CLIMATE CHANGE AND RESILIENCE
(2019, R2023)

Policy Statement
The American Society of Landscape Architects (ASLA) recognizes the serious risks that climate change poses to ecosystems and public health, safety, and welfare. ASLA believes landscape architects are the most qualified professionals to lead and develop innovative and sustainable solutions. ASLA believes design and planning can reduce and mitigate ecological harms, improve resilience, and adapt our communities to the effects of climate change.

ASLA supports:

- Broad collaboration to address the complexities of a changing climate, including active engagement of government, public and private sectors, communities, and others
- Data-driven and science-based research to produce knowledge that may be used to address climate change
- Nature-based solutions to enhance climate resilience in all built environments
- Ecosystem restoration and biodiversity protection to reduce the impacts of climate change
- Equitable and just planning and design for all communities, realizing the need to address past harms on underserved communities, which often have greater exposure to climate impacts
- Creative incentives for solutions that lower emissions, reduce resource use, and increase climate resilience

Justification
Climate change is a critical issue that impacts both the natural environment and human society. Landscape architects are the most qualified professionals and are uniquely positioned to lead, collaborate with, and develop innovative and sustainable solutions to protect public health, safety, and welfare. Landscape architects play a vital role in addressing climate change by using their education and experience in environmental design and social sciences to pioneer best practices that address the realities of a changing climate, including extreme heat, drought, fires, flooding, and sea level rise. Their expertise in planning and designing nature-based infrastructure reduces climate change impacts and mitigates ecological harms. ASLA's Climate Action Plan (launched in 2022) outlines the Society's plan and calls the profession to improve climate resilience and adapt our communities to the effects of climate change.

Landscape architects develop and implement sustainable solutions that:

- implement nature-based infrastructure
- design for resilience from increasingly frequent and extreme natural disasters such as flooding, wildfires, and extreme weather
- adapt to changing environmental conditions such as sea-level rise and shifting USDA plant zones
- reduce the heat island effect
- promote the proper selection and location of trees, plants, and other materials that sequester carbon
- increase and enhance open space and the public realm
- mitigate transportation connectivity issues
- adapt best practices in stormwater drainage to changes in rainfall
- address wildlife habitat shifts and biodiversity loss
- reduce the use of materials with high embodied carbon

- use more locally sourced products to reduce transportation emissions

Climate change is a complex issue. The work of landscape architects ranging from a backyard, a street, neighborhood, district, city, county, and/or region helps to protect our planet and our future.

Issue

Climate change refers to significant and long-term changes in the Earth's climate patterns, which are being driven by human activities including the burning of fossil fuels, deforestation, and industrial processes. These activities release greenhouse gasses—such as carbon dioxide, methane, and nitrous oxide—into the atmosphere, which trap heat and lead to a changing climate. Climate change presents a wide range of interconnected environmental, social, and economic issues, such as:

- Rising global temperatures—Earth's average temperature has been increasing, leading to more frequent and severe heat waves and worsening air quality. This can result in various health issues, especially for vulnerable populations.

- Melting ice and rising sea levels—Higher temperatures are causing polar ice caps and glaciers to melt, contributing to rising sea levels. This can lead to coastal erosion, increased flooding, and the displacement of communities living in low-lying areas.

- Extreme weather events—Climate change is associated with more frequent and intense extreme weather events, such as hurricanes, droughts, wildfires, and heavy rainfall. These events can have devastating effects on communities and ecosystems.

- Biodiversity loss—Climate change disrupts ecosystems and threatens many plant and animal species, leading to a loss of biodiversity.

- Food and water security—Changes in temperature and precipitation patterns can impact agricultural production, leading to food shortages. Additionally, altered water availability can affect both drinking water supplies and agriculture.

- Economic consequences—Climate-related events can damage infrastructure, disrupt supply chains, and lead to increased insurance costs. These economic impacts can disproportionately affect vulnerable communities.

- Migration and conflict—As people are displaced due to the effects of climate change, there is potential for increased migration and conflicts over resources such as water and arable land.

- Environmental feedback loops—Some climate-related processes, such as the thawing of permafrost, release additional greenhouse gasses, creating self-reinforcing feedback loops that can exacerbate climate change.

Resources

1. ASLA
    - ASLA Climate Action Plan 2022-2025, November 2022 https://www.asla.org/climateactionplan.aspx
    - ASLA Climate Action Field Guide for ASLA Members, November 2022 https://www.asla.org/fieldguide.aspx

- Smart Policies for a Changing Climate: The Report and Recommendations of the ASLA Blue Ribbon Panel on Climate Change and Resilience, June 2018 www.asla.org/climatepolicies
- Landscape Architecture Technical Information Series: A Landscape Performance + Metrics Primer (2018) by Emily McCoy, ASLA https://my.asla.org/My-ASLA/Store/StoreLayouts/Shop-LATIS.aspx
- American Society of Landscape Architects Stormwater Case Studies. www.asla.org/stormwatercasestudies.aspx

2. Public
    - Fourth National Climate Assessment Volume II: Impacts, Risks and Adaptation in the United States, 2018 https://nca2018.globalchange.gov/
    - U.S. Global Change Research Program https://www.globalchange.gov/browse
    - United States Environmental Protection Agency Climate Change Research https://www.epa.gov/climate-research
    - National Institute of Environmental Health Sciences https://www.niehs.nih.gov/research/programs/climatechange/index.cfm
    - United Nations Climate Action https://www.un.org/en/climatechange/reports
    - United Nations Intergovernmental Panel on Climate Change https://www.ipcc.ch/