Barcelona Building Block
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The 3-30-300 Rule for Urban Forestry and Greener Cities

By Cecil Konijnendijk

Crucial Urban Forests

Urban forests provide a wide range of essential benefits. Current global challenges, such as climate change, environmental degradation, and the COVID-19 pandemic, have resulted in increased awareness of the importance of urban trees and green spaces. We have all experienced the importance of our local trees and green spaces during times of restricted movements, and when lock-down restrictions were eased in Spain, many people flocked to parks and other green spaces. Many studies from across the world have demonstrated the importance and increased use of urban nature during the pandemic. Even indoor plants have become more appreciated, as preliminary findings from a study at the University of British Columbia show.

When working with cities, national governments, and international organisations, experts like me are often asked for specific guidelines for developing successful urban forestry programs. We have mostly declined, because every city is different, which makes it difficult to set transferable targets (such as tree canopy cover) across various contexts and settings. The situation in Barcelona, for example, is very different from that in Vancouver, and Beijing is a world away from Lagos, even though these are both megacities.

Introducing a New Guiding Rule of Thumb

Although it is difficult to generalise, there are arguments for developing simplified, easy-to-remember rules and guidelines, especially when these are grounded in evidence. Many of us working in this field are familiar with Frank Santamour's 10-20-30 rule for ensuring species diversity in the urban forest. The rule states that no tree species should make up more than 10% of a municipality's urban forest, no genus should have a share larger than 20%, and no single family should make up more than 30% of the urban forest. Although this rule has been debated, it has become widely known and adopted, most likely having a positive effect on urban forest structure and diversity.

The 10-20-30 rule, however, does not have a specific focus on the benefits provided by urban forests. Given the current climate and public health urgencies, as well as a range of other challenges we face, it would be useful to introduce a guiding principle for urban forest programmes, and city greening across the world, that ensures that all residents have access to trees and green – and the benefits these provide.

Based on some of the most up-to-date research on the links between urban forests and health, wellbeing, and climate change, and the work of influential global organisations like the World Health Organization, we would like to introduce a new (guiding) rule for urban forestry: the 3-30-300 rule. We'll explain this rule below and are of course aware that its application will be more challenging – and perhaps less relevant – in some contexts. The rule recognises that we need to bring trees and nature all the way into people's neighbourhoods, streets, and on their doorsteps in order to capitalise on their many benefits. It is not sufficient to strive for a city-wide tree canopy cover of 30%, because typically the urban forestry will not be evenly distributed and more marginalised populations usually will have less trees and green in their neighbourhoods. Also, putting most efforts into developing and managing large, high-profile city parks is only one part of the story, as we really have to integrate green infrastructure into all places where we live and work, so that nature is always within sight and easy access.

3 Trees from Every Home

The first element of the rule is that every citizen should be able to see at least three trees (of a decent size) from their home. Recent research demonstrates the importance of nearby, especially visible, green for mental health and wellbeing. During the COVID-19 pandemic, people have often been bound to their homes or direct neighbourhoods, placing even greater importance on nearby trees and other green in gardens and along streets. Seeing green from our windows helps us keep in touch with nature and its rhythms. It provides important breaks from our work and can inspire us and make us more creative. The Danish municipality of Frederiksberg has a tree policy that calls for every citizen to see at least one tree from their house or apartment. We should take this one step further and ensure that everybody has multiple trees in sight.

30 Percent Tree Canopy Cover in Every Neighbourhood

Recent studies have shown an association between urban forest canopy and cooling, better microclimates, mental and physical health and possibly also reducing air pollution and noise. The work of Prof. Thomas Astell-Burt and his team in Australia has repeatedly found that 30% is an important threshold – a minimum canopy cover percentage that ensures that residents benefit in terms of their health and wellbeing. By creating more leafy neighbourhoods, we also encourage people to spend more time outdoors and to interact with their neighbourhoods (which in turn promotes social health). Many of the most ambitious cities in the world in terms of greening, including Barcelona, Bristol, Canberra, Seattle and Vancouver have set a target of achieving 30% canopy cover. At the neighbourhood level, 30 percent

should be a minimum, and cities should strive for even higher canopy cover when possible. Where it is difficult for trees to grow and thrive, e.g., in arid climates, the target should be 30% of vegetation.

300 Metres from the Nearest Park or Green Space

Many studies have highlighted the importance of proximity and easy access to high-quality green space that can be used for recreation. A safe 5-minute walk or 10-minute stroll is often mentioned. The European Regional Office of the World Health Organization recommends a maximum distance of 300 metres to the nearest green space (of at least 1 hectare). This encourages the recreational use of green space with positive impacts for both physical and mental health. Of course, it will be important to work within the local context. For example, the needs in lower-density suburban areas will be different from those in denser urban areas. But, in all locales efforts need to be made to provide access to high-quality urban green space, such as in the form of linear green spaces that double as cycle corridors and walking paths. It could be difficult to create new public green spaces of 1 ha in size, especially in existing neighbourhoods where "retrofitting" is needed. In these cases, a decent size of 0.5 ha should be a minimum. Moreover, we don't have to always think of park-like green spaces. Linear spaces like green avenues have substantial vegetation, seating, and areas to play and exercise.

Spanish cities offer some really good examples of this type of integration of public space and mobility.

Implementing the 3-30-300 Rule

There has been some initial interest in the rule from cities and organisations in different countries. Using the 3-30-300 rule will allow for benchmarking (nationally and internationally) as well as easy monitoring of progress. The rule is also easy to communicate and can generate interest and support among residents, politicians, businesses, and other key stakeholders. Applying the 3-30-300 rule will help improve and expand the local urban forest in many cities, and with that promote health, wellbeing, and resilience. It will help us create greener, better, and more biophilic cities.

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the 3-30-300 rule:

3 trees from your window

30% tree cover

300m to nearest park