

Quarantine Forest Pest Surveillance in Croatia: Methods and Results over Five Years

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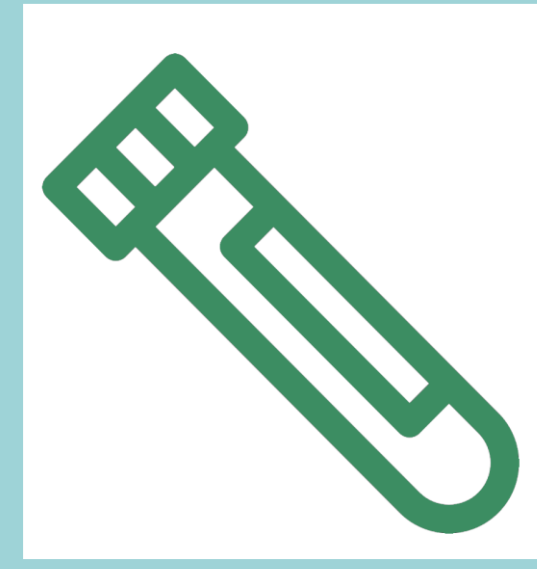
Safeguarding Croatia's forests

Our research focuses on identifying, monitoring and managing quarantine forest to preserve biodiversity and resilience of our valuable forest ecosystems. Here we present technologies and methodologies already used, as well as innovative technologies as remote sensing and genetic analysis that help in our research.

Quarantine pests in forestry include alien invasive insects, plant diseases and invasive plant species that can devastate forest ecosystems. Regular monitoring enables rapid detection of introduction and prevents the spread of these pests, safeguarding the health, productivity and all other benefits of forests.

The quarantine pest monitoring programme phases include:

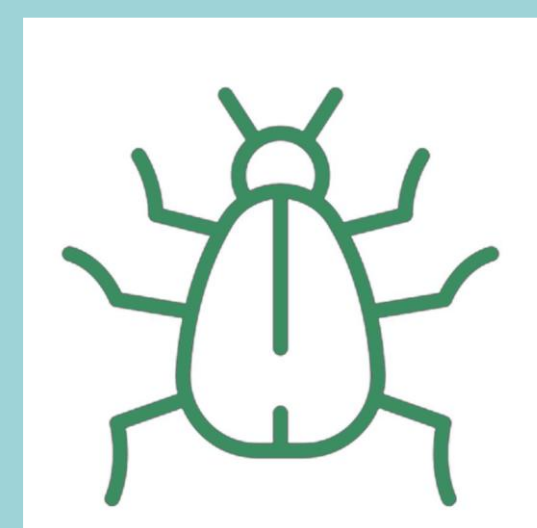
- Planning
- Visual inspections
- Data collection
- Analysis
- Monitoring
- Evaluation



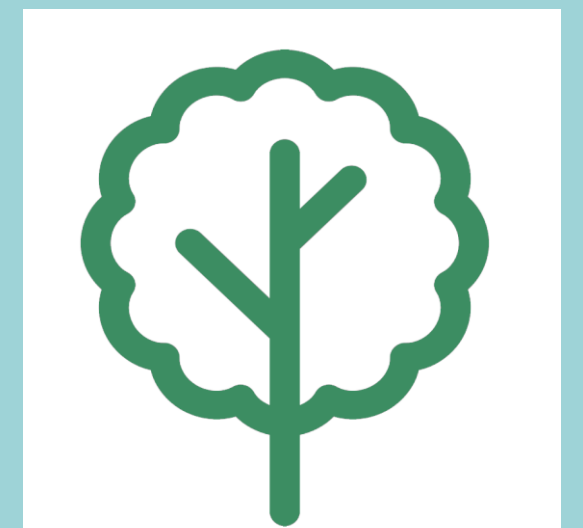
500 samples/year



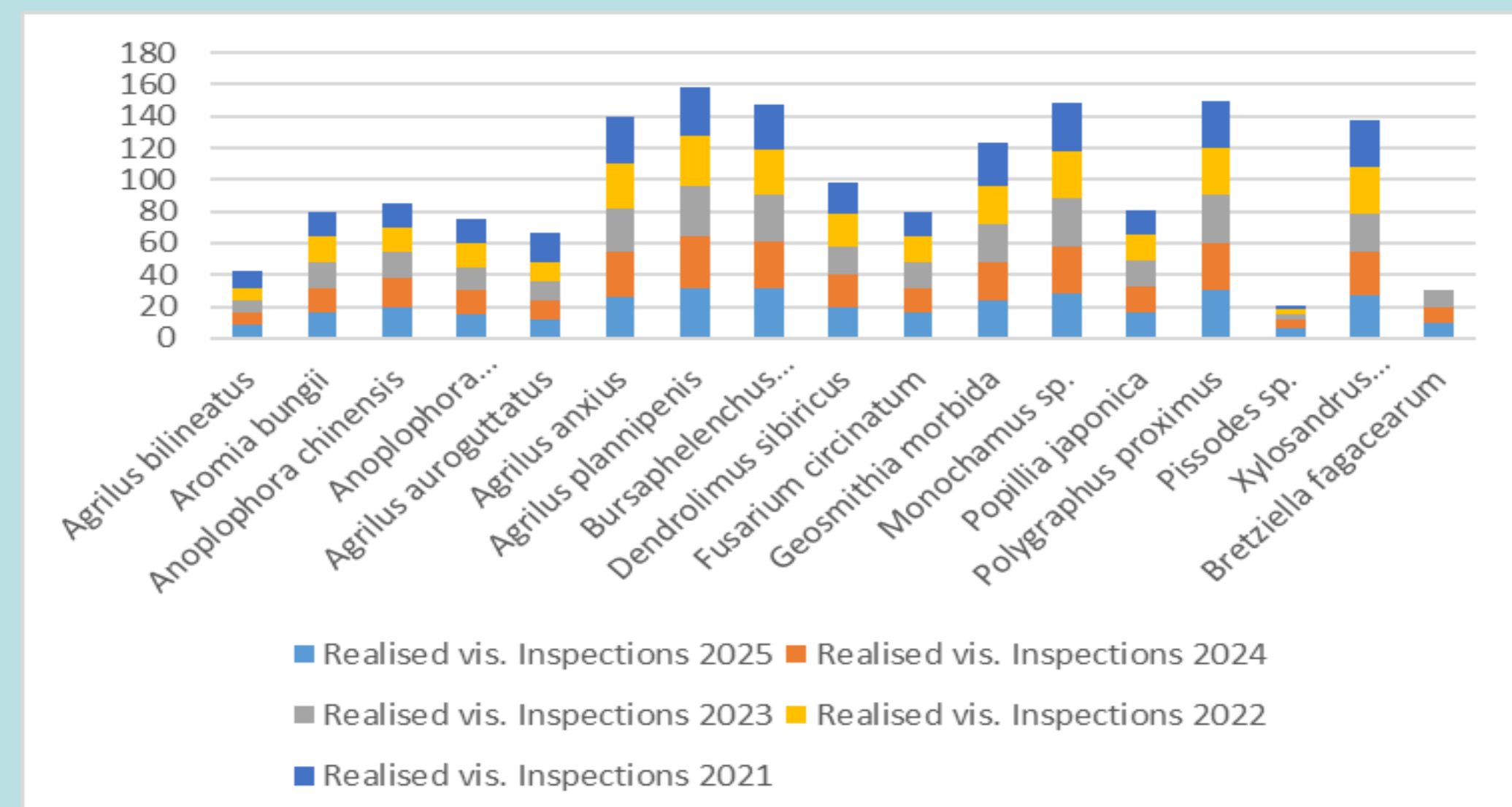
300 visual inspections/year



26 quarantine pests



30 000 trees inspected/year

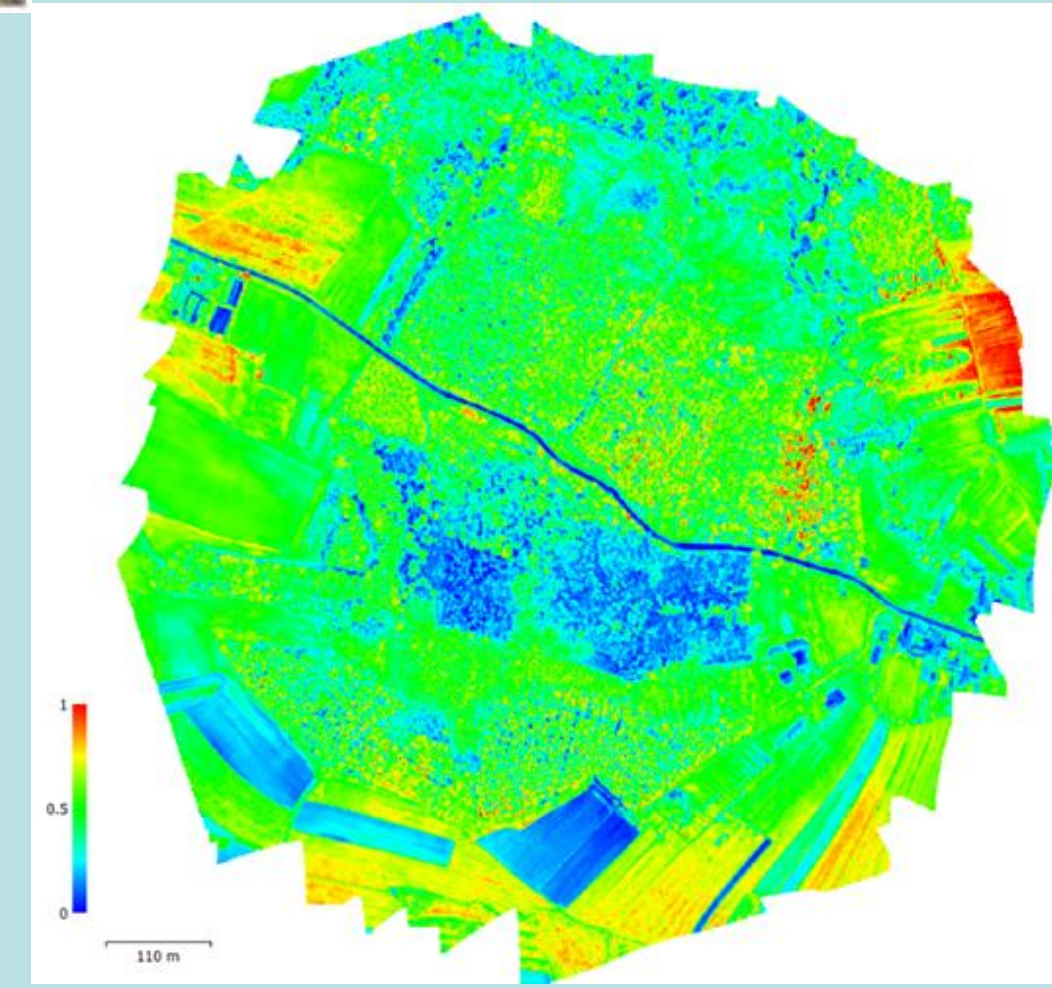


Annual results for different types of monitored organisms in the period from 2021 to 2025

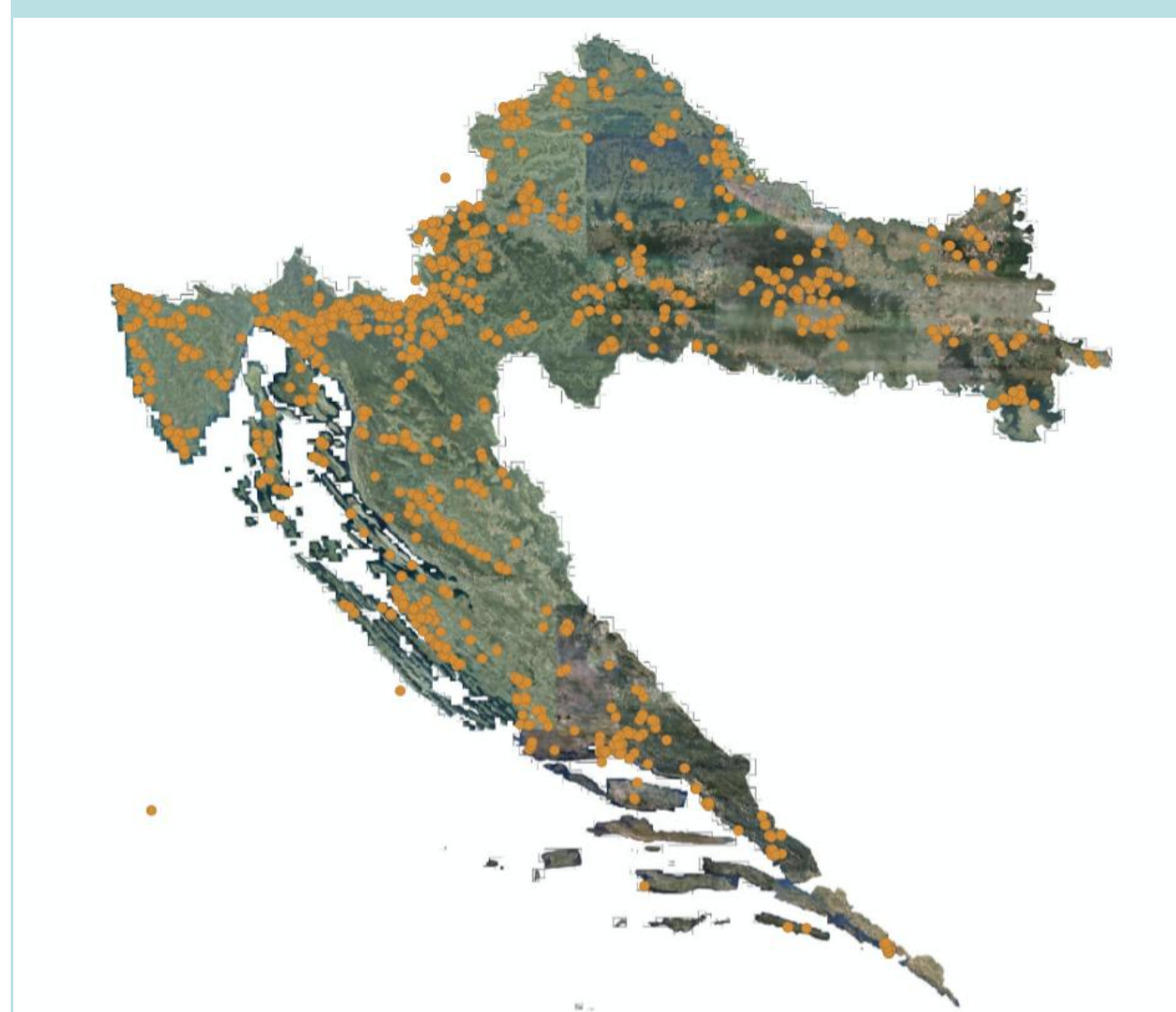


Various pheromone traps designed for different organisms

NDVI orthomosaic generated from images collected with a multispectral camera mounted on a UAV. From 2024 we are using thermal and multispectral cameras for detection

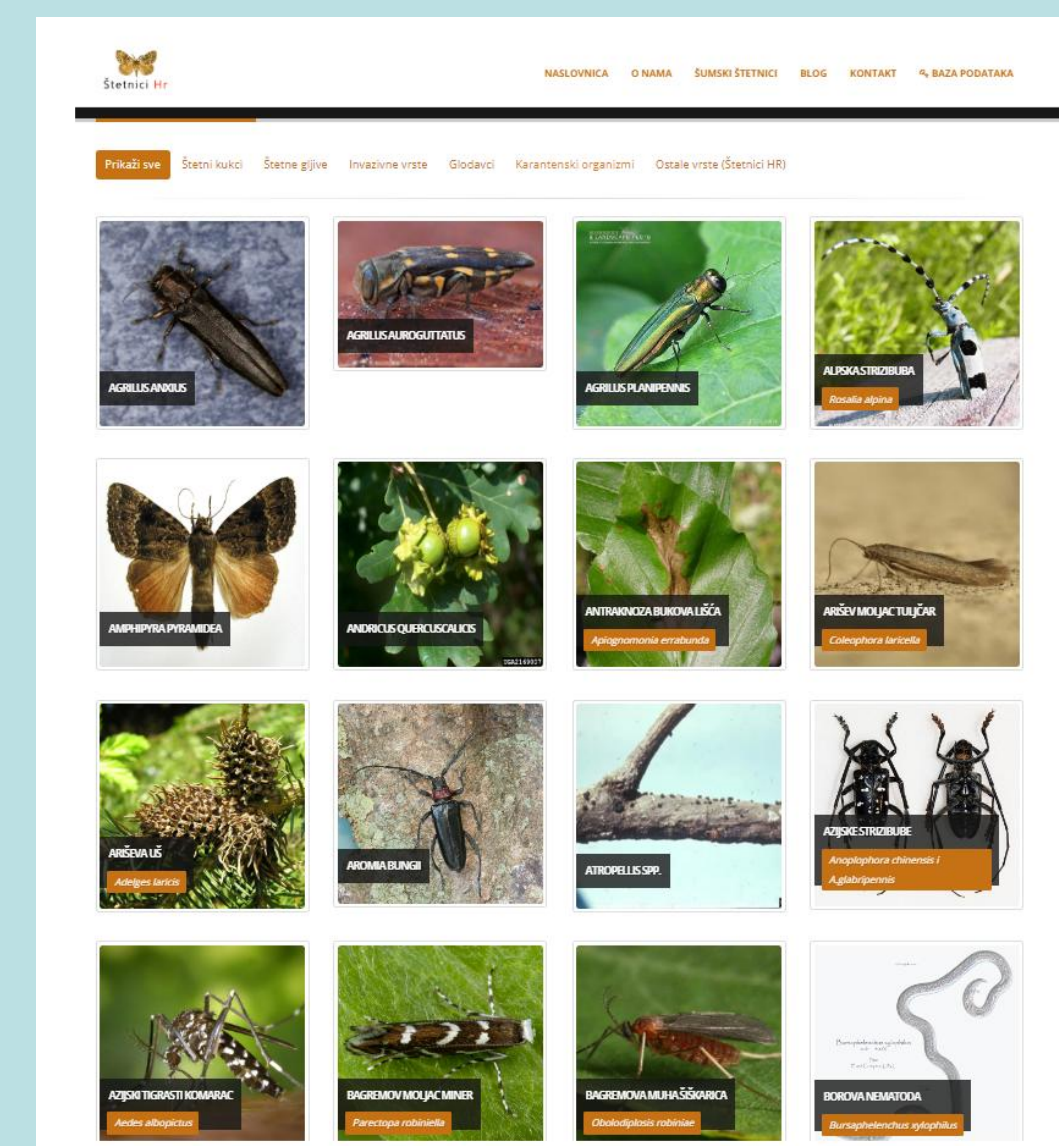


In 2023, a positive finding of *Anoplophora chinensis* near Biograd na Moru was reported, which has spread from urban areas into the forest. Exit holes and feeding damage on branches were observed in the field. Adult individuals were captured using pheromone traps.



Visual inspections and sampling sites in Croatia in the last 5 years

Štetnici.hr is an online platform providing valuable information about plant pests and methods for their control. On this website, you can find detailed descriptions of various pests, including appearance, biology, damage they cause and how to recognize them.



In the future we will start using isothermal amplification (LAMP) method and employing EFSA statistical program RiPEST. Over the years, we will conduct visual inspections for 26 quarantine organisms. The personnel active in the sampling and identification of quarantine forest pests regularly take part in BTSF and EFSA trainings which makes all our efforts accurate and scientifically valid.