Pruning Intensity of Street Trees and Associated Effects on Ecosystem Services
Su-Ting Cheng1,2 & Shuo Wei1
1. School of Forestry & Resource Conservation, National Taiwan University, Taipei, Taiwan. 2. E-mail: chengsuting@ntu.edu.tw

**Method**

1. Data collection: tree species, diameter at breast height (DBH), tree height, and GPS coordination.
2. Calculate canopy cover and crown width by i-Tree Eco.
3. Simulate pruning intensity from 10% to 100% and quantify their associated effects on the ecosystem services by adjusting crown missing percentage.
4. Determine optimal pruning intensity based on simulation result and arboriculture practice.

**Result**

- **Pollution Removal**
- **Avoided Runoff**
- **Carbon Storage**

**Conclusion**

1. ES delivered by street trees are 5.6 million USD.
2. Benefits is $7.23 and maintenance cost is $11.5 USD per tree/yr.
3. Beneficial benefits like property should be investigate to increase benefits value to justified maintenance action.
4. We suggest a 20% or lower pruning intensity to maximize the ES values.