



Faculty of Forestry, Department of Forest Ecology and Silviculture

Main research field

Silviculture, arboriculture, ecology, microbiology, phytocoenology, chemistry with biochemistry, pedology.

Specific research areas

Ecological monitoring in forest ecosystems, research in protected natural resources, monitoring the environmental condition and selecting recovery measures for degraded terrains, environmental impact assessment study, close to nature silviculture, silvicultural analyses and recommendations, quality control of forest seed material, quality control of forest seed, afforestation projects, forest soil condition monitoring, soil and soil properties mapping, physical and chemical soil analyses, vegetation research, forest vegetation mapping, forest fire risk assessment, recovery methods of burned forest area, nature protection, arboriculture.

Techniques/methods

Ecological modelling, forest monitoring, spectrometric analyses, quality control of forest seed and other material, soil monitoring, vegetation research, soil analysis.

Equipment

- microscope,
- analytical balances,
- laboratory pressure chambers for soil water potential,
- lab ovens,
- chn analyzer,
- calcimeter,
- air pycnometer,
- soil water permeameter,
- pH-meters,
- spectrometer - ICP-AES,
- UV-vis spectrophotometer,
- resistograph,
- US tomograph,
- germination cabinet,
- mobile pressure chamber for plant water potential,
- analyser for forest canopy.

Certificates

No, but it is planned:
ISO 170025

Technology keywords

- Silviculture, Forestry
- Biodiversity
- Ecology
- Measurement and Detection of Pollution
- Natural Disasters
- Soil Pollution

Services offered

- Teaching and training
- Material characterisation (testings, measurements, various quantitative and / or qualitative analyses)
- Use of specialized equipment
- Diagnostics
- Quality control
- Project documentation and solutions

Market sectors

- Alternative Energy
- Industrial Engineering
- Support Services
- Forestry & Paper
- Household Goods & Home Construction
- Leisure Goods



- Personal Goods
- Electricity
- Oil & Gas Producers

Short summary (English)

Research interests of experts of the Institute of ecology and silviculture are focused on improving the management of forest ecosystems and green areas that have a recreation purpose. In this sense, research has focused on understanding relationships within ecosystems, and on control of trend of changes in them, by taking measures and procedures to ensure stability and sustainability. It includes ecological monitoring in forest ecosystems, research in protected natural resources, monitoring the environmental condition and selecting recovery measures for degraded terrains, environmental impact assessment study, close to nature silviculture, silvicultural analyses and recommendations, quality control of forest seed material, quality control of forest seed, afforestation projects, forest soil condition monitoring, soil and soil properties mapping, physical and chemical soil analyses, vegetation research, forest vegetation mapping, forest fire risk assessment, recovery methods of burned forest area and arboriculture.

Short summary (Croatian)

Istraživački interesi eksperata Zavoda za ekologiju i uzgajanje šuma fokusirani su na unaprijeđenje gospodarenja šumskim ekosustavima te zelenim površinama koje imaju rekreacijsku namjenu. U tom smislu istraživanja su usmjerena na poznavanje odnosa unutar ekosustava te na kontroliranje trendova promjena u njemu, poduzimanjem mjera i zahvata koji osiguravaju njegovu stabilnost i održivost. Ona obuhvaćaju ekološki monitoring u šumskim ekosustavima, istraživanja u zaštićenim prirodnim vrijednostima, praćenje stanja okoliša i određivanje mjera sanacije degradiranih terena, izradu studija utjecaja na okoliš, prirodno uzgajanje šuma, šumskouzgojne analize i preporuke, ispitivanje kvalitete šumskog sadnog materijala, ispitivanje kvalitete šumskog sjemena, izradu projekata za pošumljavanje, monitoring stanja šumskih tala, izradu pedoloških karata, fizikalne i kemijske analize tla, vegetacijska istraživanja, kartiranje šumske vegetacije, procjenu ugroženosti šuma od požara, metode sanacije opožarenih šumskih površina i arborikulturu. Istraživački interesi eksperata Zavoda za ekologiju i uzgajanje šuma fokusirani su na unaprijeđenje gospodarenja šumskim ekosustavima te zelenim površinama koje imaju rekreacijsku namjenu. U tom smislu istraživanja su usmjerena na poznavanje odnosa unutar ekosustava te na kontroliranje trendova promjena u njemu, poduzimanjem mjera i zahvata koji osiguravaju njegovu stabilnost i održivost. Ona obuhvaćaju ekološki monitoring u šumskim ekosustavima, istraživanja u zaštićenim prirodnim vrijednostima, praćenje stanja okoliša i određivanje mjera sanacije degradiranih terena, izradu studija utjecaja na okoliš, prirodno uzgajanje šuma, šumskouzgojne analize i preporuke, ispitivanje kvalitete šumskog sadnog materijala, ispitivanje kvalitete šumskog sjemena, izradu projekata za pošumljavanje, monitoring stanja šumskih tala, izradu pedoloških karata, fizikalne i kemijske analize tla, vegetacijska istraživanja, kartiranje šumske vegetacije, procjenu ugroženosti šuma od požara, metode sanacije opožarenih šumskih površina i arborikulturu.