

# UNSUSTAINABLE GREEN LAWNS

## CAN URBAN FOOD FORESTS BE A SUSTAINABLE ALTERNATIVE TO GREEN LAWNS IN NORTH AMERICAN URBAN LANDSCAPES ?

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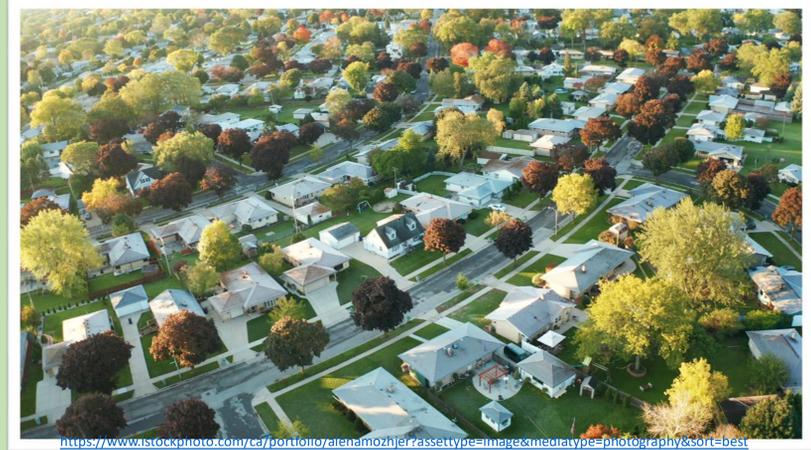
### THE PROBLEM: GREEN LAWNS

Urbanization will continue to shape our future, all new population growth is projected to take place in urban areas, and over 60% of the total population is expected to reside in cities by 2030.<sup>3</sup>



The spread of the monoculture of lawn and its high input management systems is the cause of major ecological change. The application of chemical fertilizers, herbicides, and insecticides in residential backyards is detrimental to both human and environmental health. Pesticides are dangerous to both human and non-human health if found in surface and ground water. Fertilizers leach into water systems and lead to the eutrophication of water bodies and the contamination of drinking water.<sup>5</sup>

Urban sustainability, "considered as the dynamic capacity of an urban area for adequately meeting the needs of its present and future populations through ecologically, economically, and socially sound planning, design, and management activities is an increasingly urgent topic".<sup>9</sup> Hence, the development of urban food forests can be an important strategy for future sustainability and human health and wellbeing.<sup>3</sup>



### THE URBAN FOOD FOREST

### CASE STUDY: SEATTLE'S URBAN FOOD FOREST



Urban food Forestry is defined as "the intentional use of woody perennial food-producing species in urban edible landscape to improve the sustainability and resilience of urban communities".<sup>3</sup>

An urban food forest is a gardening or land management system that mimics natural ecosystems. "Food forests help improve the environment we live in, build stronger, more resilient communities; and provide a host of economic benefits as well".<sup>4</sup>

Urban food forests provide ecosystem services, which are defined as benefits that the human population can derive, directly or indirectly from ecosystem functions.<sup>2</sup>



Seattle land area 217 km<sup>2</sup>.  
Population of the city of Seattle: 608,000.  
12% of the population under the poverty line.  
14% of households experience food hardship.<sup>5</sup>

In 2010 the municipality of Seattle revised its land use code to expand opportunities for growing plants, farming and raising animals in the city. The objective of the urban land use code revisions is to create a more just and sustainable food system for urban residents.<sup>5</sup>

Seattle's Urban Forest Management Plan envisions urban forest primarily as a service provider, nevertheless, the notion that urban forests might serve as spaces where people can engage in productive forest practices, such as gathering, gleaning, and livestock production, is rapidly gaining political traction in Seattle.<sup>5</sup>



One of Seattle's many green infrastructure programs is the **Beacon Food Forest Project**, a 7-acre site in the Beacon Hill neighborhood, near downtown Seattle. It is a project that they hope will offset some of the environmental impacts of agriculture, improve local food security, and provide educational opportunities. The project allows the community to gather, grow their own food, and rehabilitate the ecosystem. It includes food forest, a berry patch, a nut grove, a community garden, a gathering plaza, and a kid's area.<sup>4</sup>

### CONCLUSION

Urban food forests are a valuable sustainable alternative to address challenges such as climate change, food security, and poverty, they also contribute to both physical and mental health and "promote sustainable urban development through providing ecosystem services".<sup>3</sup> They are "an emerging view of the city as an agroecological landscape where urban forests and agriculture coexist".<sup>5</sup>



Communities throughout North American cities are engaging in urban agriculture, creating opportunities to provide food, jobs, environmental enhancement, beautification, education, inspiration and hope.<sup>8</sup> Lastly, although the problem of the monoculture of lawn in North America has been structured over the years "into vast cultures and economies", there are many possibilities for positive change through different interventions and actions. Federal, provincial, and municipal laws can be enacted to regulate or proscribe the use of chemicals and other lawn products and sustainable alternatives to lawns can be promoted and encouraged.<sup>7</sup>

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### SUPPORTING SERVICES

Urban food forest are the habitat of rare plants and animal species which are important for biodiversity and crucial for pollination.<sup>1&2</sup>

- **Wildlife habitat**
- **Biodiversity Conservation**
- **Pollination**



### CULTURAL SERVICES

Urban food forests have also a non-material value, such as spiritual and religious, social relations, cultural heritage, and recreational value.<sup>1&2</sup>

- **Recreation & Aesthetics**
- **Health and Psychology**
- **Education Site**



### PROVISIONING SERVICES

Urban food forests provide city dwellers with food. <sup>1&2</sup>

- **Fruits**
- **Nuts**
- **Herbs**
- **Mushrooms**
- **Game**



### REGULATING SERVICES

Urban food forests have a positive effect on the urban climate. <sup>1&2</sup>

- **Air pollution reduction**
- **Carbon sink**
- **Noise retention**
- **Rainwater retention**
- **Microclimate amelioration**

