

Urban tree biosecurity

What small and medium municipalities need to know

Invasive pests threaten the trees that cool and shelter our towns. Most local authorities lack the staff and tools to respond.



1 Why urban trees matter

 **220M**

Europeans live in small and medium-sized cities

FREE3 project data

 **2-8°C**

cooler surfaces under urban trees during heatwaves

Schwaab et al., 2021

 **30%**

tree cover could avert many heat deaths in 93 European cities

lungman et al., 2023

 **10x**

cheaper to prevent a pest than to control it once established

Hulme, 2021

THE 3-30-300 RULE

A simple benchmark for healthy, green neighbourhoods

Konijnendijk, 2023

 **3**
trees in view from every home

 **30%**
canopy in every neighbourhood

 **300 m**
to a quality green space

2 Priority threats to watch

Examples named in the policy brief



Ash dieback

Hymenoscyphus fraxineus



Oak processionary moth

Thaumetopoea processionea



Emerald ash borer

Agrilus planipennis



Xylella

Xylella fastidiosa

3 Why small towns are exposed



Information gap

Guidance is too technical for parks staff.

Needed: simple, mapped pest databases



Monitoring gap

Findings go unreported or arrive too late.

Needed: standard reporting protocols



Procurement gap

Tenders favour price over plant health.

Needed: plant passport checklists

HOW AN EARLY WARNING SHOULD TRAVEL

- 1** Someone spots symptoms on a tree
- 2** The municipal contact point logs a report
- 3** The Plant Health Authority confirms
- 4** Data feeds EU surveillance (2016/2031)

Six practical steps any municipality can take now

- 1 Know your priority threats**
 Check national bulletins and pest platforms.
 Focus on your main tree genera.
- 2 Set a simple monitoring routine**
 Name one responsible officer. Walk public trees yearly and record findings.
- 3 Engage citizens as early warners**
 Promote iNaturalist or ObsIdentify. Models: LIFE ARTEMIS, Observatree.
- 4 Secure your supply chain**
 Ask for valid EU plant passports and add plant health criteria to tenders.
- 5 Connect to networks**
 National authorities must help on request.
 Share data, skills and equipment.
- 6 Diversify what you plant**
 Avoid monocultures to limit damage from any single host-specific pest.

The 10-20-30 rule

Max. share of the urban tree stock

Species		10%
Genus		20%
Family		30%

No species over 10%, genus over 20% or family over 30%. It also counts toward EU biodiversity targets.

FREE3 ONE-STOP SHOP

QGIS plugins: pest risk assessment on your own tree inventory, on the map.

RShiny app: turns risk results into ready-to-use graphs and reports.

ub3guard.eu



Every action counts toward EU commitments

EU Plant Health Regulation (EU) 2016/2031

REQUIRES

Pest awareness, surveillance support, pest-free stock.

YOUR ACTION

Pest databases, reporting, plant passport checks.

EU Biodiversity Strategy for 2030

REQUIRES

Tackle invasive species and restore ecosystems.

YOUR ACTION

Diversify species with the 10-20-30 rule.

Nature Restoration Law (EU) 2024/1991

REQUIRES

No net loss of urban green space; canopy targets.

YOUR ACTION

Canopy baseline and biosecure planting plans.

Recommendations

Municipal decision-makers

- Name a biosecurity contact point.
- Budget yearly for tree health checks.

Regional / national level

- Give simple guidance and training.
- Co-finance regional monitoring networks.

Research community

- Keep pest databases open and co-designed.
- Publish case studies and cost-benefit models.