include Risk and Emergency Management in Community Planning

Work with community members and government agencies to develop local and regional climate resilience and recovery plans, anticipating potential climate disruption. Promote wise management of the [wildland-urban interface](#), and encourage resilient rebuilding in appropriate locations to avoid repeated losses.

Support Self-Reliant Ecosystems

Build circular economies and circular systems for water, food, waste, and energy. Incorporate design elements to reduce the reliance on outside systems, including capturing rainwater where it falls, and repurposing and recycling waste locally. (See [SITES](#) Prerequisite 3.1 Manage precipitation on site; Credit 3.3 Manage precipitation beyond baseline.)

Create Urban Forest Canopies

Plan, design, establish, and manage street trees where appropriate to provide urban cooling and pollution shielding and increase biodiversity. Maximize soil volumes and root area for tree planting using continuous soil beds and use passive irrigation for parks and street trees.

Prioritize Health and Well-Being

Design landscapes to provide for [multiple co-benefits](#), and include passive and active spaces for all demographics. Design for varied experiences: active places to walk, ride and play, experience joy, or rest and recuperate. (See [SITES](#) Credit 6.3 Promote equitable site use; Credit 6.4 Support mental restoration; Credit 6.5 Support physical activity; Credit 6.6 Support social connection.)

07 Support regenerative local agriculture and increase food security



It is estimated that 23 percent of global [greenhouse gas sources](#) relate to food, agriculture, and land use. As global populations are projected to continue increasing through 2100 (UN Population Division), food and water security will become more important considerations in planning and design. We can support more localized food sources that will reduce the energy demand of shipping food from distant places.

Current conventional farming techniques degrade soil life and the nutritional value of food while polluting waterways. As an alternative, conservation and regenerative agriculture techniques can build soil health, retain more water, and enhance carbon sequestration, thereby improving a town's resiliency and supporting continued food access through climate disruptions.

Protect Existing Agricultural Areas

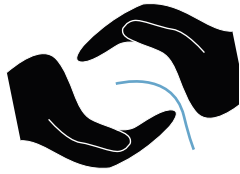
Advocate for protecting sustainable peri-urban agricultural areas from development and the expansion of urbanized areas into rural communities. Avoid land clearing and support the use of food forests where appropriate to increase diversity and reduce urban heat while diversifying regional agricultural systems. (See [SITES](#) Prerequisite 1.1 Limit development on farmland.)

Support Local Food Supplies

Integrate and maximize local food production in the landscape, thereby reducing “food miles” as a result of transportation and promoting more localized self-sufficiency. Design spaces that facilitate local commerce through the creation of urban productive landscapes (e.g., farmers markets, small scale organic farms, market gardens, rooftop agriculture). (See [SITES](#) Credit 6.7 Provide on-site food production; Credit 6.11 Support local economy.)

Encourage Alternative Farming Techniques

Support regenerative and conservation agriculture techniques. Regenerative agriculture diversifies fertilization programs by using holistic methods, such as composting, vermicomposting, and foliar spraying with the use of inoculants. (See [SITES](#) Prerequisite 8.1 Plan for sustainable site maintenance.)



Equity

Goal 2: Empower Communities

Success Indicators for 2040

- ASLA and its members are world leaders in the advancement of the rights of nature and protection of all forms of life from the impacts from the climate crisis.
- ASLA members have good relationships with, are looked to, and are trusted by local, underserved, underrepresented, and Indigenous community members when it relates to equity and climate justice by first asking for permission to engage.
- ASLA and its members are trusted when reporting and seeking comment on climate and environmental equity, the public realm, and climate-related journalism.
- Landscape architects have strong collaborative relationships with local communities around the world and is known for helping communities to self-determine solutions and become environmental stewards.
- Landscape architects are represented on key decision-making, leadership and strategic groups related to environmental and climate equity in the US and internationally.
- ASLA members are recognized as industry leaders in sustainable practice, influencing the behavior of others and providing the big picture that links up all allied built-environment professionals.
- Landscape architects are having a profound impact in interdisciplinary problem solving by prioritizing equity and justice in climate solutions.

3

Utilize communication tools and techniques





Climate Agency

Advocate for equity and social well-being



ASLA 2019 Professional Communications Award of Excellence. The FloMo: A Mobile Messenger for Sea Level Rise / Bionic

Key Climate Actions to Take

Yourself

Educate Yourself — Learn about the [history of environmental and climate injustices](#) and its devastating impacts on BIPOC (Black, Indigenous, and People of Color) and underserved communities. Investigate those histories in your local community and project locations.

Volunteer — Volunteer with and donate to local community design centers. The [Association for Community Design](#) can point you to a local community design center.

Monitor — Monitor community, statewide, and regional infrastructure investments and assess whether the distribution of resources and decision-making processes are equitable.

Amplify — Amplify the tenets of ASLA's [Racial Equity Action Plan](#), which was developed with the Black Landscape Architects Network (BlackLAN), and ASLA's iAdvocate Network campaigns on environmental justice.

Increase Representation — Commit to tangibly increasing the representation of diverse practitioners within the landscape architecture profession. Explore ASLA's [Career Discovery and Diversity](#) resources.

With your firm / organization

Hire — Recruit, hire, retain, and promote diverse landscape architects, including in leadership positions. Look to [BlackLAN](#) and the [National Association of Minority Landscape Architects](#) (NAMLA) for candidates, job postings, and resources.

Partner — Search for diverse partners and create

diverse planning and design teams to bid on projects, including partnering with [Minority Business Enterprise](#) (MBE) and/or [Women Business Enterprise](#)-certified businesses. Learn more about the Small Business Administration's MBE and Women-Owned Business contracting programs.

Eliminate — Identify discriminatory land use, citing, and permit decisions on your projects and take action to eliminate these practices.

Donate — Donate planning and design services to historically marginalized and underserved communities. Use design skills to communicate the causes and effects of environmental and climate justice issues such as hazardous areas, pollution, lack of access to green infrastructure and open space, and insufficient access to resources and security from water-energy-food systems.

Prepare — Become familiar with the EPA [environmental justice programs](#) and the [Justice 40 Initiative](#). Qualified firms can apply and/or bid for the EPA programs to provide technical assistance through federal grant programs to municipalities and communities on climate projects. Consider expanding the share of the work you dedicate to underserved communities, following the Justice 40 example.

With your community

Change Policies — Engage with your metropolitan planning organization (MPO) to change policies that perpetuate inequities. Access the Federal Highway Administration's [Metropolitan Planning Organization Database](#) to identify MPOs in your state.

Trailblaze — Some communities have adopted comprehensive equity plans that analyze policies and projects through an equity lens, such as [Baltimore's Equity Planning Committee](#) [EPC] plan. If your community doesn't have one, create one! Work with city and community leaders to develop a plan that meets the equity needs of your residents.

Engage — Create new policies for responsible public engagement practices. Integrate local knowledge and community voices to co-design strategies for enhancing the environment and community resilience. Leverage community assets and empower communities to make decisions that impact our collective future.

Align — Collaborate with organizations that support and are working to address climate inequities, including the [NAACP](#); [National Urban League](#); [The Bullard Center](#) at Texas Southern University; [WE-ACT](#); the [Hip Hop Caucus](#); [Climate + and Community Project](#); and more. greenhouse gas emissions and increase community resilience to climate impacts.



Climate Engagement Toolkit



The climate crisis further challenges landscape architects to engage with communities in meaningful ways. To overcome this, landscape architects can adopt participatory design practices. Now is the time for us to seek new approaches with more equitable outcomes that address inequalities and injustices.

As landscape architects we can go beyond just having good intentions. We can invest in techniques that strengthen meaningful relationships between communities and landscape architects. These approaches can enable inclusive design and strengthen communities most affected by the climate crisis. Not only will this help create more resilient communities, but by welcoming local knowledge, we can break barriers within communities and discover unimagined climate solutions.



Landscape architects will increase support for equity and equality, food security, and the right to clean water and air, green spaces housing, and affordable and accessible transportation options for all.

- IFLA Climate Action Commitment





01 Build community

By establishing genuine partnerships with communities, we can work toward a collaborative design process. Together we can create impactful designs that build great support and investment in climate solutions.

Understanding a community's cultural and environmental history is the starting point of an effective engagement process. By learning about past injustices, a landscape architect can begin to build a solid foundation with community members. That trust and understanding can serve as a starting point for learning just approaches to addressing societal impacts of the climate crisis by following a few key steps.

Recognize Past Injustices

Depending on the project location, understand the Indigenous communities from which the land was forcefully taken along with the contemporary issues facing these communities. Dive into the book by Dr. Robert Bullard, known as the father of the environmental justice movement: *Dumping in Dixie: Race, Class, and Environmental Quality*. Then, explore the interactive ASLA Environmental Justice Professional Practice Network [Living History Timeline](#), which is principally organized by key moments in the history of the environmental justice movement.

Know Yourself

Get to know our own motivations, attitudes, and biases prior to working with communities in order to be open to both data and the lived experience of the community with whom they will work. A framework for this work is available from [Saltwater Social Justice Training](#) (see Resources).

Start by Listening, then Share

Listening openly without judgment is essential to understanding what is being shared by the community. Learn how to immerse yourself in the community setting from [Gulf South for Green New Deal](#) and [Climate Justice and Joy](#).

Focus on What Matters Most

Craft and facilitate engagements that illuminate what matters most to communities by using techniques such as photo documentation, sketch exercises, pop-up events, and walking workshops that can happen in convenient locations for community members.

02 Understand climate injustices

When exploring a community's past, map out not only environmental considerations but social ones as well that may unearth past social injustices in a community that may be exacerbated by the climate crisis.

Unearth Community Knowledge

Build relationships with local knowledge experts in the community to understand the deep history of a place and its culture. Consider interviewing local community members to understand their stories and gather knowledge about the community's identity. Work with community-led and -based organizations to learn more about a community prior to engaging. (See [SITES](#) Credit 6.1 Protect and maintain cultural and historic places.)

Identify Issues

Identify issues that might inform how to climate-proof communities. Document the data and stories that may include inequities in accessibility, distribution of public resources and hazards, decision makers, and past harms to a community.

Go to the People

Consider meeting people in their own neighborhoods or own homes for work sessions to break down barriers and encourage open and honest conversation as well as engaging with others who might not be able to attend in other venues.





03

Use communication tools and techniques



As people most often respond to situations in their everyday lives, it is often difficult to relate to the global climate crisis. To find common ground and shared values, consider asking about what people are experiencing and share your story as well. A two-way dialogue can help build partnerships.

By openly engaging with local community members, you can encourage long-lasting ownership and stewardship of climate efforts. Landscape architects can share design methods and expertise in a way that involves local knowledge that demonstrates mutual respect.

The following activities support co-creation and may tap into expertise that citizens may not have realized or reveal a key contribution to developing resilient and sustainable solutions.

Develop a Plan for Community Collaboration

Work with the community to map out a plan that supports giving them agency in collecting data that identify community concerns, vulnerabilities, and assets.

Gather Data

Use available data mapping from municipal sources and free online sources. [ArcGIS Living Atlas of the World](#) is one example. Additional examples include EPA's and the General Service Administration's (GSA) [Smart Location Database](#) and [Smart Location Calculator Update](#), which provide current condition data nationwide, including Seattle and EPA-funded [National Public Health Assessment Model](#) (N-PHAM), an evidence-based software tool that estimates for any community in the United States place-based, health-related outcomes that are influenced by the built, natural, and social environment. EPA's [EJScreen](#) combines environmental and demographic indicators in maps and reports.

Support Community Involvement through Analytical Tools

Such tools can include large-format maps, spatial design exercises, visualizations, and activities. Consider using geospatial asset mapping with mobile technology. The [Streetwyze](#) platform enables citizens to document assets within their neighborhoods and identify opportunities for having lasting impacts on a community's resilience. Begin by mapping out the risks, followed by asking a series of questions about community priorities in relation to future decision making. [Marin County Game of Floods](#) is an example of participatory process around the threat of sea level

rise. Consider mobile information forums to reach a broad range of community constituents. The Resilient by Design [FloMo by Bionic](#) is a fun, informative, relatable, and bilingual mobile messenger that delivers a profound and simple message about flooding and the climate crisis. Incorporate EPA [Community & Citizen Science Programs](#) into projects. Compensate community members for time and expertise and pace the process based on what is comfortable to them.

Organize and Synthesize

Organize the information collected and present it in an understandable way. Identify potential solutions and set priorities for action.

Implement and Evaluate

Pilot or prototype portions of a project to unearth potential future complications that can be addressed before large-scale implementation occurs, which can save on cost, time, and complexities. Evaluate results and support future community resilience.

04 Explore pathways to financial sustainability with communities



Support community investment trusts to fund green infrastructure and resilience projects, including clean energy projects such as community solar and wind energy. These are typically created as partnerships between local government agencies, nonprofit organizations, and private sector entities.

Redevelopment and Economic Development Tools for Funding Green Development

Redevelopment and economic development tools vary by state and local jurisdictions. Some states have passed enabling legislation to allow these tools, and/or constitutional restrictions that prohibit them. Local jurisdictions may elect to implement what is allowable and/or choose to remove restrictions on what might be prohibited.

For example, most states allow tax abatements for some economic development projects as well as tax increment financing for redevelopment. However, some cities and counties in those states may elect not to use these tools.

Funding tools are both publicly and privately sourced at the national levels. Explore tools that can improve financial sustainability for communities:

Development Driven

Funding that stems mostly from new development

Tax Increment Financing (TIF)

This is one of the most potent redevelopment tools used by cities around the country. Most states allow cities to capture newly generated property taxes from new construction and to reinvest those funds, often by issuing revenue bonds, to make eligible public improvements in the area where the new development occurred. Some states such as Texas and Louisiana also allow adding sales taxes to TIFs.

Cities that allow TIF to be generated within a larger geographic area (e.g., hundreds of acres) have been more effective at making comprehensive neighborhood improvements.

Eligible TIF investments in many cities include public infrastructure, parks and open spaces, securing land for private or public redevelopment, and providing loans and/or grants to leverage new private and nonprofit development projects.

A number of cities have expanded downtown TIF districts to incorporate close-in neighborhoods so the latter can benefit from more significant funds, usually generated by larger downtown developments.

Impact Fees

Many cities have opted to create or expand impact fees that are charged to a new development to help offset impacts of the development on a community. Impact fees are often charged to new (and sometimes rehabilitated) commercial and residential developments for transportation and open space improvements. Also, a growing number of cities use impact fees to support

affordable housing. Although impact fees are usually collected from a specific project and then put into a fund that invests those funds in the city, some communities allow “sole source impact fees” where the fees collected from a designated area stay in that area to provide needed improvements.

Fees/Assessments/Taxes

Voluntarily agreed-to assessments or new or increased taxes or fees, approved by city councils or voters

Special/Local Improvement Districts (SID/LID)

These districts are usually voluntarily established in neighborhoods to help pay for various infrastructure improvements. LIDs have ranged from street construction to sidewalks and streetscape furnishings to building streetcar lines.

LIDs place an assessment on property owners over a period of time. The assessments pay back tax-exempt bonds used to cover the costs of improvements. In some cities where area property owners cannot cover the total costs of proposed LID improvements, tax increment funds have been added to the mix to ensure that projects are completed.

Real Estate Transfer Tax (RETT)

Some states allow cities to collect a tax from all residential and commercial real estate transactions. The tax rates are often low (less than 1 percent), but the volume of transactions can generate a significant funding source. In many cases, the RETT is used for public improvement projects designated by city councils; whereas in others, it is focused on helping provide affordable housing units.

Leveraging federal funds

Grants, loans, and guarantees from federal agencies for local redevelopment and economic development

HUD Section 108 Loans

Louisville, like other cities with 50,000 or more people, receives federal Community Development Block Grant (CDBG) dollars annually. These funds go into eligible lower-income neighborhoods to provide capital improvement projects, low-interest loans/grants for eligible business improvements, or housing projects.

The U.S. Department of Housing and Urban Development (HUD) allows cities to borrow up to five times their annual allocation for low-interest loans to eligible economic development projects. These loans have sometimes been under 1 percent interest for 20 years and usually make up an important, but smaller, portion of a project's total costs.

Projects need to be carefully underwritten to ensure that they will repay these loans and avoid putting city general funds at risk. Many cities have used HUD 108 loan guarantee programs for catalytic projects in revitalizing neighborhoods.

Other People's Money

Bringing funds into your community from outside investors, often but not exclusively through tax credits

New Market Tax Credits (NMTC)

These are tax credits designed by the federal government to be used to stimulate economic development and redevelopment projects in eligible lower-income census tracts. A project must be within the boundaries of these nationally designed tracts. Tax credit buyers – usually lending institutions, insurance companies, and wealthy individuals in

various parts of the country – invest their funds through a Community Development Entity (CDE) within a city. The CDE funnels funds into a redevelopment or economic development project that meets New Markets Tax Credit (NMTC) program criteria, which include “being ready to go.” NMTCs can fund up to 25 percent of a project's cost depending on its size. NMTCs are competitive in part, because in some circumstances, the funds do not need to be repaid.

Employment Base Visa Program (EB-5)

The EB-5 program allows foreign nationals wishing to become U.S. citizens to do so by investing \$500,000 in an eligible economic development project that creates at least 10 jobs for U.S. citizens. Eligible projects must be located in Targeted Employment Areas (TEAs), which are geographic areas within a city that have unemployment rates that exceed 150 percent of the national unemployment rate.

EB-5 regional centers identify foreign nationals seeking U.S. citizenship and have their credentials carefully vetted by the U.S. Citizenship and Immigration Services (USCIS), an arm of Homeland Security. Regional centers look for private development and economic development projects in TEAs that would benefit from low-cost equity to make those projects happen.

The regional centers use federally sanctioned criteria to determine the number of jobs – direct as well as indirect jobs – that would be created by each project and subsequently work to find a pool of investors that could benefit from that job creation.

EB-5 funds have been used to raise low-cost equity, which is repaid to the investors at the end of five years, for a broad range of projects, including mixed-use developments, hotels, industrial and commercial facilities, and apartment projects.

Other Important Options

Sources from the private and non-profit sectors

Foundations

Many cities have corporations, institutions, or wealthy individuals who have established foundations that allocate resources to causes. Although we mostly hear about foundations granting funds to the arts, education and research, or other very worthy causes, some also opt to make investments in community redevelopment and revitalization.

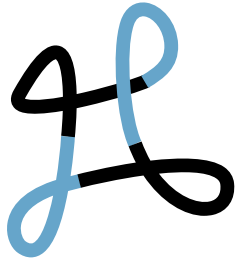
The Kaiser Family Foundation in Tulsa, Oklahoma, and the Baton Rouge Area Foundation in Baton Rouge, Louisiana, are two examples of foundations that have made grants and loans available to projects ranging from new parks and museums to rehabilitation of historic buildings and the provision of affordable housing.

Mercy Corp, a Portland, Oregon, entity, has opted to set up a real estate investment trust (REIT) that enables lower-income people in inner-city neighborhoods to invest small sums (as low as \$20 to \$30/month) in income-producing commercial projects in their neighborhoods. Mercy Corp purchases the commercial enterprise and has it privately managed, and the REIT allows lower-income households to own shares in that property to encourage wealth creation. Louisville, Kentucky, has a number of foundations with the capacity to provide similar programs. These programs can often be bundled with other resources identified in this section of the field guide.

Redevelopment and economic development tools are one key bundle of assets that are needed to revitalize neighborhoods. They need to be part of a portfolio that incorporates a consensus-based vision for the

future of a neighborhood; capable, dedicated leadership; and effective, supported strategies to make productive investments in the community to benefit public and private projects.





Cultural Empowerment

Learning from cultural knowledge systems and practices of care



ASLA 2010 Professional Analysis and Planning Honor Award. Orongo Station Conservation Master Plan. Poverty Bay, North Island, New Zealand. Nelson Byrd Woltz Landscape Architects

Key Climate Actions to Take

Yourself, with your firm, your organization, and your community

Understand History — Learn the history of the Indigenous people in your community, including the impacts of colonialism.

Develop Relationships — Nurture long-term, trusting relationships with local Indigenous communities and accept circumstances when Indigenous communities reject your interest in collaborating and building relationships.

Learn — Seek to learn Indigenous history and land management knowledge.

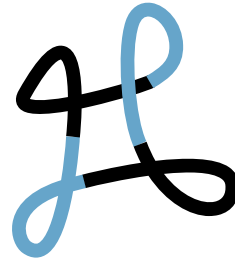
Collaborate — Collaborate with Indigenous people to use cultural knowledge in planning and design.

Support — Determine ways to assist Indigenous communities through listening and elevate their agency in determining their future.

“
Respecting and working with Indigenous cultural land management knowledge to mitigate climate crisis impacts and continue work toward reconciliation is our priority.

- IFLA Climate Action Commitment

Cultural Knowledge Toolkit



According to the sixth IPCC assessment, Indigenous history prior to colonial disruption provides information about climate, major floods, earthquakes, tsunamis, volcanic eruptions, and other geological events. And globally today, [Indigenous lands](#) account for 37 percent of remaining ecologically intact lands and intersect with around 40 percent of terrestrial protected areas. Indigenous peoples make vital contributions to biodiversity conservation and sustainable use as documented in the [2020 Global Biodiversity Framework](#).

It is vital to learn from and seek reconciliation from Indigenous peoples. In the second edition of the Local Biodiversity Outlooks, we can learn more about Indigenous cultures by listening to shared views, perspectives, and experiences of Indigenous peoples and local communities on biodiversity issues.



It is important to understand the longstanding history that has brought you to reside on the land, and to seek to understand your place within that history. Land acknowledgments do not exist in a past tense, or historical context: colonialism is a current ongoing process, and we need to build our mindfulness of our present participation.

- Northwestern University Native Governance Center Guide to Indigenous Land Acknowledgment



ASLA 2021 Professional General Design Honor Award. Auckland International Airport. Auckland, New Zealand.
SurfaceDesign, Inc. / Blake Marvin

05

Learn from Indigenous communities through collaboration



Engaging with Indigenous Communities

Communities that have lived in a close relationship with their ecosystems for long periods have developed a cultural knowledge system that includes an intimate understanding of themselves in relation to the landscapes in which they live. Indigenous science and land management practices work in harmony with the natural resources for long-term sustainability of the environment.

Learning from Indigenous communities can help us collectively unlearn an extraction-based mindset and amend modes of practice that separate humans as something distinct from the natural world. Working with Indigenous peoples can help us maintain and, in many cases, re-create the complex ecosystem functions that have been disrupted by dominant development practices. By recognizing Indigenous peoples as historic stewards of the land, we can collaboratively face the climate and biodiversity crises as we simultaneously elevate Indigenous cultural and scientific knowledge.

In North America, and throughout much of the world, Indigenous people continue to be displaced and disrupted by colonization. Building relationships with Indigenous people includes necessary reciprocal work to support Indigenous efforts to reclaim, protect, and restore their physical connection to ancestral lands.

Enrich Discovery

Indigenous and traditional local knowledge systems enrich problem-solving and result in more effective and holistic decision making and reciprocity. Sharing of Indigenous traditional and contemporary science with current research enriches discovery of more sustainable futures.

Inspire a New Future

Indigenous ways of knowing and being can evoke and inspire new narratives and visions of living in balance with nature.

Develop Long-Term Collaborative, Meaningful Relationships

By respecting and understanding Indigenous approaches and culture with local Indigenous peoples, we can support ongoing trust and respect that can increase two-way support for projects and ensure reciprocity to give as well as receive. Seek guidance to understand and respect local protocols. Local, state, and federal government agencies typically have tribal affairs liaisons and are responsible for managing relationships with tribal leaders.

Listen First

Engage with Indigenous community leaders early and often. Enable direct action and co-benefits. Understand colonial history to avoid negative stereotypes. Be generous with your time and compensate Indigenous people for their emotional labor. See the guide [Working with Indigenous Communities](#) by Indigenous Tourism BC for more information.

Recognize, Respect, and Identify

Recognize the rights and [traditional territory](#) of Indigenous peoples while respecting and protecting Indigenous intellectual property. Identify and respect the Indigenous governance and authority structure. Teach and demonstrate the work of landscape architects to encourage diversity in the profession.



06

Show respect through Land Acknowledgments

Start with Humility and Self-Reflection

Consider the purpose and goal. Research and learn about the Indigenous people to whom the land belongs and the history of the land and treaties.

Understand and Acknowledge

Be clear and upfront about displacement, genocide, ethnic cleansing, assimilation, and forced removal. See the resource [Five Steps to Writing a Land Acknowledgment](#) by Care About Climate, Inc.

Show Respect

Use Indigenous place names and languages as appropriate. Use correct pronunciation. Use past, present, and future tenses.

Reasons for Land Acknowledgment

See the resource: U.S. Department of Arts and Culture [Honor Native Land](#).

Offer recognition, reverence, and respect: Tell the true story of ongoing colonization. Repair or establish relationships with Indigenous people and the land.

Support reconciliation: Inspire ongoing action and relationships

Alternatives to Land Acknowledgments

In place of a Land Acknowledgment, you can also support Indigenous communities by taking action. For a list of action-oriented ideas, see the resources listed on [Ecotrust](#).

07

Plan and design project work with Indigenous peoples

Co-Plan and Co-Design

Climate solutions with Indigenous communities can be co-created using their cultural land management practices and knowledge systems.

Adopt Indigenous Science

Strategies can include planting, food sources, and ecological land management practices, as appropriate, to solve climate-related challenges. Seek advice on potential for cultural burning to restore biodiversity and reduce fire risk on your projects. When appropriate, provide ongoing future employment through the life of the project, including seed collection, propagation, maintenance.

Follow Guidance

Refer to the [International Indigenous Design Charter](#) when working on projects involving the representation of Indigenous culture.





Advocacy

Goal 3: Build Coalitions

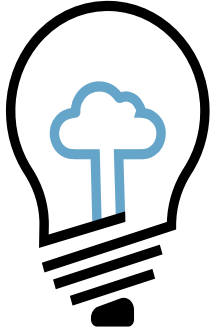
Success Indicators for 2040

- ASLA and its members influence and shape local, state, and federal policy on climate action.
- ASLA and its members are sought out as experts by key policy and regulation decision makers at the federal, state, and local levels for guidance related to climate, equity, and biodiversity issues.
- ASLA and its members are trusted by the media for reporting and seeking comment on infrastructure, community design, water, and climate change.
- ASLA members are leading climate solutions collaborators, providing the big picture that links up all allied built environment professionals.
- ASLA and its members build strong collaborative relationships with landscape architecture associations and professionals around the world.
- ASLA members support product manufacturers and their efforts to achieve a zero-emission supply chain.
- Landscape architects are represented on key decision-making, leadership and strategic groups related to climate and biodiversity in the US and internationally.
- ASLA and its members build a network of relationships with climate justice leaders and organizations and is viewed as a trusted allies.
- Global sustainable development, biodiversity, and climate goals and targets continuously shape the goals and business plans of ASLA members.

3

Build climate coalitions





Climate Leadership

We commit to galvanizing climate champions



ASLA Diversity, Equity, and Inclusivity Summit / EPNAC

Key Climate Actions to Take

Yourself

Take Action — Sign up for [ASLA's iAdvocate tool](#) or organize or volunteer for a ballot or petition campaign on critical climate issues for state and local legislation and regulations.

Volunteer — Volunteer on local, state, and/or federal boards or local schools, nonprofit organizations, community groups, and regional chapters of related professions that address climate, environmental policy, planning, or other related areas.

Lead — Consider nontraditional professional employment to include policy positions in local, state, and federal regulatory agencies (i.e., Departments of Environment, Natural Resources, Transportation, Housing). Landscape architects' problem-solving and analytical skills make them ideal to fill climate policy positions.

Express Yourself — Write an op-ed for your local newspaper or community blog. Participate in webinars, conferences, radio shows, and podcasts that connect local issues to the climate crisis. Introduce yourself to local and state news editors and alert them of your new climate-focused projects. Position yourself as an authority on the subject and someone who can be called upon for comment, background, and expertise.

With your firm / organization

Show Your Work — Invite elected officials and other policy makers to tour a completed project. Use ASLA's [Guide to Hosting a Site Tour](#) to showcase for policymakers how landscape

architecture projects are helping to solve and adapt to the climate and biodiversity crises in which new policies are needed. Design and distribute one-pagers of your projects that include data, metrics, and policy implications that address the issues at hand.

Be a Change Agent — Identify and change at least one local and/or state code or policy that was a barrier to implementing your climate positive and environmentally just project. Grow state ASLA chapters' efforts on climate action by building new connections among local members and climate experts. Volunteer to represent your chapter or university through the ASLA Climate Action Network.

Follow the Money — Influence state, local, and federal procurement processes that involve climate positive design projects. Get to know contracting officers and urge them to scope projects in a manner that will address the climate and biodiversity crises. The Congressional Research Service has published an Overview of the Federal Procurement Process (updated January 12, 2021).

Create Resources — Create public educational materials (web and print pamphlets, brochures, stickers, handouts, etc.) for use by your local ASLA chapter in partnership with other local landscape architecture professionals, students, and university faculty.

Support Employee Health — "Eco-anxiety" triggered by concerns for the climate crisis is a growing global concern. To support mental health, well-being, and the capacity to advocate, employers can provide resources and a balanced work environment. Be a leader by

supporting healthy working hours and creating a work culture that celebrates employee involvement in causes outside and inside the office.

With your community

Join the Collective — Join your state ASLA chapter to help advance collective advocacy goals, including Climate Positive Design, equity, licensure, and more. Help your ASLA chapter host a State Advocacy Day.

Be a Champion — Help create and champion your city's climate action plan. Landscape architects can use their expertise to help perfect, implement, and grow a city or town's climate action plan. (Examples: Climate Action Plan – Green Houston and Climate Ready Boston).

Give Back — Work with communities that can benefit from the skills and training of landscape architects to help them identify policy and design solutions to ensure climate and environmental equity. ASLA's national partnership with the [National Park Service Rivers, Trails and Conservation Assistance \(RTCA\) Program](#) connects ASLA chapters with RTCA project leaders to support community-based technical assistance grants for planning and design of natural resources. Contact [RTCA's Regional Program Managers](#) to explore opportunities for partnering.

Organize — Organize a local forum to highlight the policies and practices needed to support climate positive work. Invite elected officials, community leaders, other design professionals, and others to learn and benefit from landscape architects' problem-solving skills.



ADVOCACY

Climate Leadership Toolkit



Landscape architects already take many types of climate action through our work, but to create change at scale, we must step up to lead beyond our workplaces. Two key ways to lead are public-facing and targeted communication and shaping climate policy.



We commit to galvanizing climate champions. Landscape architects are uniquely placed to galvanize and lead a built-environment response to this crisis. We will continue to collaborate with clients, suppliers, and allied professions to champion climate positive design.

- IFLA Climate Action Commitment



ASLA Center for Landscape Architecture

01

Engage the public

Raise the visibility of the profession and build support for nature-based solutions to the climate and biodiversity crises.

To optimize your climate action communications work, you first need to develop a strategy. To develop a strategy, you need to understand your audience, craft your messages, and determine how you will reach your audience to inform, persuade, or convince them to take some action. Within this strategy, define your outreach goals and measurements for success. For more complete guidance, visit ASLA's [Chapter PR Handbook](#).

Educate the Public about Landscape Architecture

Engage the media

Reach out to local reporters who have written articles on subjects related to climate, infrastructure, or topics related to landscape architecture. Prepare talking points similar to those listed under Educating Elected Officials. Once you build relationships with reporters, you can begin to pitch story ideas and send media kits. Reference ASLA's [Chapter Public Relations Guidelines](#) for further guidance. Scan your local publications for climate-related articles, and write an op-ed response highlighting nature-based solutions to stories that omit them.

Get out there

Attend conferences and events, including the United Nations Framework Convention on Climate Change - ([Events Calendar](#)). See [ASLA Conferences for Landscape Architects](#) for more options.



02

Work with elected officials and public servants

Active engagement between landscape architects and elected officials, public servants, and allied professionals is crucial to securing a seat at the table as decisions about the built environment, infrastructure, and our collective response to the climate and biodiversity crisis are being made.

To raise the profile of nature-based solutions on policy makers' and policy implementers' radars, we must make and sustain meaningful human relationships. In doing so, we can position ourselves as trusted experts to be called upon to advise, craft, evaluate, and execute climate positive policy.

Who to Reach

The obvious players are the Mayor, State Representative, and City Councilperson.

Less obvious power-holders are head of municipal Environmental Quality/Safety departments, Public Works departments and key staff, Planning departments, and Transportation departments.

How to Reach Out

Craft your message

As you begin to craft your communications message, ask yourself "why would this person care?" The official might not understand why landscape architects offer expertise on climate issues. Consider including or editing the following talking points in your initial outreach.

- **What is Landscape Architecture?:** Landscape architecture encompasses the analysis, planning, design, management, and stewardship of the natural and built environment through science and design. Consider attaching this [leave-behind](#) to an email.
- **[Climate Change and Resilience:](#)** Landscape architects confront the climate and

biodiversity crises in their daily lives and use their expertise in resilient and sustainable design to mitigate the consequences of the ongoing climate crisis.

- [Climate Equity](#): Landscape architects know the importance of community engagement during the design and planning process. Those most affected by a project need to be heard and understood. All too often underserved communities, especially Black and Indigenous communities, are ignored during the planning stages of a project and disproportionately suffer adverse environmental and health consequences.

Share case studies

Choose relevant landscape architecture case studies related to the official's region, platform priorities, or community concerns. Browse [30 ASLA-curated climate action case studies](#).

Share [SITES](#)

Share the SITES Rating System as a framework for responsible climate positive land development. Encourage policy makers to integrate SITES goals and strategies into comprehensive plans and site development ordinances.

Invite others

Hosting a site tour can make an enormous impact in educating local, state, and federal public officials on how landscape architects use design to create well-planned communities, neighborhood master plans, parks, and green streets; to manage stormwater runoff; and to plan state-of-the-art transportation corridors. Visit ASLA's [Site Tour Guide](#) for additional advice on organizing such events or ASLA [Guide for Conducting a State Advocacy Day](#). Link your work to jobs and economic benefits. Use data to explain the positive economic impact of your climate work on communities.

End with an ask

Regardless of your angle, ending your email with an action request increases the likelihood of a response and the beginning of a relationship. Some example asks include:

- Could we schedule an informational meeting over coffee? I' would love to get to know you in person.
- Could I count on your vote/support for [a specific current issue]?
- Who else in your administration could benefit from knowing about landscape architecture and how we could work together? I' would appreciate it if you could put us in touch.

Follow up

Share on social media and send thank-you to letters / social media posts to officials.

Hire a Lobbyist to Advance Climate Policies

Coordinate with others

An ASLA state chapter or an allied coalition may use a [state lobbyist to advocate for legislation](#) that supports climate goals as well as practice.

- Chapters or coalitions evaluate lobbyist preferences:
 - Solo, small firm, or large firm
 - Familiarity with landscape architecture a plus
 - Familiarity with environmental issues
- Determine detailed scope of what they will do:
 - Strategy development
 - Legislative advocacy
 - Licensure lobbying
 - Media outreach
- Contract should include:
 - Define outcomes
 - Determine a time frame based on
 - Legislative calendar
 - Products they will produce
 - Communication and reporting system
 - Fee and payment plan

03

Support employee health and well-being

Support health and well-being in your organization through everyday practices and by providing support resources. Eco-anxiety is a growing concern and is defined by the Climate Council as “a way of describing how people feel when they hear bad news about our planet, the climate, and the environment.”

Be Proactive

Evaluate

Consider evaluating your organization through a social justice and equity lens. The [JUST Certification Program](#) strives to increase transparency by optimizing policies that improve social equity and enhance employee engagement. You can also become a [B Corporation](#).

Support health and wellbeing

[Coping with Climate Change Distress](#) recommends these [key takeaways](#):

1. Take action
2. Take a break
3. Have fun
4. Move your body
5. Focus on the solutions
6. Talk it out



ADVOCACY

04 Build climate coalitions



Collaboration provides the opportunity to raise awareness of the landscape architecture profession within both the allied professions and the general public. Coalitions allow us to be stronger in advocating for climate policies, they provide the opportunity to educate others about climate positive landscape architectural practice, and they provide opportunity for our members to learn about what others are doing. In addition to building and bettering the relationships with allied professions, these partnerships create efficiencies for scarce resources, including time and money. For more, see ASLA's [Building Relationships with Allied Professions](#).

Build relationships for Strategic Collaboration

Identify and reach out to key collaborators

Potential groups include:

- Climate-focused nonprofits. For example: Architecture 2030, Carbon Leadership Forum (CLF), Building Transparency, C40 Cities, Climate Reality Project, CarbonBrief, Climate Central, Global Land Outlook UNCCD, IUCN, The Nature Conservancy, Wild Lifelines, Wildlands Network, Ecoadapt, American Forests
- University research and institutes focused on climate in your state and region
- Landscape architecture professional/member organizations: AILA, CSLA, IFLA, Landscape Institute, CELA, LAF
- AEC Professional Organizations: AIA, APA, ASCE
- Climate Focused Member Organizations: American Meteorological Society
- Equity and justice organizations: Bridge Alliance
- Government agencies: NOAA, EPA, National Center for Environmental Information, U.S. Climate REsilience Toolkit
- Product manufacturers
- Sustainability/climate rating program coordinators: USGBC/GBCI (LEED/SITES), ILFI, SE2050, AIA 2030 Commitment

Determine targeted items for collaboration

Items may include:

- Major conferences and events:
 - UN Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) - UN's annual climate change conference
 - NYC Climate Week
- Educational resource development
- Outreach and communications
- Development of codes, standards, regulations, and policies
- Fundraising and grant application collaboration

Build local climate coalitions

Build a team of allied professionals and experts across disciplines who are dedicated to addressing the climate crisis in your city or state. Bring together landscape architects, engineers, scientists, local government, community advocates, and equity-focused organizations to discuss climate-smart solutions and tackle the barriers to their local implementation.

Organize roundtable discussions

Organized topic-based roundtables spanning government regulators, landscape architects, equity organizations, and diverse stakeholders involved in climate issues, such as local flood control responses, fire suppression, and transportation planning. Use your transdisciplinary expertise to bring decision makers together who might not otherwise directly interface. Support ASLA Chapter Climate Action Committee program planning.

05 Guide policies



Standard development practices are intensifying the negative impacts of the climate and biodiversity crises, putting people and ecosystems at risk. We need a new paradigm for building and enhancing communities that works in tandem with natural systems and considers the needs of all. Such a paradigm takes shape through many efforts, including new local, state, and federal policies. A list of ASLA's current [public policies](#) can be referred to for consistency where possible.

In 2018, ASLA organized an interdisciplinary Blue Ribbon Panel to develop guidance on changes to existing policies and development of new policies to provide guidance to public officials. See [Smart Policies for a Changing Climate](#).

Climate policies should:

- Be incentive-based wherever feasible
- Promote holistic planning and provide multiple benefits
- Address racial and social equity issues
- Empower communities for self-directed change
- Include regular evaluation against performance measures
- Include review for unintended consequences
- Address broad regional goals as well as local concerns

Planning and Developing Policies

Nature-based systems

Designing and planning in concert with natural systems promotes resilience and provides multiple, layered benefits. Provide guidance for developing and advocating for policies based on and using nature-based systems.

Community planning and design

Compact, walkable, transit-oriented development with networks of green space and tree canopy foster human health and social connection while reducing energy use. Combined with the use of nature-based systems, these communities are resilient and adaptable.

Underserved communities

Pay particular attention to communities that are at increased risk from the impacts of the climate and biodiversity crises.

Transportation

Consider transportation through multiple lenses: as critical connectivity between homes, jobs, schools, recreation, retail, and essential services; as a major source of greenhouse gas emissions; and as a contributor to or detractor from a community's appearance and function. Planned and designed thoughtfully, transportation systems can promote resilience.

Agriculture

At the same time that farmland is being lost to expanding development and sprawl, agricultural systems are being stressed by the effects of a changing climate and unsustainable farming practices. Current and future impacts on food production and security, including equitable access to healthy food options, must be addressed.

Greenhouse gas emissions

Greenhouse gas emissions are the driving factor in global heat increases and the resulting climate and biodiversity crises. Policies that encourage net zero and, better yet, climate positive buildings, infrastructure, and landscapes, are critical.



Global Alliance

We commit to advancing the United Nations (UN) Sustainable Development Goals (SDGs) and expanding international collaboration



ASLA 2020 Student Collaboration Honor Award. Custom Living Wall from Industrial Waste-stream. Haoyue Yang, Student ASLA; Panwang Huo; Niti Tataria, Student ASLA; Karishma Joshi, Student ASLA; Yuanjia Yang, Student ASLA; Yu Shi, Student ASLA. Texas A&M University, College of Architecture

Key Climate Actions to Take

With yourself, with your firm, your organization, and your community

Expand — Expand the contribution of landscape architects to advance all SDGs.

Innovate — Explore opportunities to support the SDGs through research and experimental practices.

Think Beyond — Broaden our contribution to the SDGs by thinking beyond the site, considering cultural and economic impacts of an action.

Take Part — Take on roles in administration, management, and policy development to support broader SDGs.

Integrate — Work with community leaders and other disciplines, including health care and medical professions, to expand our impact on health and well-being.

Engage — Partner with underserved and historically marginalized communities to improve quality of life.



SDG Toolkit

The [SDGs](#) were adopted by the UN in 2015, with 17 goals to be accomplished by 2030. The SDGs provide a framework for nations to work together to create a more peaceful and just world, placing a priority on progress for those who are most in need. The goals address five pillars: People, Prosperity, Planet, Peace, and Partnership.

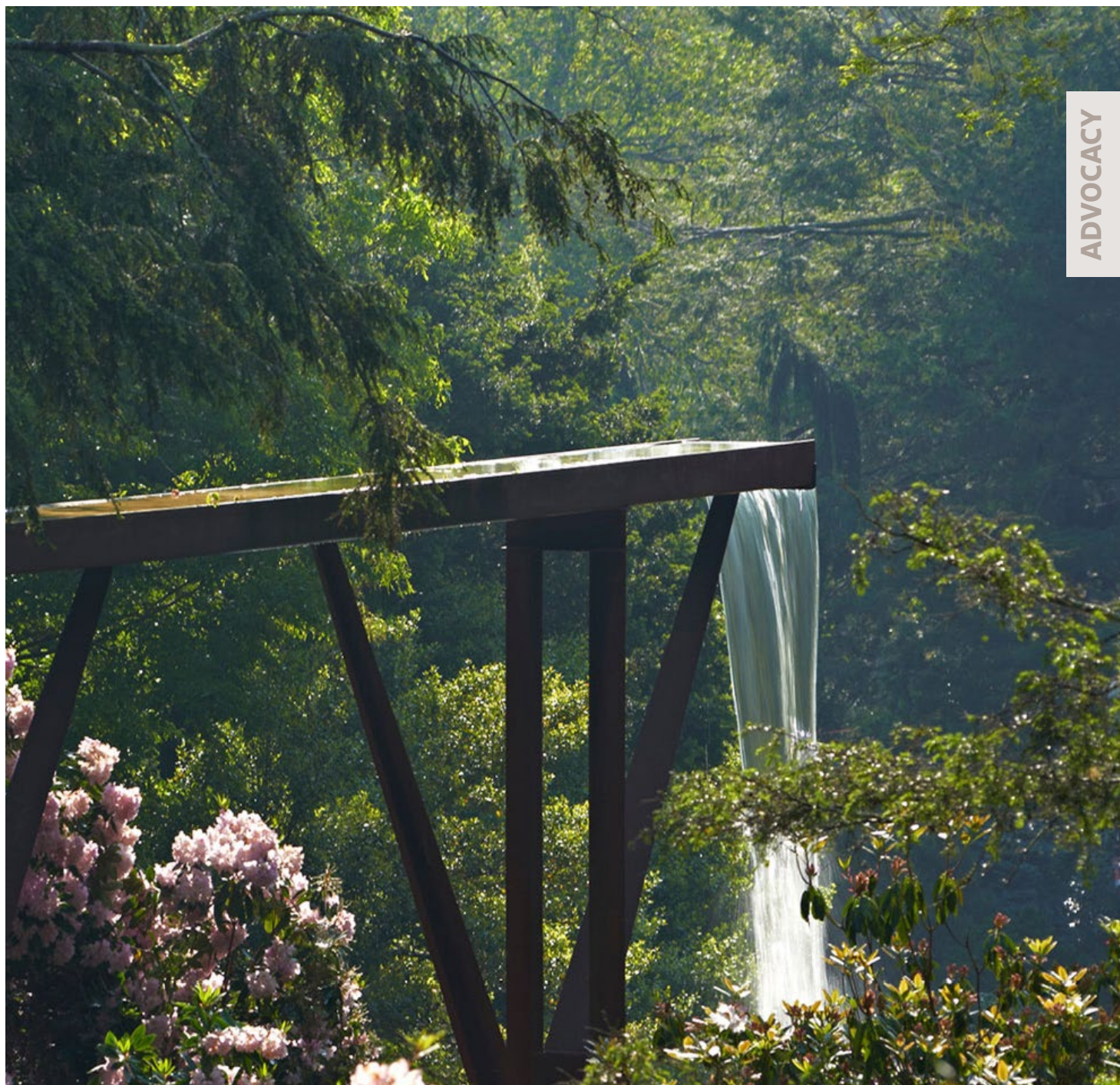
Although there are 17 stated goals, the goals affect each other, and all actions will support other outcomes. Integrated solutions are required for [sustainable development](#).

The climate and biodiversity crises threaten our ability to collectively meet these goals, increasing food insecurity and migration from increasingly uninhabitable places.

The IFLA Climate Action Commitment, of which ASLA is a signatory, includes a commitment to advancing the SDG that calls for “accelerating our work to repair global ecosystems.” Landscape architects contribute to achieving these goals through their planning and design efforts, and several of the goals are a focus of our practice, as highlighted below.

“*Through each of the 77 nations represented by the IFLA, landscape architects within our member associations (including ASLA) accelerate our work to repair global ecosystems.*

- IFLA Climate Action Commitment



ASLA 2019 Professional General Design Award of Excellence. Heritage Flume. STIMSON. Sandwich, MA, USA / Charles Mayer

06

Embody the SDGs

Embed the SDGs into Business Plans and Daily Actions

Through all of the actions taken above in the guide, landscape architects work to sustain and create places that contribute to health and well-being through increasing green networks with a diversity of plants in cities and towns. They design systems to clean water and to recharge groundwater resources. They design multi-modal green streets and plan for public transit, bicycle networks, and safe pedestrian walks and paths. They support biodiversity through conservation, restoration, and design of soils and plantings. They work to establish local food sources and distribution in cities and regions to provide healthy food.



07 Go global

Expand International and Interdisciplinary Relationships

Most importantly, they collaborate with other design professionals, scientists, community groups, and equity and environmental organizations to address multiple sustainability goals. This includes involvement in developing policies.

By incorporating these strategies in this document, ASLA and its members will contribute significantly to the broader global impact of the UN SDGs.

The IFLA Climate Action Commitment, of which ASLA is a signatory, includes a commitment to advancing the SDG that calls for “accelerating our work to repair global ecosystems.” Landscape architects contribute to achieving these goals through their planning and design efforts, and several of the goals are a focus of our practice, as highlighted on the right.

1. **End poverty** in all its forms everywhere.
2. **End hunger**, achieve food security and improved nutrition, and promote sustainable agriculture.
3. Ensure **healthy lives** and promote **well-being** for all at all ages.
4. Ensure inclusive and equitable **quality education** and promote lifelong learning opportunities for all.
5. Achieve **gender equality** and empower all women and girls.
6. Ensure availability and sustainable management of **water and sanitation** for all.
7. Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. Promote sustained, inclusive, and **sustainable economic growth**; full and productive **employment**; and decent work for all.
9. Build resilient **infrastructure**, promote inclusive and **sustainable industrialization**, and foster **innovation**.
10. **Reduce inequality** within and among countries.
11. Make **cities** and human settlements **inclusive, safe, resilient, and sustainable**.
12. Ensure **sustainable consumption** and production patterns.
13. Take urgent action to **combat climate change** and its impacts.
14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. Protect, restore, and promote sustainable use of **terrestrial ecosystems**, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.
16. Promote **peaceful and inclusive societies** for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels.
17. Strengthen the means of **implementation** and revitalize the [Global Partnership for Sustainable Development](#).

Appendix

Resources

ASLA Resource Guides

[Resilient Design](#)
[Green Infrastructure](#)
[Transportation](#)

ASLA Residential Design Guides

[Applying Ecological Design](#)
[Improving Water Management](#)
[Increasing Energy Efficiency](#)
[Using Low-Impact Materials](#)

Biodiversity

[Viewpoint: Delivering Biodiversity-Positive Design](#)
by Jasmine Ong, Landscape Australia

Climate Positive Design

[Climate Positive Design \(CPD\) Beyond Neutral](#)
[Annual Report 2021](#)

Communications

[ASLA Guide to Field Visits](#)
[Environmental Protection Agency Community and Citizen Science](#)

Equity

[ASLA Racial Equity Plan of Action](#)
[ASLA Participatory Design Must Evolve](#)
[ASLA Interview with Diane Jones Allen](#)

General

[ArcGIS Living Atlas of the World](#)

Implementation

[AILA Climate Positive Design Resources](#)
[Landscape Institute: Landscape for 2030](#)
[Firescaping: Protecting Your Home with a Fire-Resistant Landscape](#) by Doug Kent
[The Wild](#) by Greg Kochanowski, ASLA
[UN Climate Neutral Now](#)

[UN Climate Action Goal](#)

[Climate Action/Sustainability Plan Examples:](#)
[Jacobs](#), [Gensler](#), [HMC](#), [Smith Group](#), [SOM](#),
[Mithun](#), [GGLO](#), [David Baker Architects](#),
[Dialog](#), [Hart Howerton](#), [City of San Francisco](#),
[University of California, Berkeley](#)

Indigenous Peoples

[AILA Reflect Reconciliation Action Plan](#)
[UN Department of Economic and Social Affairs – Fifth Volume: State of the World’s Indigenous Peoples](#)

Policy

[American Planning Association Climate Change Policy Guide](#)
[ASLA Smart Policies for a Changing Climate](#)
[United Nations Sustainable Development Goals](#)



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