

Recommendations for municipal green space and forestry authorities

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Trees are not only dying because of drought and heat-wave but also because of improper management. Precise and evidence-based recommendations are being developed within the framework of the „Green Lungs“ project. For **Dr. Somid Saha** (KIT), important options for action are already at hand today:

1. Species matters:

Please select the right species for the right places. Selection of drought-tolerant broadleaf species should be preferred. Please also experiment with drought-tolerant Mediterranean and Central Asian species with proper care on invasiveness.

2. Rooting area:

Many urban trees are dying because of too little rooting space given to them. Low water holding capacity of the soil or substrate is killing the trees during drought and heatwaves. This must be improved.

3. Varieties matter:

Germany is historically famous for tree breeding and creation of new tree varieties. However, this tradition is being eroded under the era of mass propagation of seedlings. German foresters and gardeners should revitalize this field to create more drought tolerant varieties for urban planting by breeding native species.

4. Irrigation:

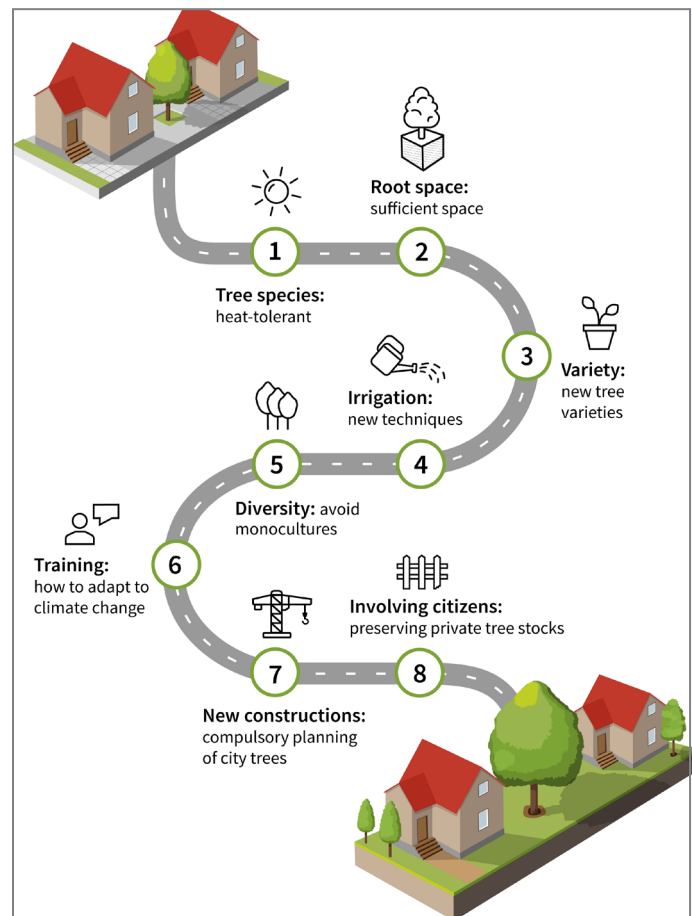
We need to develop species-, size-, and site-specific irrigation techniques.

5. Stop monoculture:

Most of us will notice that one street is often planted with one species. This increases risks of dieback in urban areas. Foresters and gardeners should increase the diversity of tree species in urban areas.

6. Training:

Many workers in urban garden and forest departments lack training on the need of climate change adaptation in daily management of urban trees and forests. As a result, mistakes (e.g. wrong selection of species) are being done repeatedly. It increases tree mortality and also wastes time and public money. I suggest that a thorough nationwide training program should be initiated by the federal and state governments for the workers involved in garden and forestry departments of the cities.



Graphic: Earth System Knowledge Platform ESKP

7. New building projects:

Inclusion of urban trees and forests in the planning of future and smart cities: There is an urgent need for inclusion of urban trees and forests in the future planning of the cities. The city administrations are already aware of it. However, it should also become a mandatory part of urban planning.

8. Talk to people:

City administrators and elected councilors should talk more with people on the issue of the importance of urban green space. A high portion of urban green space is privately owned. We need to increase the awareness of people so that we can also secure and sustain urban green areas in private places.