

IMPROVING AIR QUALITY  
IN THE CITIES STREET:  
TO TREE OR NOT TO TREE?

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Trees in the cities are a necessity that offers environmental, economic and cultural benefits. We typically associated urban trees as an improvement to the environmental quality particularly in combating air pollution which is originated largely by vehicle emissions. Trees help to improve air quality by converting carbon dioxide (CO<sub>2</sub>) into nutrients in its natural processes called photosynthesis. The fact that trees are able to reduce CO<sub>2</sub> in the atmosphere and it gives us a rational and scientific reason as to why trees are rather important in our urban environments. Despite the fact that the trees can effectively remove pollutants in the air, urban trees, under certain circumstances may also induced a local increase of pollutant concentrations. Thus, it can still be argued whether trees remain as

one of the reliable solutions to improve air quality in the cities. As an example, trees in urban street canyon could potentially obstruct the wind flow thus reducing the inner cities ventilation which can lead to higher pollutant concentration. This negative effect of urban vegetation towards urban air quality is less known amongst the policy makers and the public. Therefore, there is a need for a paradigm shift: rather than asking “how to use urban vegetation to improve the air quality”, urban planners and policy makers should foresee on how urban trees can be used without deteriorating the urban air quality. To mitigate the urban air quality issues, a study model is proposed using different types of tree planting patterns, sizes and textures.



Model of trees along the road side used to improve air quality - 2016

