Tiny Forest: urban woodlands bringing social and environmental benefits

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What is a Tiny Forest?
A Tiny Forest is a small (200m²), densely planted native woodland. Each contain 600 trees, of 12-25 different species, following the Miyawaki planting method [1].

Methods for monitoring ecosystem benefits
Citizen Scientists monitor four key benefits of Tiny Forest:

1. **Biodiversity** – pollinator count, butterfly count, diversity of ground invertebrates.
2. **Carbon Storage** – measure height and diameter of 100 trees to calculate above-ground biomass.
3. **Flood management** – examine soil type, colour, texture, compaction and infiltration rate to characterise flood mitigation potential.
4. **Thermal Comfort** – measure the cooling effect of trees on micro-local environmental temperature using a weather station and personal perception.

Figure 1a. A Tiny Forest is the size of a tennis court (200m²). 1b. Witney Tiny Forest planted on 14 March 2020 in Oxfordshire. Credit: Earthwatch Europe.

Community benefits
Tiny Forests are often located in urban areas of economic or green deprivation. A Tiny Forest connects people with nature by:

- Engaging people in the design, implementation, and maintenance of their Tiny Forest.
- Training Citizen Scientists to monitor environmental benefits.
- Promoting community-driven stewardship of local green spaces.
- Providing usable green space to enjoy.

“*I want to be an environmental scientist when I grow up!*”

**Year 1 monitoring results**
So far, in 17 Tiny Forests in the first year since planting…

This small amount of carbon, equivalent to boiling a kettle 6000 times, is an essential baseline to estimate future carbon storage capacity.