

TREES IN CITIES CHALLENGE

Information note



UNECE



Trees in Cities
Challenge



Trees in Cities Challenge

For the first time in human history, over half of the world's population lives in cities. If current projections turn out accurate, by 2050, two-thirds of humanity will be living in urban areas. Cities are a major driver of climate change, responsible for an estimated 75% of all carbon dioxide emissions globally but at the same time, they are particularly vulnerable to its effects. Inland and coastal flooding, heat stress, extreme precipitation, droughts, water scarcity, and increased air pollution are just some of the expected impacts.

Climate risks are unevenly distributed, both within and between cities. Cities with outdated infrastructure, urban sprawl, inadequate housing regulations and supply, are at particularly high risk. Building urban resilience to climate change is a complex, multi-stakeholder driven process, and is often constrained by the lack of resources.

In this context, nature-based solutions are both cost-effective and scalable. They simultaneously mitigate climate change and contribute to building resilience against climate-related and natural hazards. Urban and peri-urban trees and forests are one such solution.

Strategic, tailored and ambitious tree-planting and strengthening capacities for sustainable management of urban forests is a palpable way for local governments to contribute to climate action and the Sustainable Development Goals (SDGs).

As we enter the UN Decade on Ecosystem Restoration, hoping to inspire large-scale efforts to halt the destruction of natural habitats and restore degraded ecosystems, this is the perfect moment for city governments to step in and contribute.

In 2019, the United Nations Economic Commission for Europe (UNECE) launched the "Trees in Cities Challenge". This initiative invites mayors and local governments worldwide to make a concrete tree-planting pledge that will be implemented within a year and set up their objectives for making their cities greener, resilient, and more sustainable.

Mayors and local authorities pledging under the "Trees in Cities Challenge" are invited to become part of a global community of change-makers and offer their residents benefits from the many ecosystem services that trees and forests in and around cities provide.



**Join a
global
movement
to restore,
protect and
maintain
trees and
forests in
urban areas
worldwide.**

Urban and peri-urban trees and forests



Create economic benefits

The energy-saving and the various other benefits of trees make urban forestry a cost-effective nature-based solution with a high return on investment. Some researchers estimate that, for each USD invested in tree planting, an average return of USD 2.25 is generated, and integrating trees in landscape planning can significantly increase property values.

Mitigate the effects of climate change

Mature trees sequester and store annually up to 150kg carbon dioxide. Moreover, with the right allocation of trees around buildings, significant savings on energy consumption can be achieved.



Help build resilience

Climate change increases the frequency of extreme weather events causing, amongst others, floods, which trees and forests in coastal areas of cities can prevent. Trees can avert further natural hazards including soil erosion and mudslides.

Contribute to cleaner air

by absorbing air pollutants and filtering fine particulates. Increasing tree cover in cities improves air quality and reduces air pollution-related illnesses and deaths.

Improve human health and well-being

The presence of green areas is shown to have a beneficial impact on physical and mental health alike. Green urban spaces contribute to citizens' well-being, promote physical activity, foster social inclusion and create more sustainable communities.



Cool outdoor temperature

Climate change increases the severity and frequency of heat waves. Through evaporation, trees can reduce the temperature in the urban environment by up to 8°C and provide natural shade.



Contribute to food security

by providing free, easily accessible food such as fruits and nuts, mushrooms, honey, or plants for medicinal purposes.

Foster biodiversity

Trees in the urban environment provide essential habitats, food and protection for flora and fauna, thus fostering biodiversity.



5 reasons to make a pledge to the "Trees in Cities Challenge" today



- 1) Become part of a global movement to restore, protect, and sustainably manage terrestrial ecosystems
- 2) Benefit from an exchange of experiences on urban forestry with other cities around the world
- 3) Contribute to your country's efforts to mitigate and adapt to the effects of climate change
- 4) Make your city more sustainable, healthier, resilient, and liveable
- 5) Share your story with the world through our dedicated website

How can you make a pledge?

1. Contact the UNECE Secretariat via our website treesincities.unece.org and express your interest in joining the initiative. We will send you the relevant information about the "Trees in Cities Challenge" and discuss details of your participation.

2. Prepare your input and confirm the number of trees to be planted. The pledge is made via the exchange of letters with the UNECE Secretariat who will then send you a confirmation letter.

3. Define your tree-planting approach and make sure it is aligned with your current urban greening strategy, if applicable. Make sure this strategy is also aligned with the existing legal and institutional frameworks; and identify the sources of funding to support tree planting. Due attention needs to be paid to pre-existing property rights.

5. Help us spread the word about the Challenge by inviting other mayors to join the challenge, regularly sending us material for social media, and/or hosting or attending an event organized by UNECE or its partners.

4. Keep the Secretariat informed of your progress and share data for your city (population, number of trees, etc). The updates on the progress, and best practices, will be available on our website.



Technical consideration

Before tree-planting, each city has to assess how to integrate the implementation plans with the existing urban forestry guidelines and urban development strategy.

1. Tree-planting must be strategically approached and implemented

In some cities, tree canopy cover is the only major consideration. However, this does not recognize the vital difference between tree species, nor the diversity of urban trees.

In particular, details on species, tree volume, location, age, and the condition of the existing trees is vital for sustainable urban forestry. Every city should develop its own strategy that is in line with the local knowledge of existing tree coverage. Urban trees can be classified into a number of groups (i.e., residential trees, street trees, park trees, woodland trees) and all of them count towards the "Trees in Cities Challenge", as long as they meet the following definition: "A woody perennial with a single stem or, in the case of coppice, with several stems, having a more or less definitive crown."

In accordance with its strategy, every city should focus on:

- a) Increasing the diversity of its tree cover; while avoiding invasive and allergenic species;
- b) Keeping an eye on biodiversity and properly placing newly planted trees into the broader ecosystem of the city;
- c) Being selective and choosing trees fit for purpose;
- d) Ensuring that the location of each planted tree is chosen for a specific reason (i.e. tackling air pollution, lack of green spaces in that part of the city, high temperatures etc.) and in line with the overall strategy for building urban resilience;
- e) Considering the different tree species' location requirements.





2. Tree-planting should be strongly driven by climate considerations

This includes current and future climate conditions, as they determine which tree species can actually grow in a city, but also their benefits. Not all tree species respond well to urban challenges. Ideally, tree-planting should include a mix of species that are suitable for desired targets.

Whenever possible, indigenous species should be planted, as they are normally best suited for the prevailing climate conditions. Research has shown that large trees provide the greatest benefits, and therefore, when possible, species with the potential to grow tall should be prioritized.

Like all ecosystems, urban trees are impacted by ongoing climate change that results in rising air temperatures, stronger and more frequent storms, and heat waves. A strategic approach and tailored maintenance are needed to offset some climate implications, which requires a far-sighted approach to tree-planting.

3. Tree-planting should be implemented with full regard to the overall ecosystem, as well as complement the national strategy for the implementation of the Sustainable Development Goals

In the case of street trees, for example, priority should be given to providing shade to buildings and paved surfaces on footpaths and cycling paths. The aim is to find the golden middle between consideration of a particular problem a city faces and its environmental and social reality. For example, if the target is using urban trees to tackle air pollution, trees should be planted where the concentration of air pollution and population density overlap, while keeping in mind that trees can only clear air within a very close radius.

Likewise, if the main target is reducing energy consumption and providing a natural way of lowering temperatures, trees should be strategically placed next to surrounding buildings but also urban roads and infrastructure. Although trees provide shade that can protect and prolong the life of asphalt paths and roads, reduce their maintenance costs and extend longevity; tree-planting in ill-chosen areas can actually cause damage to infrastructure, e.g. cracked sidewalks and building foundations from root growth. Thus, thoughtful consideration of where trees are planted is important.



Highlights

In the first year of the “Trees for Cities Challenge”, over 20 cities from 16 countries pledged to plant a total of 11 million new trees and set tailored goals for improving their management of urban trees and forests. Some examples include:

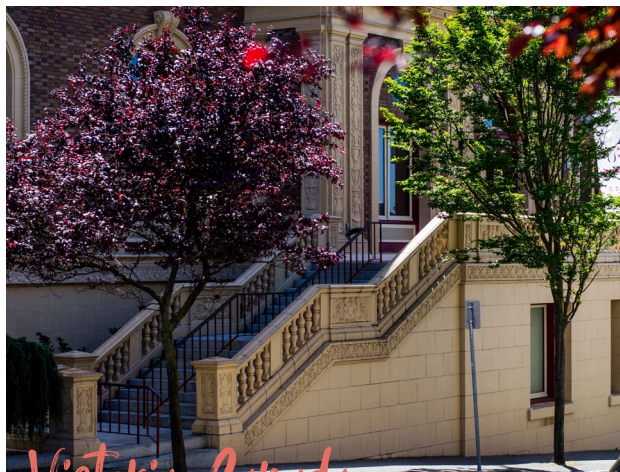
Helsingborg is one of the oldest cities in Sweden, counting over 100,000 inhabitants. In 2019, the city was one of the first to join the “Trees in Cities Challenge”, pledging to plant 8,000 new trees in strategic areas by the end of 2020.

The city reported to have exceeded its pledge by over 10,000, planting a total of 18,193 trees from 2019 through 2020. New trees can be found in the Children’s Forest (Pålsjö), the Climate Forest (Ödåkra) and in and around many parks and streets in the city.

Helsingborg also set up a *dedicated site* where residents can follow the progress, and learn how to take care of their new trees.



Helsingborg, Sweden



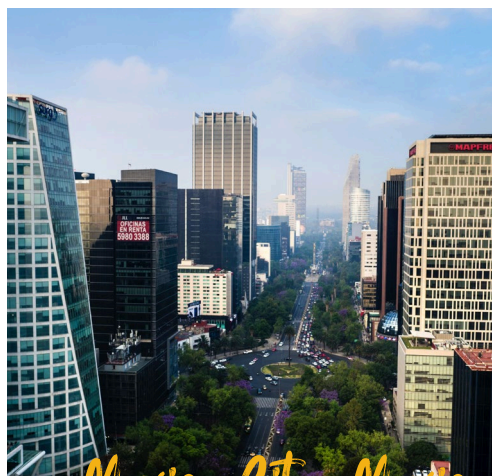
Victoria, Canada

Victoria is the capital city of British Columbia, with a population of over 80,000. There are approximately 150,000 trees in the city’s parks, natural areas, boulevards, gardens and backyards.

The city pledged to plant 5,000 new trees, and mobilized its residents to actively contribute to the tree-planting, following a *set of criteria and guidelines* prepared by the city. A “*tree-tracker*” was created to follow progress, and map the exact location of newly planted trees.

The city of **Vancouver** is in the state of Washington, with a population exceeding 185,000 and an estimated 5579 acres of tree canopy. Its urban forest is a dynamic, diverse, and cohesive ecosystem that is highly valued and cared for. In 2020, the city pledged to expand its canopy cover with over 1,000 new trees and exceeded that target by almost 50%.

Via a range of innovative community engagements, from writing letters to trees, to giving awards to individuals, organizations and business that have made a positive impact on Vancouver's urban forest, the city continues to build a culture of caring and protecting its urban canopy cover. More details can be found [here](#).



The largest Spanish-speaking city in the world and home to over 9 million people, **Mexico City** started a large-scale tree-planting action, and made a pledge to plant 8 million trees and shrubs by the end of 2020.

To achieve this goal, the city engaged with different levels of government, academic, civil society and the private sector. The objectives of the local government include strengthening the pollination process to preserving biodiversity, regenerating the soil and recovering ecological processes, regulating micro-climates, reversing the deterioration of ecosystems, and creating a culture of care for urban trees and forests among citizens. According to its latest report, the city is on track to see 8 million new trees and shrubs.

For more information, please visit
www.treesincities.unece.org

Contact
treesincities.ece-faoforests@un.org

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