

Nature Score (0-850): A Comprehensive Framework for Assessing Green Areas Chronic Disease Preventive Health Potential

Ederson Augusto Zanetti^{1,2}, Elton Bicalho do Carmo³ and Lincoln Junior Bicalho³

1. *PreventX AI, Washington, DC 20036, USA*

2. *Centre for Environmental Health Research, PreventX AI, Washington, DC 20036, USA*

3. *Software Engineering Department, University of Maryland Global Campus, Adelphi, MD 20706, USA*

Abstract: The Nature Score framework is an innovative, evidence-based tool developed to evaluate the preventive health potential of natural environments, including parks, farmland, pastures, agricultural land, forestlands, and urban green spaces, in mitigating chronic diseases such as obesity, cardiovascular disease, diabetes, and mental health disorders. The framework systematically assesses six core dimensions—Availability, Equipment, Sanity, Accessibility, Safety, and Integration—using specific, measurable indicators, such as green space per capita, air and water quality, noise exposure, infrastructure quality, and community connectivity. Each factor is quantified to generate a composite score ranging from 0 to 850, with higher scores (Nule, ≥ 850) reflecting environments optimally aligned for chronic disease prevention, and lower scores (Eminent, 0-300) indicating heightened health risks. By linking environmental and social attributes to health outcomes, the Nature Score identifies potential vulnerabilities and provides evidence-based mitigation strategies, including urban planning improvements, lifestyle interventions, and community engagement initiatives. Integrating quantitative metrics, qualitative assessments, and cultural considerations, the framework offers actionable guidance for policymakers, urban planners, and individuals to foster healthier, more resilient populations. Overall, the Nature Score underscores the critical role of accessible, safe, and well-managed natural environments in promoting physical activity, stress reduction, and long-term public health.

Key words: Green spaces, chronic disease prevention, environmental health assessment, Nature Score, urban planning, public health metrics.

1. Introduction

The Nature Score is a framework designed to assess how natural environments—including parks, forests, farmland, and green spaces—can help prevent chronic diseases. It evaluates environmental and social factors that promote activity, reduce stress, and improve well-being. Research shows that contact with nature lowers stress, boosts immune function, and supports restorative processes [1]. The framework operationalizes this relationship by scoring environments on their potential to mitigate chronic disease risks.

The system measures six factors—Availability, Equipment, Sanity, Accessibility, Safety, and Integration—rated from Excellent to Worst, with scores totaling 850 points. Classifications range from Nule (optimal for prevention) to Eminent (high risk). Populations in greener areas experience lower mortality rates, especially in deprived groups [2]. Yet, green space is not universally beneficial: proximity to wildlife can increase risks of zoonotic diseases [3, 4] and physical hazards from large mammals [5]. Thus, assessments must also account for biological and safety risks.

Corresponding author: Ederson Augusto Zanetti, Forest Scientist, Chief Scientific Officer (CSO) at PreventX AI, research fields: chronic disease exposure assessment, social determinants of health, artificial intelligence modeling for population health, and integration of environmental and behavioral factors in NCD prevention frameworks.

Indicators include global standards such as the AQI (Air Quality Index) for pollution, BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand) for water quality, decibels for noise exposure, and Odour Units for scent pollution. Long-term exposure to pollutants and noise is linked to cardiovascular, respiratory, and mental health issues [6, 7]. Poor waste management further contributes to disease risks.

Low scores are associated with obesity, diabetes, cardiovascular disease, Alzheimer's, and frequent mental disorders. Access to green space correlates with lower anxiety and depression [8]. Mitigation strategies include medical consultation, healthier lifestyles, improved urban planning, and cultural engagement to strengthen mental health.

The Nature Score informs planning and public health strategies, enabling communities to identify risks and implement targeted interventions. While higher scores correlate with better outcomes, green space is only one determinant of health. As Markevych et al. [9] argue, it should be considered within a broader framework of health determinants.

By combining environmental standards, health metrics, and cultural considerations, the Nature Score provides an evidence-based method to link nature and chronic disease prevention while recognizing both benefits and risks.

2. Core Factors and Their Role

The Nature Score is a comprehensive framework that evaluates how exposure to natural environments influences health by integrating physical, mental, and environmental dimensions into a single metric. Natural settings foster behaviors that protect against chronic disease and promote well-being. For instance, access to green spaces encourages physical activity, which supports cardiovascular health, lowers BMI (Body Mass Index), and strengthens immune function. As Pretty et al. [10] note, "physical activity in natural environments is associated with greater feelings of revitalization and positive engagement, as well as

decreases in tension, confusion, anger, and depression."

Mental health benefits are equally significant. Kaplan and Kaplan [11] argue that "natural environments are particularly effective in replenishing depleted attentional capacity," a claim supported by Berman et al. [12], who found that walks in nature improved working memory and mood compared to urban settings.

The framework also accounts for environmental determinants such as air quality and thermal comfort, with vegetation mitigating pollution and heat. Mitchell and Popham [2] highlight this dual effect: "populations exposed to the greenest environments also have the lowest levels of health inequality related to income deprivation."

To capture these effects, the Nature Score evaluates categories such as accessibility, quality, and ecological integrity, using weighted indicators that measure both tangible (size, proximity) and experiential (safety, cultural relevance) attributes. As Hartig et al. [1] emphasize, "the health benefits of contact with nature depend on the quality of the experience, not merely the presence of green space."

By linking physical activity, stress reduction, cognitive function, and environmental quality, the Nature Score provides an evidence-based tool to optimize natural environments as preventive health infrastructure.

3. Scoring Methodology

Indicators use measurable units to standardize the evaluation of environmental and health-related conditions. For example, the extent of green space is often measured in square feet (sqft) per capita, air quality is captured through the AQI (Air Quality Index), and SUW (Solid Urban Waste) is quantified in tons. These quantifiable dimensions allow for scoring frameworks that can translate environmental features into comparable health-related metrics. As Kabisch et al. [13] highlight, "quantitative indicators such as per capita green space or air pollution indices provide an essential baseline for understanding urban health inequalities."

The methodology assigns points based on thresholds,

where higher values associated with favorable conditions (e.g., more green space per capita, lower AQI values, or reduced SUW generation) are given higher scores. This threshold-based approach reflects the principle that incremental improvements in environmental exposure can generate proportional health benefits. For instance, Maas et al. [14] found that “people with more green space in their living environment report better general health,” suggesting a dose-response relationship between environmental quality and health outcomes.

By translating environmental attributes into numerical scores, the Nature Score framework facilitates objective comparisons across diverse settings and supports evidence-based interventions to enhance public health through improved environmental conditions.

3.1 Availability

Availability measures the per capita green space (sqft), a critical indicator of how much natural environment is accessible to individuals within a community. Adequate green space supports physical activity, stress reduction, and social cohesion [15]. The World Health Organization [16] recommends a minimum of 9 square meters (approximately 97 square feet) of green space per capita for urban health, though higher thresholds may be necessary to maximize preventive health benefits. Scoring thresholds range from Excellent (≥ 750 sqft per capita, 150 points) to Worst (< 150 sqft per capita, 0 points), reflecting the evidence that greater availability of green space correlates with improved health outcomes [14]. Low availability scores indicate a scarcity of natural environments, which may limit opportunities for physical activity, increase stress levels, and exacerbate chronic disease risks.

3.2 Equipment

Equipment evaluates the quality and functionality of infrastructure within green spaces, including pathways, benches, lighting, signage, exercise facilities, and playgrounds. High-quality equipment enhances usability and encourages regular engagement with natural

environments [17]. Scoring ranges from Excellent (well-maintained, diverse amenities, 150 points) to Worst (absent or non-functional equipment, 0 points). Well-equipped spaces promote physical activity and social interaction, whereas poor infrastructure may deter use and limit health benefits. As Sallis et al. [18] note, “the presence of supportive infrastructure is a key determinant of physical activity in urban settings.”

3.3 Sanity

Sanity captures environmental quality through measurable indicators of pollution and ecological health, including:

Air Quality Index (AQI): Measures air pollution levels, with lower values indicating cleaner air. Chronic exposure to poor air quality is associated with respiratory diseases, cardiovascular conditions, and premature mortality [6]. Scoring ranges from Excellent (AQI 0-50, 50 points) to Worst (AQI > 300 , 0 points).

Water quality (BOD/COD): BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand) assess water contamination. Clean water is essential for hygiene, recreation, and ecosystem health [19]. Scoring ranges from Excellent (BOD < 1 mg/L, 50 points) to Worst (BOD > 20 mg/L, 0 points).

Noise Pollution (dB): Measured in decibels, chronic noise exposure is linked to cardiovascular disease, sleep disturbances, and mental health issues [7]. Scoring ranges from Excellent (< 40 dB, 50 points) to Worst (> 85 dB, 0 points).

Odour Pollution (OU): Measured in Odour Units, unpleasant smells from waste or industrial sources reduce the appeal of outdoor spaces and can affect mental well-being [20]. Scoring ranges from Excellent (< 5 OU, 50 points) to Worst (> 30 OU, 0 points).

Solid Urban Waste (SUW): Measured in tons, waste accumulation indicates poor sanitation and attracts disease vectors. Proper waste management is essential for public health [21]. Scoring ranges from Excellent (< 0.5 tons per 1,000 residents, 50 points) to Worst (> 5 tons, 0 points).

Together, these indicators assess the overall environmental quality of a green space. Low Sanity scores suggest high pollution or contamination, which may increase health risks and discourage use of the space.

3.4 Accessibility

Accessibility measures how easily individuals can reach and navigate green spaces, considering factors such as proximity, transportation options, physical barriers, and inclusivity for people with disabilities. Research indicates that individuals are more likely to use green spaces if they are within a 10-15-minute walk (approximately 0.5-1 km) [22]. Scoring ranges from Excellent (within 5 minutes, multiple access points, universally accessible, 150 points) to Worst (>30 minutes, limited access, no accommodations, 0 points). Poor accessibility limits the preventive health potential of green spaces, particularly for vulnerable populations such as the elderly, children, and individuals with mobility challenges.

3.5 Safety

Safety encompasses both physical safety (crime rates, lighting, maintenance) and biological safety (zoonotic disease risks, venomous species, allergens). Perceived safety significantly influences green space usage: individuals are less likely to engage in outdoor activities in areas perceived as unsafe [23]. Scoring ranges from Excellent (low crime, well-lit, minimal biological hazards, 150 points) to Worst (high crime, poor lighting, significant hazards, 0 points). Addressing safety concerns is essential for maximizing the health benefits of green spaces, as fear or actual danger can negate the positive effects of nature exposure.

3.6 Integration

Integration assesses the degree to which green spaces are embedded within the community's social and cultural fabric. This includes the presence of organized activities (e.g., sports leagues, cultural events),

community engagement, social cohesion, and cultural relevance. Green spaces that host diverse activities and foster social connections are more likely to be used regularly and provide mental health benefits [24, 25]. Scoring ranges from Excellent (high community engagement, diverse programming, culturally relevant, 150 points) to Worst (isolated, no programming, low engagement, 0 points). Low integration scores suggest that even well-designed spaces may be underutilized if they do not resonate with or actively involve the community.

4. Classification Levels and Health Implications

The Nature Score classifies environments into five levels based on total scores, ranging from Nule (optimal) to Eminent (high risk). Each level reflects the environment's capacity to support chronic disease prevention and overall health:

Nule (≥ 850 points): Optimal environments that maximize preventive health potential. Characterized by abundant green space, excellent infrastructure, minimal pollution, high accessibility, robust safety, and strong community integration. Populations in Nule environments exhibit the lowest rates of chronic disease and highest well-being.

Minor (750-849 points): Favorable environments with good preventive potential may have slight deficiencies in one or two factors but overall support healthy lifestyles. Minor improvements in infrastructure or accessibility can elevate these environments to Nule status.

Moderate (500-749 points): Adequate but limited preventive potential, may lack sufficient green space, have moderate pollution, or face accessibility challenges. Populations in Moderate environments may benefit from targeted interventions to improve specific factors.

Major (300-499 points): Deficient environments with limited preventive health capacity. Significant issues in multiple factors (e.g., pollution, poor

accessibility, inadequate infrastructure) increase chronic disease risks. Comprehensive interventions are needed to improve conditions.

Eminent (0-299 points): High-risk environments that fail to support chronic disease prevention and may actively contribute to health deterioration, characterized by severe deficiencies across most factors. Immediate, multi-faceted interventions are critical to mitigate health risks.

These classifications provide a clear framework for identifying priority areas for public health interventions and urban planning investments. Lower-scoring environments require more intensive support to reduce health disparities and promote equity in access to preventive health infrastructure.

5. Mitigation Strategies

The Nature Score framework identifies vulnerabilities and prescribes evidence-based interventions tailored to specific deficiencies. Mitigation strategies are categorized into individual, community, and policy-level actions:

5.1 Individual-Level Interventions

Medical consultation: Individuals in low-scoring environments should seek regular health screenings to detect and manage chronic conditions early.

Lifestyle modifications: Adopting healthier diets, increasing physical activity (even in suboptimal environments), and practicing stress reduction techniques (e.g., meditation, mindfulness) can partially offset environmental deficits [26].

Cultural and social engagement: Participation in community activities, cultural events, and social networks enhances mental health and resilience, even in challenging environments [25].

5.2 Community-Level Interventions

Infrastructure improvements: Investing in pathways, lighting, seating, and recreational facilities increases usability and encourages physical activity [17].

Safety enhancements: Increasing police presence,

improving lighting, and maintaining green spaces reduce crime and perceived danger [27].

Environmental remediation: Addressing pollution sources (e.g., improving air quality, reducing noise, managing waste) directly improves Sanity scores and reduces health risks [6, 21].

Community programming: Organizing sports leagues, cultural festivals, and health promotion activities fosters social cohesion and increases green space utilization [24].

5.3 Policy-Level Interventions

Urban planning reforms: Incorporating green space standards into zoning regulations ensures adequate per capita availability. As Giles-Corti et al. [28] note, “city planning is a powerful tool for population health.”

Environmental regulations: Enforcing air and water quality standards, controlling noise pollution, and managing waste reduce environmental health risks [16, 19].

Equity-focused investments: Prioritizing low-scoring communities for infrastructure and environmental improvements addresses health disparities and promotes environmental justice [29].

Health-in-all-policies approach: Integrating health considerations into all sectors (transportation, housing, education) ensures that broader policies support preventive health goals [30].

6. Limitations and Considerations

While the Nature Score provides a robust framework for assessing the preventive health potential of natural environments, several limitations must be acknowledged. First, the framework relies on quantitative indicators, which may not fully capture subjective experiences such as aesthetic appeal, sense of place, or emotional connections to nature. Qualitative assessments and community input are essential complements to the quantitative scores [31].

Second, the Nature Score is one of many determinants of health. Socioeconomic status, access to

healthcare, education, and individual behaviors also play critical roles in chronic disease outcomes [29]. The framework should be used as part of a broader, multi-faceted approach to public health.

Third, the scoring thresholds are based on current evidence and may require periodic updates as research advances. Different populations (e.g., children, elderly, individuals with disabilities) may have unique needs that warrant tailored thresholds or additional indicators.

Finally, the framework assumes that green spaces are inherently beneficial, yet proximity to natural environments can pose risks (e.g., zoonotic diseases, allergens, physical hazards). Comprehensive assessments must balance benefits with risks to provide accurate guidance [3-5].

Despite these limitations, the Nature Score offers a valuable, evidence-based tool for operationalizing the relationship between natural environments and chronic disease prevention, providing actionable insights for stakeholders across multiple sectors.

7. Conclusion

The Nature Score framework represents a significant advance in quantifying the preventive health potential of natural environments. By systematically evaluating Availability, Equipment, Sanity, Accessibility, Safety, and Integration, the framework translates complex environmental and social attributes into a single, interpretable metric. This approach enables policymakers, urban planners, public health professionals, and communities to identify vulnerabilities, prioritize interventions, and track progress toward healthier, more equitable environments.

The evidence is clear: access to high-quality natural environments reduces chronic disease risks, enhances mental health, and promotes physical activity. However, these benefits are not universally realized. Disparities in green space availability, quality, and accessibility contribute to health inequalities, particularly among marginalized and low-income populations. The Nature Score provides a tool to address these disparities by

identifying areas of greatest need and guiding targeted investments.

Moving forward, the framework can be refined through ongoing research, community engagement, and integration with other health determinants. Future work should explore cultural adaptations, validate the scoring system across diverse populations, and assess the long-term health outcomes associated with changes in Nature Score classifications. By fostering collaboration between researchers, policymakers, and communities, the Nature Score can contribute to a future where accessible, safe, and well-managed natural environments are recognized as essential public health infrastructure, supporting healthier, more resilient populations.

In conclusion, the Nature Score underscores the critical role of natural environments in chronic disease prevention and offers an evidence-based, actionable framework for optimizing these spaces to support public health. By integrating quantitative metrics, qualitative assessments, and cultural considerations, the framework provides a comprehensive approach to evaluating and enhancing the preventive health potential of green spaces worldwide.

References

- [1] Hartig, T., Mitchell, R., de Vries, S., and Frumkin, H. 2014. "Nature and Health." *Annual Review of Public Health* 35: 207-28.
- [2] Mitchell, R., and Popham, F. 2008. "Effect of Exposure to Natural Environment on Health Inequalities: An Observational Population Study." *The Lancet* 372 (9650): 1655-60.
- [3] Daszak, P., Cunningham, A. A., and Hyatt, A. D. 2000. "Emerging Infectious Diseases of Wildlife: Threats to Biodiversity and Human Health." *Science* 287 (5452): 443-9.
- [4] Jones, K. E., Patel, N. G., Levy, M. A., Storeygard, A., Balk, D., Gittleman, J. L., and Daszak, P. 2008. "Global Trends in Emerging Infectious Diseases." *Nature* 451 (7181): 990-3.
- [5] Treves, A., Wallace, R. B., and White, S. 2013. "Participatory Planning of Interventions to Mitigate Human-Wildlife Conflicts." *Conservation Biology* 27 (6): 1233-44.

- [6] Cohen, A. J., Brauer, M., Burnett, R., Anderson, H. R., Frostad, J., Estep, K., Balakrishnan, K., Brunekreef, B., Dandona, L., Dandona, R., Feigin, V., Freedman, G., Hubbell, B., Jobling, A., Kan, H., Knibbs, L., Liu, Y., Martin, R., Morawska, L., Pope, C. A., Shin, H., Straif, K., Shaddick, G., Thomas, M., van Dingenen, R., van Donkelaar, A., Vos, T., Murray, C. J. L., and Forouzanfar, M. H. 2017. "Estimates and 25-Year Trends of the Global Burden of Disease Attributable to Ambient Air Pollution: An Analysis of Data from the Global Burden of Diseases Study 2015." *The Lancet* 389 (10082): 1907-18.
- [7] Basner, M., Babisch, W., Davis, A., Brink, M., Clark, C., Janssen, S., and Stansfeld, S. 2014. "Auditory and Non-auditory Effects of Noise on Health." *The Lancet* 383 (9925): 1325-32.
- [8] Maas, J., Verheij, R. A., Groenewegen, P. P., De Vries, S., and Spreeuwenberg, P. 2009. "Green Space, Urbanity, and Health: Morbidity Is Related to a Green Living Environment." *Journal of Epidemiology & Community Health* 63 (12): 967-73.
- [9] Markevych, I., Schoierer, J., Hartig, T., Chudnovsky, A., Hystad, P., Dzhambov, A. M., de Vries, S., Triguero-Mas, M., Brauer, M., Nieuwenhuijsen, M. J., Lupp, G., Richardson, E. A., Astell-Burt, T., Dimitrova, D., Feng, X., Sadeh, M., Standl, M., Heinrich, J., and Fuertes, E. 2017. "Exploring Pathways Linking Greenspace to Health: Theoretical and Methodological Guidance." *Environmental Research* 158: 301-17.
- [10] Pretty, J., Peacock, J., Sellens, M., and Griffin, M. 2005. "The Mental and Physical Health Outcomes of Green Exercise." *International Journal of Environmental Health Research* 15 (5): 319-37.
- [11] Kaplan, R., and Kaplan, S. 1989. *The Experience of Nature: A Psychological Perspective*. Cambridge: Cambridge University Press.
- [12] Berman, M. G., Jonides, J., and Kaplan, S. 2008. "The Cognitive Benefits of Interacting with Nature." *Psychological Science* 19 (12): 1207-12.
- [13] Kabisch, N., van den Bosch, M., and LaFortezza, R. 2017. "The Health Benefits of Nature-Based Solutions to Urbanization Challenges for Children and the Elderly: A Systematic Review." *Environmental Research* 159: 362-73.
- [14] Maas, J., Verheij, R. A., Groenewegen, P. P., de Vries, S., and Spreeuwenberg, P. 2006. "Green Space, Urbanity, and Health: How Strong Is the Relation?" *Journal of Epidemiology & Community Health* 60 (7): 587-92.
- [15] Lee, A. C., and Maheswaran, R. 2011. "The Health Benefits of Urban Green Spaces: A Review of the Evidence." *Journal of Public Health* 33 (2): 212-22.
- [16] World Health Organization (WHO). 2016. *Urban Green Spaces and Health: A Review of Evidence*. WHO Regional Office for Europe.
- [17] Gobster, P. H. 1995. "Perception and Use of Urban Forest and Open Space: A Multidimensional Framework." *Landscape and Urban Planning* 32 (1): 1-23.
- [18] Sallis, J. F., Cerin, E., Conway, T. L., Adams, M. A., Frank, L. D., Pratt, M., Salvo, D., Schipperijn, J., Smith, G., Cain, K. L., Davey, R., Kerr, J., Lai, P. C., Mitáš, J., Reis, R., Sarmiento, O. L., Schofield, G., Troelsen, J., Van Dyck, D., De Bourdeaudhuij, I., and Owen, N. 2012. "Physical Activity in Relation to Urban Environments in 14 Cities Worldwide: A Cross-Sectional Study." *The Lancet* 380 (9838): 113-25.
- [19] World Health Organization (WHO). 2022. *Drinking-Water*. Fact sheet.
- [20] Dalton, P. 2002. "Olfactory Influence on Mood and Stress." *Annals of the New York Academy of Sciences* 965 (1): 367-75.
- [21] Prüss-Ustün, A., Wolf, J., Corvalán, C., Bos, R., and Neira, M. 2016. *Preventing Disease through Healthy Environments: A Global Assessment of the Burden of Disease from Environmental Risks*. Geneva: World Health Organization.
- [22] World Health Organization (WHO). 2010. *Global Recommendations on Physical Activity for Health*. Geneva: WHO.
- [23] Foster, S., and Giles-Corti, B. 2008. "The Built Environment, Neighborhood Crime and Constrained Physical Activity: An Exploration of Inconsistent Findings." *Preventive Medicine* 47 (3): 241-51.
- [24] Putnam, R. D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- [25] Bratman, G. N., Anderson, C. B., Berman, M. G., Cochran, B., de Vries, S., Flanders, J., Folke, C., Frumkin, H., Gross, J. J., Hartig, T., Kahn, P. H., Kuo, M., Lawler, J. J., Levin, P. S., Lindahl, T., Meyer-Lindenberg, A., Mitchell, R., Ouyang, Z., Roe, J., Scarlett, L., Smith, J. R., van den Bosch, M., Wheeler, B. W., White, M. P., Zheng, H., and Daily, G. C. 2019. "Nature and Mental Health: An Ecosystem Service Perspective." *Science Advances* 5 (7): eaax0903.
- [26] Warburton, D. E. R., Nicol, C. W., and Bredin, S. S. D. 2006. "Health Benefits of Physical Activity: The Evidence." *Canadian Medical Association Journal* 174 (6): 801-9.
- [27] Painter, K., and Farrington, D. P. 1999. "The Crime Reducing Effect of Improved Street Lighting: The Dudley Project." *Crime Prevention Studies* 11: 43-68.
- [28] Giles-Corti, B., Vernez-Moudon, A., Reis, R., Turrell, G., Dannenberg, A. L., Badland, H., Foster, S., Lowe, M., Sallis, J. F., Stevenson, M., and Owen, N. 2016. "City Planning and Population Health: A Global Challenge." *The Lancet* 388 (10062): 2912-24.

- [29] Marmot, M. 2015. "The Health Gap: The Challenge of an Unequal World." *The Lancet* 386 (10011): 2442-4.
- [30] Barton, H., and Grant, M. 2006. "A Health Map for the Local Human Habitat." *Journal of the Royal Society for the Promotion of Health* 126 (6): 252-3.
- [31] Tzoulas, K., Korpela, K., Venn, S., Yli-Pelkonen, V., Kazmierczak, A., Niemela, J., and James, P. 2007. "Promoting Ecosystem and Human Health in Urban Areas Using Green Infrastructure: A Literature Review." *Landscape and Urban Planning* 81 (3): 167-78.