



BIOSECURITY AND SURVEILLANCE OF QUARANTINE PESTS OF TREES IN FORESTS AND CITIES



September 8-10, 2025

VENUE:

NOVA SBE, Carcavelos Campus
Rua da Holanda, no. 1,
2775-405 Carcavelos, Portugal

Explore innovative approaches to urban tree health
and forest pest surveillance.

- Biosecurity strategies in urban settings
- NPPO practices and challenges
- New tools for pest detection
- Species resistance and vulnerability
- Stakeholder involvement
- Education and awareness
- Policy frameworks for urban biosecurity



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Conference programme

Biosecurity and Surveillance for Quarantine Pests of Trees in Forests and Cities
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Monday, September 8th

08:00	Registration, Meet & Greet		
08:30	Opening - Local hosts: Dra Patrícia Inácio (vice President INIAV IP.) and Dra Margarida Oliveira (President of Green-IT ITQB); Dmitrii Musolin (EPPO), Johanna Witzell (COST Action UB3Guard)		
Session I - Surveillance and monitoring - strategies, regulations and experiences			
09:00	Dmitrii Musolin	EPPO	Regional and international cooperation in surveillance of quarantine pests of trees in forests
09:15	Tomasz Kaluski	European Food Safety Authority	Optimising plant pest surveys for broadleaved trees: Application of EFSA guidelines and tools
09:30	Maria Mirazchiyska	European Commission	EU legal framework and the recent developments in plant health surveillance
09:45	Joan Webber	Forest Research	Forest surveillance for quarantine pests: is there a divergence between regulation and science?
10:00	Ferenc Lakatos	FAO REUFIS/University of Sopron	Capacity building for forest invasive species surveillance – the REUFIS (Forest Invasive Species Network for Europe and Central Asia) initiative
10:15	Susanne Raum	Technical University of Munich	The growing threat of urban tree pests and diseases – Impacts, risk awareness, and action
10:30	Benno Augustinus	Swiss federal Research Institute WSL	Optimising surveillance for multiple quarantine forest pests using a bioeconomic model
10:45 Coffee break			
11:15	Luís Bonifácio	INIAV	Quarantine forest species surveillance in Portugal

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11:30	Dinka Matosevic	Croatian Forest Research Institute	Surveillance of quarantine forest pests in Croatia: analysis of practice and challenges
11:45	Tom McDonald	Department of Agriculture Food and the Marine	Forest health surveillance in Ireland
12:00	Francis Maire	Francis Maire Arboriste Conseil	Feedback from French experience with canker stain (<i>Ceratocystis platani</i>)
12:15	Paula Catusińska	State Plant Health and Seed Inspection Service	Poland's preparedness for plant biosecurity threats: The role of simulation exercises on <i>Agrilus planipennis</i>
12:25 Lunch break			
Session II - Tools and methods in biosecurity			
14:00	Diana Marčiulyrienė	Lithuanian Research Centre for Agriculture and Forestry	WG2: Synthesizing Research and Scanning Horizons for Urban Tree Health
14:20	Nicolas Meurisse	Bioeconomy Science Institute	Early detection of exotic pests across urban and forest environments - integrating risk-based surveillance systems in New Zealand
14:40	Alain Roques	INRAE	PORTRAP SORE 2021-2024: A trapping network using generic lures for early detection of non-native xylophagous species at ports-of-entry in France
15:00	Eckehard Brockerhoff	Swiss Federal Research Institute WSL	Role of birds as predators of non-native and native pests of urban trees
15:20	Marta Betka	Poznań University of Life Sciences	The green wedge system of Poznan: An urban planning vision ahead of its time
15:35	Guitton Noah	Telespazio	Synthetic data augmentation for tree pest detection in aerial imagery

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15:45	Katie Parker	Forestry Commission	Proof of concept: Trapping for early detection of quarantine <i>Agilus</i> species in Great Britain
16:00 Coffee break			
16:30	17:15	Panel discussion	

Tuesday, September 9th

Session III - Decision support for biosecurity			
08:30	Mariella Marzano et al.	Forest Research	Urban Tree Guard: WG 1 - Identification
09:00	Hervé Jactel	INRAE	Prototype decision making tool tree planted in cities
09:15	Matteo Latini	Universita' degli Studi della Tuscia	New challenges in monitoring tree health and invasive pathogens in urban environments and support decision
09:30	Matteo Marchioro	University of Padua	Know them to stop them! The first world database on bio-ecology and distribution of Scolytinae
09:45	Marie Grosdidier	INRAE	Improving pinewood nematode monitoring in France based on risk analysis
10:00	Alberto, Santini	CNR	The invasion framework helps the management of the spread of canker stain disease of plane trees
10:15	Daiva Burokiene	Nature Research Centre, Laboratory of Plant Pathology	Two targets in one shot – entomopathogens against insect pests and plant pathogens
10:25	Johan Östberg	Nature Based Solutions Institute	Presentation of FREE3 CIG
10:40	Ana Cristina Silva	INIIV	UB3 Guardians – Card and Quiz Game for Education on Urban Tree Pests and Diseases

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10:50 - 11:15	Coffee break
Excursion, Lunch at 13:00	
COST dinner 19:00, bus back to Carcavelos 22:30 or 23:00	

Wednesday, September 10th

September 10th			
Session IV - Pests and pathogens in urban settings			
09:30	Roeland Samson	University of Antwerp	Pest resilient urban green areas – The story of the dying tree
10:00	Steve Woodward	Isparta University of Applied Sciences	The status of <i>Ceratocystis platani</i> in Türkiye: Spread beyond Istanbul
10:20	Jason Sumner-Kalkun	Forest Research	Management of <i>Ips typographus</i> in the UK
10:35	Talor Whitham	University of Reading, Forest Research	Safeguarding against Pine Wilt Disease: Monitoring pine-associated nematodes and their beetle vectors in Great Britain
10:50	Yasin Korkmaz	University of Freiburg	Impact of leaf miner moth infestation on fungal community composition in Horse Chestnut leaves
11:00	Iva Franic	WSL	FUNURB project
11:15 Coffee break			
11:45	Artemis Rumbou	Humboldt University Berlin	Birch pollen virome: fungal and plant viruses co-infecting urban trees in Berlin
12:00	Tamara Corcobado	Austrian Research Centre for Forests (BFW)	Artificial inoculations of <i>Dothistroma septosporum</i> and <i>D. pini</i> on urban pines: A comparative study of disease progression and physiological changes

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12:15	Kathrin Blumenstein	University of Freiburg	Dothistroma Needle Blight on non-native pines in Central Europe: Emerging pathogen risks for urban and native forests
12:30	Katarzyna Sikora	Forest Research Institute	Biotic and abiotic Damage to oaks in forest and urban habitats: A comparative study
12:40	H. Tuğba Doğmuş-Lehtijärvi	Isparta University of Applied Sciences	Possible causes of shoot dieback of <i>Juniperus excelsa</i> in Western Türkiye
12:50 Lunch break			
14:15	Ilija Đorđević	Institute of Forestry	Mapping of urban forest managers in protected areas in Serbia
14:30	Milica Zlatkovic	Institute of Lowland Forestry and Environment (ILFE)	<i>Diplodia seriata</i> is a "silent killer" of <i>Quercus robur</i> trees after replanting in Novi Sad, Serbia
14:45	Natália Nunes	IFCN, IP-RAM	Presence of <i>Rhynchophorus ferrugineus</i> in the city of Porto Santo island: phytosanitary assessment and georeferencing of <i>Phoenix canariensis</i>
15:00	Carmen Romeralo	Institute of Forest Sciences	Isolation and pathogenicity of Oomycetes from recreational and control sites in Spanish national parks
15:15	Nadejda Mocreac	Technical University of Moldova	The evolution and impact of invasive insects and phytopathogens in urban ecosystems in the republic of Moldova
15:30	Break		
15:45	Discussion - Future collaborations, ongoing and planned proposals and papers		
16:30	Summary and closing the meeting		

Abstracts

Synthesizing research and scanning horizons for urban tree health

Marčiulynienė, D.¹, Franić, I., Prospero, S., Branco, M., de Groot, M., Aday Kaya, A. G., Akyol, S., Augustinus, B., Avtzis, D., Beřka, M., Beram, C., Birben, Ü., Blagojević, J., Blumenstein, K., Bragança, H., Brockerhoff, E., Burokienė, D., Cleary, M., Corcobado, T., Ćepukoit, D., Davydenko, K., Diez, J. J., Đorđević, I., Drenkhan, R., Drenkhan-Maaten, T., Dvořák, M., Economou, A., Ipekdal, K., Ghelardini, L., Grigorov, B., Hysa, A., Hoppe, B., Jürisoo, L., Kacprzyk, M., Kavallieratos, N. G., Klavina, D., Korkmaz, Y., Köpke, K., Krajter, S., Koç, M., Lehtijärvi, H. T. D., Lehtijärvi, A., Luchi, N., Maire, F., Matošević, D., Matsiakh, I., McCarthy, N., Mocreac, N., Morales-Rodriguez, C., Oskay, F., Papazova, I., Paletto, A., Paraschiv, M., Pavlović, L., Romeralo, C., Samson, R., Santini, A., Sellami, D., Silva, A. C., Sotirovski, K., Soulioti, N., Stein, F., Terhonen, E.L., Topalidou, E., Vannini, A., Vettraino, A. M., Vuletić, D., Weiss, M., Woodward, S., Zlatković, M., Witzell, J., Jactel, H.

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Abstract

Cities are often the initial hotspots for the introduction of new pests, with potentially severe consequences for urban and natural ecosystems. To mitigate these risks, effective, applicable, and socially acceptable methods and tools are essential. Yet, a comprehensive overview of such methods, especially in urban contexts, has been lacking.

Working Group 2 (WG2) of COST Action CA20132 *Urban Tree Guard* addressed this gap through two complementary efforts. First, we conducted a systematic review of methods targeting 20 priority pests from the EPPO A1 and A2 lists, covering detection, identification, monitoring, management, and eradication. Our analysis revealed a significant increase in the number of method records over time, particularly for management approaches. Research effort was unevenly distributed, with substantially more studies conducted in the non-native range than in the native range of target pests. These findings show that current efforts have been largely reactive, with most attention given to management in non-native ranges, while prevention, early detection, and rapid response remain underrepresented. Second, WG2 initiated Horizon Scanning to identify promising technologies and approaches for future applications in urban biosecurity. Following a workshop in Poznań, 18 candidate methods were collected and are currently being scored by experts according to Technology Readiness Level (TRL) and urban applicability. This process will result in a co-authored publication that recommends a shortlist of the most promising urban biosecurity innovations.

Taken together, review and horizon scanning provide a robust evidence base to support practitioners, citizens, and policymakers in strengthening urban biosecurity and safeguarding green spaces.

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