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Systems Of Cross-sector Integration and Action across the Lifespan (SOCIAL) Framework Research Brief

Environmental Sector   Summer 2024

Research Brief Contents

Acknowledgements

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The Environmental Sector and the Role it Plays in Addressing Social Isolation, Loneliness, and Connection (SILC)

When defining the Environment, it is important to note that the term is complex and can convey different meetings. Broadly speaking, the word environment is used as a synonym for space, territory, place, or ecosystem.[1] Comprehensively, this can be expanded to include the conditions in which living takes place - including the air, water, land, plants, animals, and other elements that make up our physical world and influence our lives. It also includes the system of physical, chemical, and biological factors, including living and non-living elements, and the relationships among all organisms on the planet.[1] Research has long demonstrated the impact of the natural environment on mental health. Access to green and blue spaces has been noted as a key focus point for promoting mental health through the environment[2] and has been linked to reductions in mental exhaustion and tension, improved attention, and a strengthened sense of purpose and meaning.[3] Time spent in nature has been associated with increased brain activity in the prefrontal cortex, which is the area of the brain that helps us identify, respond to, and manage emotions.[3] Additionally, being in high-quality natural and physical environments is linked to improved mental clarity and a heightened sense of control.[4] Being in proximity to wildlife in these spaces also offers significant mental health benefits.[58] The relationship between positive mental health and social connection is bi-directional, meaning each influences and enhances the other. Studies show that strong social connections can lead to better mental health outcomes, as supportive relationships provide emotional support, reduce stress, and foster a sense of belonging.[5] Positive mental health (including a strong sense of identity, agency, and belonging) can improve one's ability to form and maintain social connections.[6] This relationship underscores the potential of the environmental sector to play a significant role in addressing SILC.

- Many byproducts of the climate crisis (e.g., migration, fear/anxiety) can be socially isolating,[7-8] Additionally, the broader triple-planetary crisis encompasses pollution and biodiversity loss, which further impact isolation, mental health, and access to green spaces. However, shared experience can also generate an increased sense of meaning, social engagement, social cohesion, and increased engagement with mitigation activities.[9]
- Climate change and extreme weather events can intensify social isolation by changing physical and social environments, limiting opportunities for community interaction, and putting strain on social relationships through increased competition or hostility between groups.[52]
- Outdoor natural spaces can facilitate social connections and foster a sense of community belonging.[10]
- Neighborhood environmental quality can spur socially cohesive activities in different ways: high-quality environments encourage maintaining neighborhood pride and spending time outdoors, which increases social contact, while low-quality environments can motivate the community to come together to improve the area's quality.[11]
- Social connection and social ties can play a role in building climate resilience while social disconnection weakens a community's ability to adapt to extreme weather and climate events.[53]
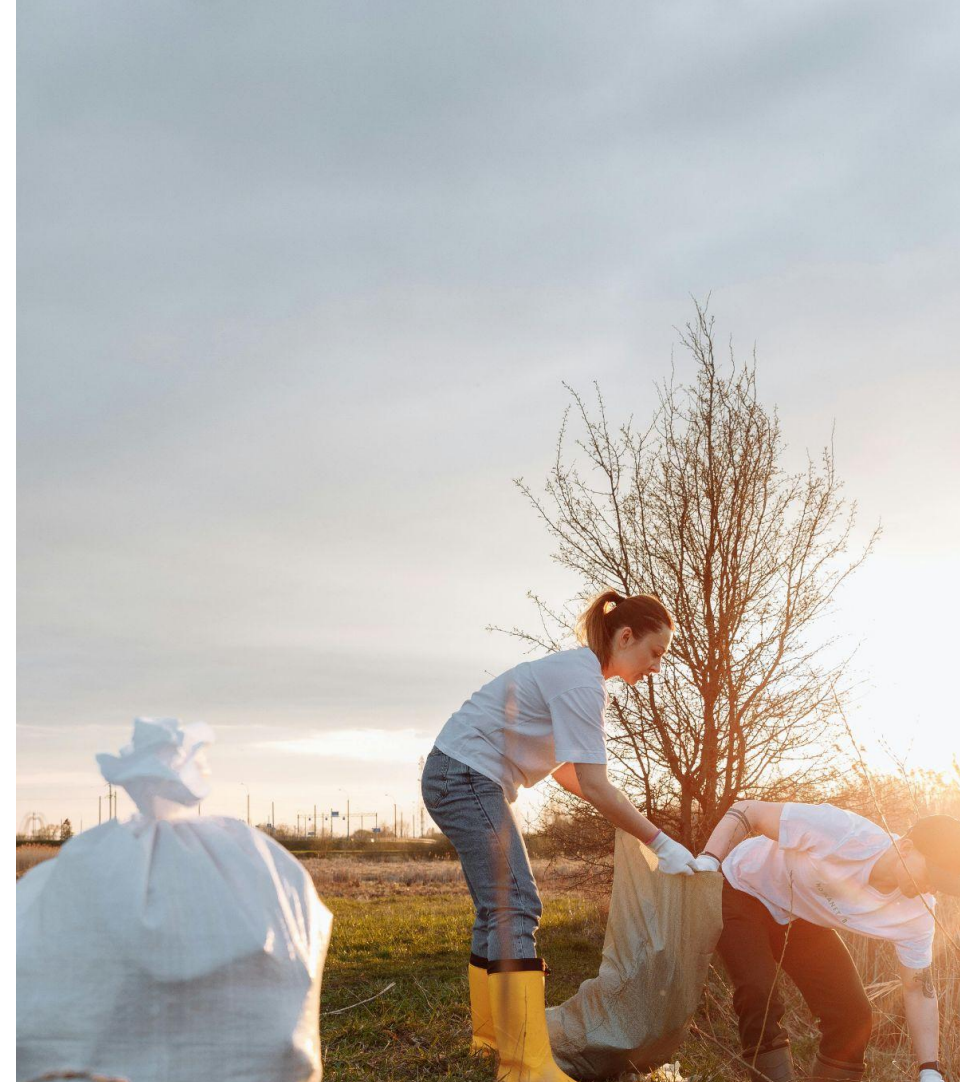
The environmental sector plays a crucial role in addressing social isolation, loneliness, and fostering connections (SILC) by creating green spaces for community engagement and promoting climate resilience and shared sustainability through communal efforts to protect and restore natural resources.

Scope and Objectives

This research brief explores the specific relationship between the environment and social isolation, loneliness, and connection (SILC), expanding on existing research at the intersection of the environment and mental health. While we touch on the environment and mental health to provide context, our primary focus is on promising strategies for addressing SILC. Additionally, we highlight the pressing need for more research on the relationship between the environment and social connection. This brief builds upon the findings of the recently published SOCIAL Framework Built Environment Report, to further explore promising strategies for addressing SILC.

The strategies presented on the following pages offer further exploration and additional insights into related concepts discussed in the full report, enhancing understanding and application within the environmental sector. Strategies listed below come from the original report, and readers are encouraged to refer to it for additional context.

- Design principles that support comfort and connection including access to and use of green and blue spaces (pg. 15)
- The investment in multi-use public spaces that foster social connection and nature connection through the development of versatile public spaces like parks and community centers that encourage proximity to nature and green social prescribing (pg. 16)
- Collective impact strategies that can be applied within the context of the environmental sector, such as co-creating solutions in partnership with community members, facilitating cross-boundary collaboration and investments, driving systemic change, addressing multifaceted issues collectively, and more (pg. 20-22)

It is also important to recognize that different strategies will be more effective in various contexts, such as urban versus rural settings. In the SOCIAL Framework Built Environment Report, page 11 introduces cross-cutting considerations aimed at ensuring inclusivity when developing, researching, and implementing these strategies. Additionally, page 20 outlines the significance of collaborating with community members, creating multi-solving solutions, and generating collective impact for lasting and equitable change across different populations and settings.

Read the SOCIAL Framework Built Environment Report

After reading this research brief, you will be able to:

- *Identify how the design, planning, policy, and use of the environmental sector can negatively or positively influence social connection.*

- *Share promising strategies for increasing social connectedness through equitable design, planning, policy, and interactions with the environment across levels of influence for various stakeholders.*

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Addressing SILC Across Levels of Influence

The SOCIAL Framework identifies five levels of influence that should be considered when developing a systems-based approach to promoting social connection and addressing social isolation and loneliness. This table names the key stakeholders best positioned to take action and provides a definition of each level of influence.

Key Stakeholders Poised to Influence the Built Environment	
Level of Influence	*Key Stakeholders*
Individual *Individuals who have the ability to influence individual behavior and/or provide SILC resources that can be used by others.*	• Engaged community members • City planners/ regional planners/ economic development leaders • Architects and designers • Policymakers • Funders
Interpersonal *Interpersonal relationships that may influence behavior in the context of social networks and support systems.*	• Community member with community member (e.g., friends, families, neighbors for grassroots/ local efforts) • Sector leaders with sector leaders (e.g., collaboration and cross-sectoral partnerships for creation and operation of spaces) • Sector leaders with community members (e.g., co-creation of spaces)
Organizational/ Institutional *Entities with the power to influence organizational culture through the designing of policies, practices, and structures.*	• Second places (e.g., educational institutions, workplaces) • Community organizations/ nonprofits and third places (including arts, culture, and faith-based organizations, libraries) • Healthcare facilities (e.g., clinics/ hospitals, dialysis/infusion spaces) • Social service organizations (including mental health and addiction services) • Municipal services departments (including those who oversee and fund public infrastructure, housing policy, and community services, transportation, parks and recreations, housing authorities, zoning and coding officials) • Local businesses (e.g., grocery stores, restaurants, shops)
Community *Entities that can collaborate to bring groups of individuals together outside of any one specific organization and foster social connection.*	• Local government (e.g., elected officials, councils, parks and recreation) • Indigenous communities & councils • Infrastructure committees (including those focused on the development and maintenance of transit, utilities, public works) • Community/ neighborhood associations and advocacy groups (including groups that advocate for residents' needs and interests, serve specific priority populations; e.g., youth, older adults, racialized populations, individuals with disabilities)
Societal *Organizations, agencies, and departments with the ability to set or shift industry standards in ways that prioritize taking action to reduce SIL and foster connection.*	• State and federal government (e.g., legislators, regulatory agencies) • Indigenous nations • Professional associations & organizations with aligned mandates • National/ international organizations (e.g., World Health Organization) • Philanthropic organizations • Researchers • Media

Table 1: Key Influences & Stakeholders in the Built Environment

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Promising Strategies for Addressing SILC Through the Environment

This table presents strategies for addressing SILC through the environmental sector, the levels of influence for each strategy, and the associated social connection outcomes it addresses. Read more about each strategy and examples of community implementation, beginning on the next page.

Find these terms in the Glossary

Strategies for Addressing SILC within the Environmental Sector		
Strategy	*Level(s) of Influence*	*Social Connection Outcomes*
Foster social sustainability and proactive climate resilience by creating inclusive and equitable community development practices.	● ○ ● ● ○	Social equity, social cohesion, social connectedness, social capital
Design multi-solving solutions that address climate and environmental resilience while enhancing public and social spaces.	● ○ ● ○ ●	Social interaction, social cohesion, social connectedness, sense of community
Increase access to nature-based environments, such as green and blue spaces, to promote well-being and social interaction.	○ ○ ● ● ●	Social interaction, social cohesion, social capital
Implement nature-based social prescribing to improve health and social outcomes by connecting individuals with natural environments.	○ ○ ● ● ●	Social connectedness Reduced loneliness, reduced social isolation
Support initiatives that provide shared spaces for social interaction and environmental stewardship.	● ○ ● ● ○	Social interaction, social connectedness, trust, sense of community, social capital Reduced social isolation

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Foster social sustainability and proactive climate resilience by creating inclusive and equitable community development practices.

Historically, development practices have not always considered equity. Environmental injustice occurs through increased exposure to pollution and related health risks, restricted access to essential environmental services, and the displacement or loss of land and resource rights.[57] As the pace of development quickens and creates environmental and climate threats, marginalized communities, including low-income communities, communities of color, Indigenous and Tribal nations, and immigrant communities, and older adult populations are often left bearing the environmental burden of non-equitable development.[13] Conversely, when community development practices are inclusive and equitable, these systems can foster social sustainability and proactive climate resilience in communities. Climate resilience refers to actively building the capacity to thrive in an environment characterized by constant change and threats to sustainability.[14] Social sustainability is achieved when different systems, structures, and relationships of society actively support current and future generations to build healthy and connected communities.[15] Equitable development practices support proactive climate resilience, which in turn allows for communities to develop social sustainability that ultimately drives environmental sustainability.[16] To create sustainable communities in the face of climate change, equitable and inclusive development practices must be established first to foster social sustainability and climate resilience.

The two main dimensions of social sustainability are equitable access to resources and services and the capacity of a community to have continued health and social functioning.[17] Equitable development policies create systems that address the systemic and disproportionate effects of climate change felt by certain communities through strategies such as adopting participatory approaches to co-create resilience plans with communities, joining diverse stakeholders in projects to include all perspectives, and using shared learning in climate planning to learn from the experiences of a range of communities.[13, 18] This includes practical measures like scheduling meetings at accessible times and locations (e.g., near public transit, considering childcare needs), compensating community members for their time and expertise, and partnering with social workers or social work researchers to leverage their social justice expertise. Additionally, it is essential to understand the community's needs and priorities alongside their strengths. Community participation in environmental planning and climate mitigation efforts has been shown to foster social cohesion and connection while assuaging environmental-related social isolation.[8, 19] Communities can build collective agency and efficacy after climate-related natural disasters, strengthening social capital and creating the social infrastructure necessary to support long-term social sustainability.[16, 20, 59-60]

Related Concept

Intersectional Climate Justice
A form of climate justice that examines the overlapping systems of disadvantage in the environment. Essential components of applying intersectional climate justice include: tackling underlying economic reinforcers of inequalities, redressing differential vulnerabilities, considering ethics and politics, adopting place-based approaches, and promoting cross-identity/vulnerability activism and community resilience building.[21]

Barcelona, Spain: The Climate and Care Refuges program is fighting the negative impacts of unequal access to green space in one of the city's most vulnerable districts, Nou Barris. The aim of this project is to create a network of climate and care refuges in a historically marginalized neighborhood by connecting public facilities, like schools and sports centers, to green and gray infrastructure that provides public and shaded spaces to take shelter in on hot days. These spaces are designed by local residents with a prioritization on including the participation of marginalized populations. Through this program, climate refugees are supported by the city to tackle equitable climate resilience and build social networks throughout their community.

United States: The Climate Safe Neighborhoods program operates in 13 US states to address systemic issues in housing practices that have caused marginalized neighborhoods to be more vulnerable to experiencing extreme heat and flooding as a result of climate change. The program collaborates with stakeholders and residents to create changes that make communities more resilient to extreme weather effects. Examples of projects led by residents and community partners include installing urban orchards in abandoned parking lots, developing multi-use trails, and restoring forgotten forests.
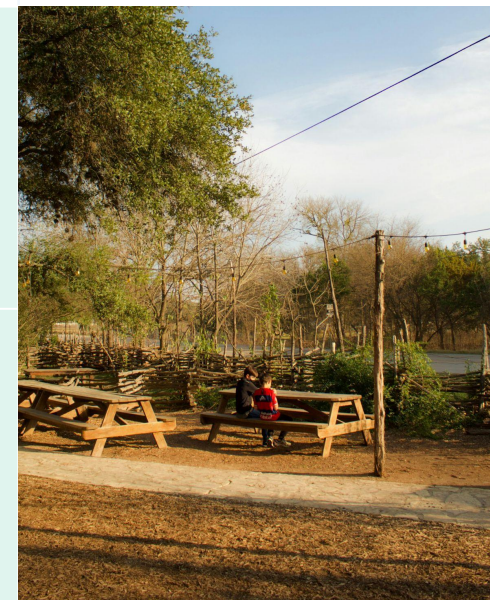
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Design multi-solving solutions that address climate and environmental resilience while enhancing public and social spaces

With this rising threat of climate change, multi-solving solutions are being created to build environmental and climate resilience while also creating spaces that support social interaction and community engagement. Many cities are investing in nature-based solutions that harness the power of nature and wildlife restoration to address societal challenges like water insecurity and extreme temperatures, while also contributing to climate change mitigation.[31] An example of the social and ecological benefits of wildlife restoration is the positive environmental impact of wolf reintroductions, which help regulate ecosystems by controlling prey populations and reducing overgrazing, leading to healthier plant growth and less erosion, while also promoting biodiversity conservation, eco-tourism, educational opportunities, and fostering community engagement with natural environments.[61] The ultimate goal of a nature-based solution is to protect, restore, or manage ecosystems in ways that increase environmental resilience while also improving human well-being. Climate resilient infrastructure is also emerging as a strategy to create buildings that are resistant to climate shocks to protect infrastructure and preserve resources. Climate resilient buildings are defined by their preparation for significant stress (ie. installing storm shutters or elevating structures off the ground), their ability to adapt as risks change through flexible zoning laws and building codes, and their capacity for a quick recovery from damage.[32]

Urban innovations that are successful both in addressing climate resilience and enhancing public spaces include green roofs and rain gardens, to absorb stormwater and reduce flood damage, and green corridors, that reduce the impacts of urban heat waves and can lead to a two-degree reduction in urban temperatures.[31, 33] Elements within corridors like walking and biking paths and benches encourage socialization. They also serve to add green spaces to urban areas, which improves social cohesion and social connections, while also encouraging more wildlife and biodiversity by creating microhabitats.[2, 62] These green spaces can be paired with "wildlife corridors" that allow larger species to pass through cities.[62] Coastal multi-solving solutions support aquatic ecosystems and can mitigate sea level rises, leading to a reduced risk of flooding for coastal communities. Mangrove forests are being planted to create habitats for sea life, while also storing significant amounts of carbon. Community members who nurture the mangrove forests note that it has brought their community together and boosted community participation.[34]

Learn more about multi-solving solutions and the role they play in advancing social connection beginning on page 20 of the Built Environment SOCIAL Framework Report.

Rotterdam, The Netherlands: In response to extreme flooding events, Rotterdam architects designed a tidal park that doubles as an area for recreation while also having the capacity to collect 1.7 million liters of water. The park offers a tier for sports, ramped sides for a skate park, an amphitheater, and various spaces for sitting and chatting with others. This project meets many social purposes through a unique park that helps foster a sense of community while also creating a flood-resistant community.

New York, New York: The High Line in New York City is a vibrant walking trail that was created from a repurposed freight train rail system. It has now become a uniquely designed public space that offers a community green space while also reducing urban heat. The High Line walking trail includes native, drought-resistant plants, a home for pollinators, and a composting system, as well as many shaded benches and areas for social interaction.

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Increase access to nature-based environments, such as green and blue spaces, to promote well-being and social interaction.

Nature-based environments can provide direct, restorative benefits for well-being such as inducing stress relief, inspiring awe, and fostering prosocial behavior.[22] Natural areas, such as green and blue spaces, also indirectly benefit our well-being by creating space for social interactions and social cohesion.[23] Access to nature-based environments influences the mental health of communities; spending time in nature provides cognitive restorative benefits, enhances feelings of awe and beauty, renews attention, alleviates tension, and fosters a sense of meaning in life.[24] However, access can be a barrier in dense, urban environments, which are home to over half of the world's population, particularly in marginalized communities such as BIPOC, low-income, and fenceline neighborhoods..[25] Harmful policies like redlining have led to fewer green spaces in affected neighborhoods, worsening climate impacts such as extreme heat and flooding. Increasing access requires structural efforts to correct these inequities. Urban greenspace refers to vegetation of any kind in urban locations, such as smaller green spaces with features like street trees and green roofs, or larger green spaces like parks or greenways.[26] Discover the multitudes of interventions that can increase urban access to green space in this report by the World Health Organization.

Nature-based environments also have great capacity to support social health, through increased engagement and connections with others. Green spaces foster social interaction through elements like sidewalks to encourage pedestrianism, playgrounds, and shaded areas.[27] Open green spaces provide spaces for children to play and meet one another, observe and appreciate wildlife, engage in recreational and sporting activities, and participate in organized community events. Research shows that tree coverage and park proximity are linked with perceptions of social cohesion and social capital building.[22,27] Additionally, greening urban spaces through interventions like restoring vacant lots has been shown to significantly reduce crime, such as gun assaults and burglaries, while enhancing perceptions of safety and promoting greater social interaction among community members.[62] Similarly, blue spaces enhance social connections and a sense of belonging by providing a place for social interaction and engagement.[28] However, access to blue space is more limited than green space, as it is harder to implement in geographic locations where water is not physically present.[29] This highlights the need to maximize access to blue space where it exists, like creating waterfront walkways and parks.

Policy Highlight

Access to Multi-Use Spaces
Support federal efforts to improve coordination and braid funding opportunities to support the development of safe, healthy, culturally relevant, and accessible community spaces to increase connections to arts, recreation, and natural environments;

Learn more about nature-based environments and the role they play in advancing social connection on page 16 of the Built Environment SOCIAL Framework Report.

Bronx County, New York: The Mott Haven-Port Waterfront Plan in the Bronx is revitalizing a waterfront that has previously been characterized by power plants and waste transfer stations. 97% of this community is Black and Brown individuals, and urban planners recognized the impact of environmental racism on this community through the disproportionate impact of pollution generated from the power plants. Interviews with residents helped shape the plan to bring new life to the waterfront through increased access, microforests, increased room for recreation, and shoreline and reef restoration. The plans also included efforts to increase both pedestrian mobility and public transit access to and from the waterfront. Following the project, residents experienced an improved environment with cooler ambient air and greater access to local blue and green spaces.

Atlanta, Georgia: The Atlanta BeltLine was created from an old railroad corridor and is now a massive greenway that encircles the city's downtown and connects 45 neighborhoods to each other and to other parks. Over the past 17 years, this unused transportation corridor has transformed into a vibrant green space that offers activities like free exercise classes, arboretum tours, a lantern parade, and an abundance of murals and street art. One particular art feature, Tiny Door ATL, has excelled at creating a sense of community through a scavenger hunt of community-painted, mini doors that are hidden throughout the greenway.

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Implement nature-based social prescribing to improve health and social outcomes by connecting individuals with natural environments.

Social prescribing is used to describe the practice of non-medical referral programs that aim to increase one's sense of social connectedness and belonging to combat social isolation and loneliness. When linked with nature-based programs, social prescribing can promote nature contact to foster restorative and social benefits.[35] Group-based activities that include natural elements have been found to cultivate connection and belonging, and increased program length is correlated to increased benefits.[36] These interventions are designed to be low-cost and promote sustainability as they encourage participants to interact with their environments in a safe and positive way. Utilizing natural elements like parks, hiking trails, and coastlines as a means for restoring mental health can reduce the need for more costly medical interventions in some cases.[35]

Major health insurance companies, like Blue Cross Blue Shield and Kaiser Permanente, have recognized the health benefits of nature-based social prescribing, and have partnered with programs like park prescriptions and family education programs.[37] Advocating for more health insurance companies to adopt nature-based social prescribing into their coverage plans and to include screening for social isolation and loneliness will encourage increased use of these programs.[35] One of the key advantages of nature-based social prescribing is the vast range of ways it can be implemented. There are smaller-scale programs like community gardening, forest bathing, bird watching, and farmers market vouchers.[38] There are also larger, national-level programs such as the Walk with a Doc program, Friends in Nature program, and the Track Rx program. Nature-based social prescribing can accommodate various activity and mobility levels as well, including viewing nature, being outdoors in nature, and participating in activities in nature.[39] These programs can be also be tailored to support populations facing high rates of social isolation (e.g., older adults, immigrants/refugees, etc). Studies show that reconnecting rural and Indigenous communities to their natural environments through land-based interventions strengthens social connections and aids in healing grief and PTSD. Programs like Project George in Cree communities reduce youth suicides and promote well-being by engaging participants in traditional practices alongside elders. These connections help restore cultural identity and resilience, even in urban settings, where nature-based practices continue to support health and social bonds.[55-56]

Policy Highlight

Social Prescribing
Support social prescribing practice in medical institutions including hospitals, long-term care facilities, and community health centers to refer patients to community-based resources such as legal guidance, financial support, housing assistance, food security, time in nature, arts and culture, and volunteer opportunities.

Manchester, UK: The RHS Bridgewater Community Wellbeing Garden in Manchester partnered with Salford Primary Care to launch a social prescribing project that involved healthcare referrals to their therapeutic gardening program. The garden offers spaces for contemplation as well as socialization, spaces for users to cultivate and upkeep plants, and spaces for wheelchair users to experience the feel of grass and plants at their level. The social prescribing program utilized group activities to connect participants with nature and each other, through a range of interventions including nature walks and garden-based crafts. Program participants noted that the garden social prescription improved their mental health and confidence levels while reducing their social isolation.[35]

Davis, California: The University of California, Davis has implemented a nature-based social prescribing program on its college campus to offer a holistic healthcare regimen that utilizes nature to foster better physical, mental, and social lives among its students. The program, Nature Rx, operates on campus through the UC Davis Arboretum and Public Garden with elements like a campus tree tour, "green classrooms", and guides to help students discover their own nature nook. Run by student and faculty volunteers, this program offers many avenues for students to engage with nature and each other.

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Environmental Stewardship has been defined as the actions taken by individuals or groups to protect, care for, or responsibly use the environment in pursuit of environmental and ecological outcomes.[40] Promoting group-oriented environmental stewardship activities creates spaces for social interactions and social connections between individuals united by a common goal. Stewardship groups that maintain and advocate for green and blue spaces have experienced strengthened social trust and community engagement through events that amplify their environmental values and promote socially inclusive environmental activities.[41] Similarly, community gardening groups have noted that the collective act of nurturing a garden increased their motivation to engage in social interactions and helped connect them to a sense of community.[35, 38, 42] Intergenerational strategies can also be blended with these activities. For example, intergenerational contact zones, such as community gardens, parks, and shared spaces, encourage sustained, meaningful interactions between older and younger generations, fostering collaboration and mutual respect. Additionally, structured volunteering programs and educational initiatives designed to bring different age groups together for environmental projects can reduce ageism, strengthen social bonds, and enhance collective action toward environmental stewardship.[54] Rural and Indigenous communities have unique relationships to the environment, as the land is intricately tied to their well-being, livelihood, and cultural values. However, rural communities also often face high rates of social and geographic isolation.[43, 44] While this isolation poses challenges, it also presents opportunities for fostering community resilience and connection through environmental initiatives.

When spaces are created for environmental volunteering, engagement opportunities can foster well-being and social connection in these communities while reducing the socially isolating factor of environmental degradation.[45] While environmental stewardship activities can foster social connection, social connections can in turn spur motivations to engage with the environment. Promoting opportunities for participants to build social connections increases the likelihood that individuals will join volunteer groups, which ultimately strengthens stewardship engagement. Social capital is the foundation for building environmental stewardship groups, and there is strong motivation for people to grow their social networks with individuals who share similar environmental values.[46] One study found that regardless of environmental goals, participants were more likely to join a stewardship movement when it aligned with their social and community engagement motivations.[47] Similarly, climate grief circles, like those organized by Climate and Mind, offer a supportive space for individuals to share their emotional responses to climate change. These social interactions help people process complex feelings such as grief, anxiety, and fear, while fostering a sense of connection and collective resilience.

Boston, Massachusetts: The Common Canine Group in Boston aims to engage dog owners to become active environmental stewards of the parks their dogs recreate in. The goal of the group is to create a long-term, sustainable mechanism for restoring park areas that are permitted for off-leash recreation. Dog parks provide opportunities for social interactions between pet owners which can increase social cohesion and neighborhood sense of community, especially in urban areas where pet owners visit the dog park multiple times a day.[48] This program increased community building potential by motivating owners through a shared goal of maintaining the beauty and function of the park.

Portland, Oregon: Environmental Services in Portland have established the Green Street Steward Program to engage community members in green street maintenance like picking up trash and debris, plant weeding, and weekly watering. The community is encouraged to join the program to protect public green spaces and help keep Portland's rivers clean, all while building a sense of community and meeting like-minded individuals.
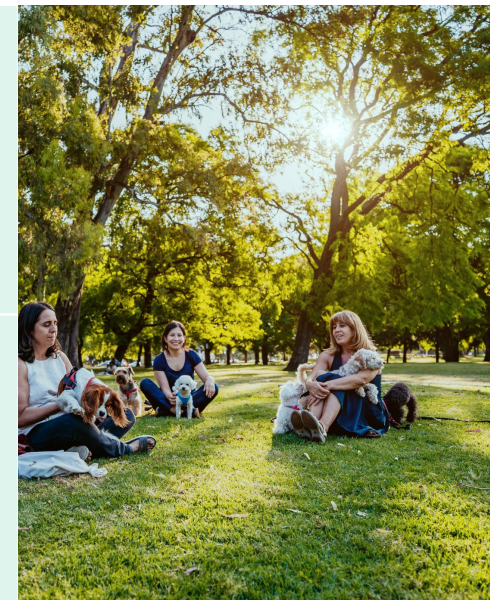
Gaps and Implications for Future Research

While this research brief begins to shed light on the environmental sector's role in advancing social connection and addressing social isolation and loneliness, several gaps remain that merit further investigation. Most research on increasing access to greenspace focuses on urban environments, where land is more limited, while rural areas receive less attention, particularly regarding the quality of their green and blue spaces. Research indicates that the quality of natural spaces is more influential than quantity in fostering a sense of community (48, 6). Higher-quality natural spaces also provide greater restorative effects on mental health. The impact of rural environments on well-being and community is particularly strong for rural residents, who often have deeper connections to the land (4). While urban areas may focus on increasing green and blue spaces, equal attention should be given to enhancing the quality and accessibility of natural spaces in rural areas. Examining the role of other sectors, like housing and transportation, is also crucial. These sectors significantly impact access to natural spaces. Cross-sector partnerships should be explored to ensure infrastructure development considers natural environments and the wildlife that call these places home. For example, modifying zoning codes to reduce or eliminate parking minimums for housing developments can free up space for natural areas that encourage social interactions.Further research is needed to balance motivating individuals toward environmental stewardship and climate resilience without overwhelming them with the climate crisis. The Six Americas of Climate Change Framework posits that there are six groups of reactions to how people perceive climate change messages: dismissive, doubtful, disengaged, cautious, concerned, and alarmed. Those in the concerned and alarmed categories are most motivated to take action (49). Communication and policy efforts should aim to move more people into the concerned and alarmed categories to encourage environmental stewardship. Research is needed to identify effective strategies that avoid creating hopelessness and isolation, which can deter action. Targeted communication could also strengthen connections within environmental groups by aligning participants' goals and mindsets (17). Additionally, further research is needed for how to educate youth populations about climate change in a way that empowers them. Research shows that nature connections made in childhood are predictive of stronger nature connections and stewardship as adults (50). Making positive associations with the environment in childhood contributes to climate resilience and how people connect with nature across the lifespan. While the benefits of climate change education for youth are clear, the field lacks a cohesive approach for how best to communicate this knowledge.

Conclusion

The environments we live in nurture our health and well-being by meeting our physical needs, like space for shelter, food, and water, as well as meeting our emotional needs. Research shows that spending time in nature has a plethora of benefits in reducing stress, inspiring joy, and promoting a sense of purpose.[22] Areas like green and blue spaces offer spaces for social interactions in nature, which have been found to enhance social connection and nurture a sense of belonging amongst partakers. Promoting programs and projects that increase nature access supports our social health and spurs connections to nature, wildlife, and to each other. In the face of the climate crisis, fostering a sense of connection to nature is an instrumental motivator for building sustainable practices that protect nature and wildlife. Climate mitigation and resilience efforts bridge communities under a common goal, and can reduce climate-related social isolation while also providing social opportunities for activism and stewardship. The town of Springfield, Massachusetts demonstrated this when a devastating tornado tore through its community. This natural disaster spurred the creation of a community-driven plan to rebuild Springfield, where residents and stakeholders came together to redevelop the town with a focus on connecting the community and celebrating cultural diversity.[51] Practices that focus on environmental resilience should consider communities most impacted by climate change and implement strategies that prioritize equitable climate mitigation. Pairing environmental stewardship with social interaction shows promise to connect communities to nature, wildlife, and to each other.

SOCIAL Framework in Action

We hope that the SOCIAL Framework, the report on the Built Environment, and this supplemental research brief on the environmental sector serve as helpful resources for the existing evidence, approaches, and policies and that they spark ideas for new evidence-based approaches, policies, and future areas of investigation. We would love to learn about how you may take action based on the information reviewed in this report. Please share more by completing this brief form.

[**Provide Feedback**]

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