cooling the air and ground surfaces, as well as mean radiant temperature reduction. Air cooling is dependent on the air velocity in the street, whereas the latter two indicators are morphology-related. Findings of the study can be summarized as below:

1. Influence on urban thermal environment varies with the crown density of urban trees. Tree crowns with an average LAD of above 0.5 are recommended for improving the outdoor thermal environment of high-density cities. In compact residential neighborhoods with street trees of this dense, cooling effect in air temperature and surface temperature would achieve 1K and 10K, respectively. With dense tree crowns of LAD averaged at about 1.0 level, the mean radiant temperature would be cut down to 33 degree under the canopy; given the hot summer in subtropical Hong Kong, it can be considered the urban trees provide a comfort microclimate for residents and greatly improve the outdoor thermal environment.
2. With respect to the influence of building geometry, the absolute cooling magnitudes of air and ground-surface temperatures were smaller in low SVF (0.2–0.3) than in high SVF (0.4–0.5) scenarios. The ground surface is exposed at varying levels in subtropical cities because of the high solar angle at noontime in the summer. Moreover, diversity in radiative environment would be enlarged as a result of builfing geometry. Street trees with certain LAD level could cool down the ground surface and even the thermal differences. And it is more critical to shade the street-crossing areas with tall dense trees to avoid overheat in high-dense neighborhoods with low SVF.

Nonetheless, this study has several limitations. First, additional environmental indicators should be included to evaluate the thermal effect of urban trees comprehensively. Second, the relationship between greening design and the thermal comfort of residents in the compact urban environment of tropical/subtropical cities should be further studied.

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