



Slovenian Forestry Institute

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GOZDARSKI INŠTITUT SLOVENIJE
SLOVENIAN FORESTRY INSTITUTE

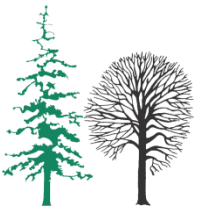
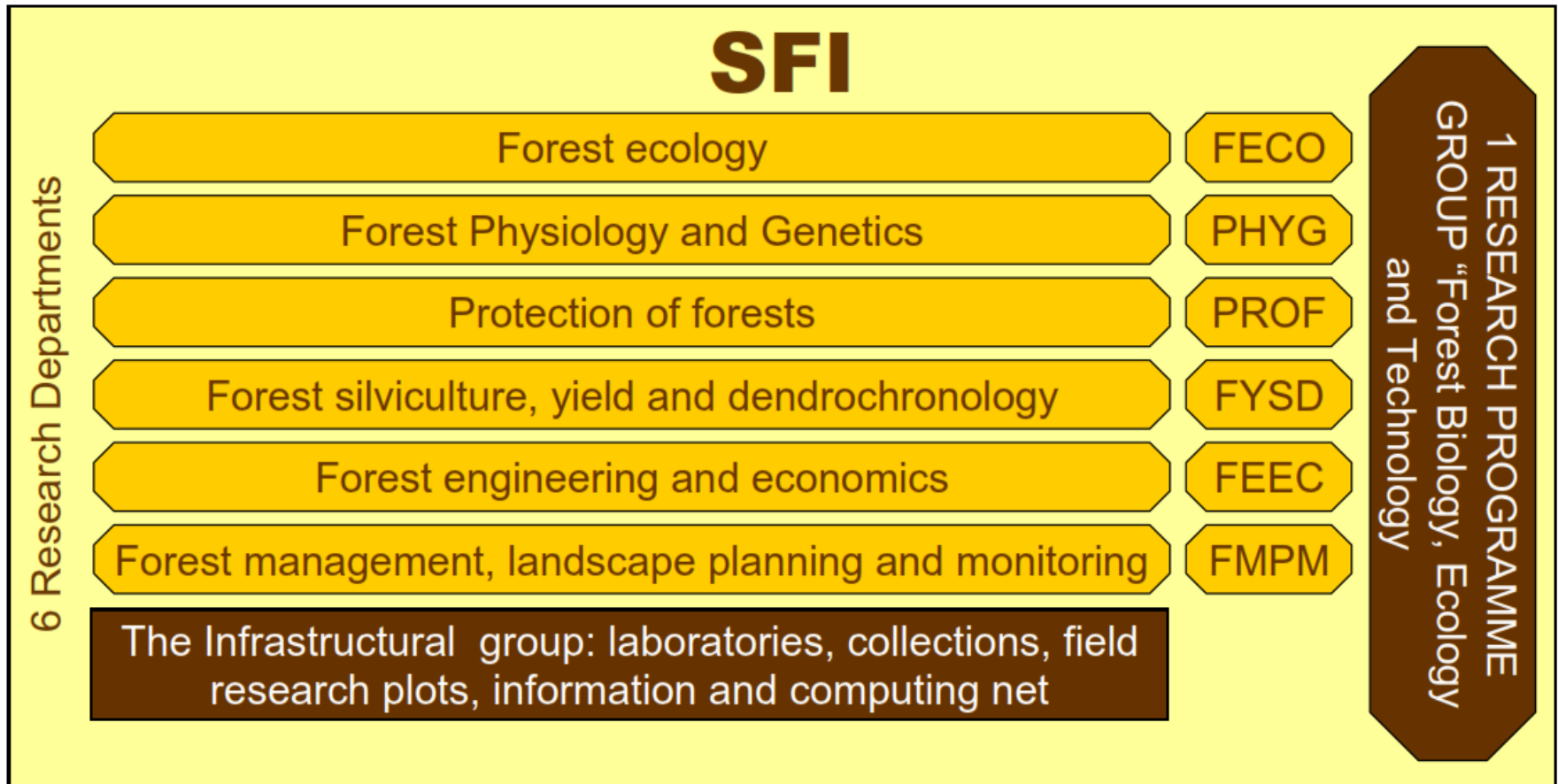


Slovenian Forestry Institute - SFI

- Established in 1947, went through different organizational phases to become a **public research institution** established by the Republic of Slovenia in 1994.
- Approx. 75 employees, with more than 40 researchers
- In the last 60 years SFI has established its firm position as the only research institute in Slovenia of national importance in the field of forests, forestry, forest ecosystems, forest and landscape planning & monitoring, wildlife ecology and management
- It is the official State Authority after the Forest Act
 - i) for approval and certification of forest reproductive material
 - ii) for professional and health control of forest seeds and nurseries



Organisation of the SFI research programme, research infrastructure & departments



SFI laboratories and other infrastructure facilities

□ OU SFI Main IP Laboratories:

- Forest Ecology
- Forest Physiology and Genetics
- Forest Protection
- Dendrochronology & Wood Anatomy
- Microscopy facilities

□ OU SFI Collections:

- Different collections (*Slovenian forest gene bank, molecular databases, Mycotheca and herbarium SFI, Culture collection of forest pathogens (ZLVG), Entomological collection, Live collection of forest root symbionts (Collection of Ectomycorrhizal Fungi, CEMF)*)
- SFI Data collections (*national forest inventory at national level ; information system, National Register of Seed objects and Gene Conservation Units*)

□ OU SFI Research plots:

- Active research plots (cca 850)
- Permanent research plots (45 – 10 monitoring & cca 10 other - case studies)

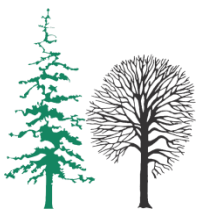
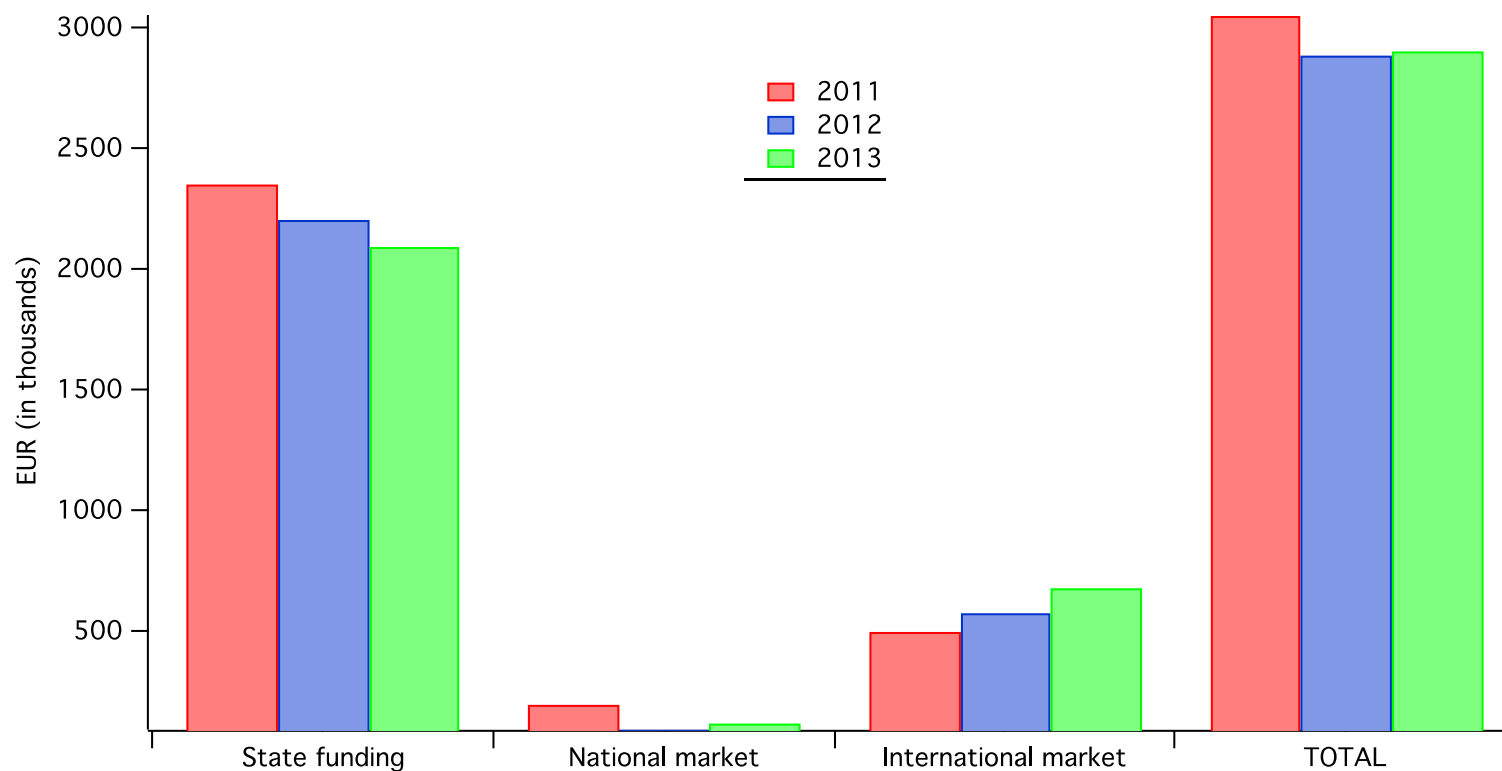
□ OU Info & data infrastructure – support act.

SFI Laboratory facilities in 2013

- Laboratory for forest physiology
- Laboratory for forest genetics
- Laboratory for forest seed & seedling certification & technology
- Slovenian forest gene bank
- Laboratory for forest ecology
- Laboratory for electronics
- Laboratory for woody biomass
- Laboratory for wood extraction studies
- Microscopy facilities
- Database on Field Inventories on State of Forests and Health Condition of Forest Ecosystems
- Services of remote sensing of forest resources and LIDAR applications
- Laboratory for wood anatomy
- Laboratory for forest eco-physiology and silviculture
- Laboratory for dendrochronology
- Laboratory for stable isotopes
- Laboratory for forest protection
- Web-portal service for forest health



Funding by type of source



KEY ONGOING INTERNATIONAL PROJECTS, PROGRAMMES, ACTIONS:

- ❑ EUFORGEN; 7 COST actions
- ❑ EUFORINNO - European Forest Research and Innovation (Infrastructures FP7 Regpot);
- ❑ PEMURES - Penetration of the energy market with unused renewable energy resources (EFRE: SI-AT);
- ❑ BIOMASSTRADECENTRE II - Development of biomass trade and logistics centres for sustainable mobilization of local wood biomass resources (IEE project);
- ❑ PROFORBIOMED - Promotion of Residual Forestry Biomass in the Mediterranean basin (MED project);
- ❑ NewFor - New technologies for a better mountain forest timber mobilization (Interreg IIIB project);
- ❑ ID.WOOD - Clustering knowledge innovation and design in the SEE wood sector (SEE);
- ❑ EFFMIS - European Forest Fire Monitoring using Information Systems (Interreg IVC);
- ❑ ManFor C.BD. - Managing forests for multiple purposes: carbon, biodiversity and socio-economic wellbeing (Life+);
- ❑ EMoNFUr - Establishing a monitoring network to assess lowland forest and urban plantation in Lombardy and urban forest in Slovenia (Life+);
- ❑ FutMon - Further Development and Implementation of an EU-level Forest Monitoring System (all Life+ Environment Policy and Governance);
- ❑ WOODAPPS - Improvement in collaboration along the wood value chain through knowledge-based methods and mobile applications (WoodWisdom-Net 2);
- ❑ RegioPower - A regional IT-based platform for bringing resource needs and land-based resource production together (WoodWisdom-Net 2);
- ❑ STARTTREE - Multipurpose trees and non-wood forest products a challenge and opportunity (7FP);
- ❑ FOROPA - Sustainable Networks for the Energetic Use of Lignocellulosic Biomass in South East Europe (SEE);
- ❑ BIOEUPARKS - Exploiting the potentialities of solid biomasses in EU Parks (IEE);
- ❑ S2Biom – Delivery of sustainable supply of non-food biomass to support a “resource-efficient” Bioeconomy in Europe (7FP);
- ❑ SIMWOOD – Sustainable Innovative Mobilisation of Wood (7FP).



SOME RESEARCH HIGHLIGHTS ...

- To extend empirical models of forest fires and of climate change impacts on vegetation to other territories (after STOJANOVA, KOBLEK et al. Estimating the risk of fire outbreaks in the natural environment. Data mining and knowledge discovery, 2012)
- Environmental economics, esp. non-market valuation and optimization of provision of ecosystem services (after MAVSAR, JAPELJ, KOVAČ. Trade-offs between fire prevention and provision of ecosystem services in Slovenia. Forest Policy and Economics, 2012)
- Evaluation of environmental factors and bioindication (after MAVSAR, KUTNAR, KOVAČ, 2005. Slovenia. In: Merlo, M. (ed.). Valuing Mediterranean Forests : towards total economic value. Wallingford: CABI publishing, p. 263-278)
- Ecosystem services of forest ecosystems, related to water quality and quantity, modelling of water balance & drought stress indices (after VILHAR & SIMONČIČ. 2012. Water status and drought stress after gap formation in managed and semi-natural silver fir - beech forests. European Journal of Forest research, 2012)
- Development of common models to predict growth in response to environmental changes (after POLJANŠEK, CEGLAR, LEVANIČ. Long-term summer sunshine/moisture stress reconstruction from tree-ring widths from Bosnia and Herzegovina. Clim. past , 2013)



... SOME RESEARCH HIGHLIGHTS ...

- Genetic diversity in time and space to provide information on early changes in the ecosystems, and as a useful tool for certification of FRM, helping the selection of seed sources with highest probability of success for selected planting sites (after WESTERGREN, JARNI, BRUS, KRAIGHER. Implications for the use of forest reproductive material of Common ash (*Fraxinus excelsior* L.) in Slovenia based on the analysis of nuclear microsatellites. *Šum. list* 2012; LEFÉVRE, KRAIGHER, WESTERGREN, et al. Dynamic conservation of forest genetic resources in 33 European countries. *Conserv. biol.*, 2013)
- Fungal diversity at gene, species and community level; past, present and potential future distribution and migrations of commercial truffle species at Mediterranean and European level; (after PÖLME, GREBENC, KRAIGHER et al. Biogeography of ectomycorrhizal fungi associated with alders (*Alnus* spp.) in relation to biotic and abiotic variables at the global scale. *New Phytologist* 2013)
- The roles and functions of mycorrhizosphere complexity & turnover in ecosystem functioning and carbon dynamics (after EKBLAD, KRAIGHER et al The production and turnover of extramatrical mycelium of ectomycorrhizal fungi in forest soils: role in carbon cycling. *Plant soil*. 2013; & KRAIGHER, BAJC, GREBENC Mycorrhizosphere complexity, In: Matyssek et al (Eds), Elsevier, 2013)

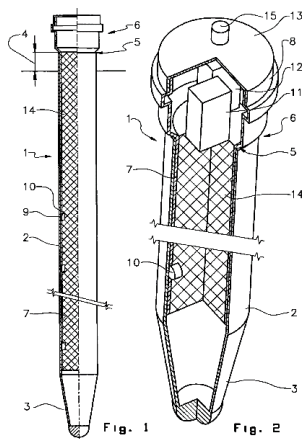


... SOME RESEARCH & INNOVATION HIGHLIGHTS

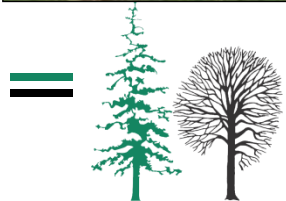
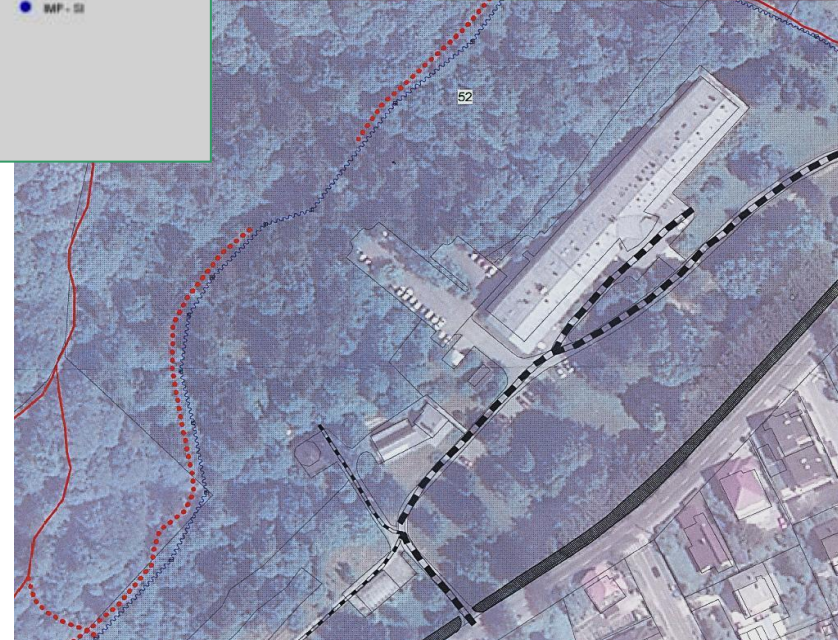
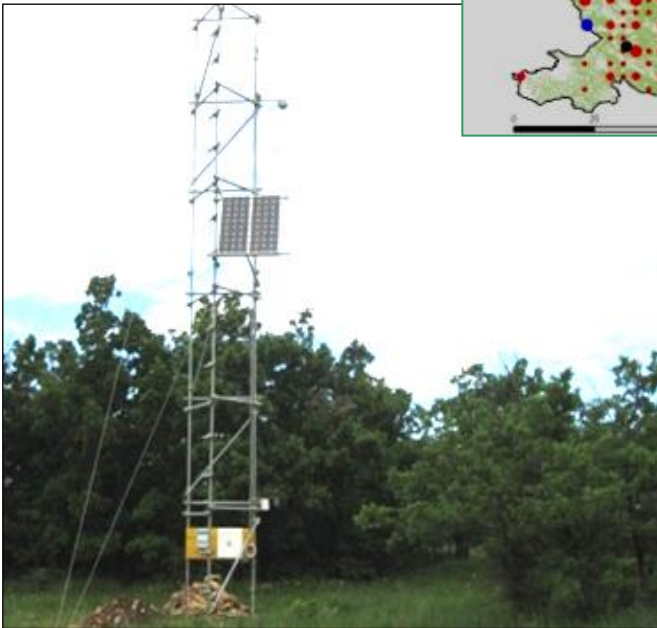
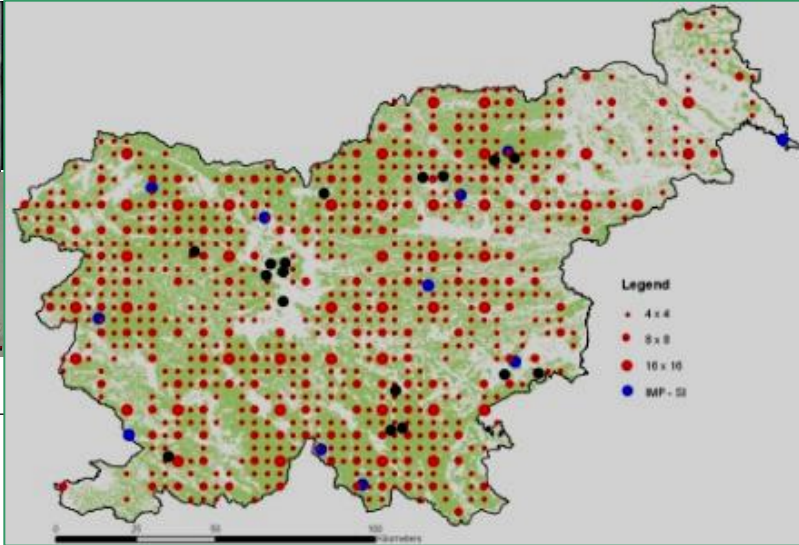
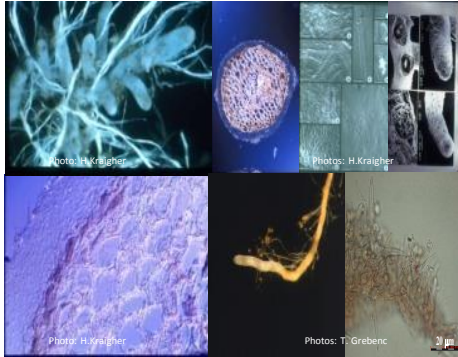
- Preparation of experiments (experimental designs), determination of many insect species, a lot of field experience and a strong statistical background (after De Groot et al. Distribution modelling as an approach to the conservation of a threatened alpine endemic butterfly (Lepidoptera: Satyridae). Eur. j. entomol. 2009)
- Production of measuring equipment in the Laboratory for Electronic Devices at SFI (after FERLAN & SIMONČIČ. Robust and cost-effective system for measuring and logging of data on soil water content and soil temperature profile. Agricultur. sci. 2012; ELER et al. Soil respiration of karst grasslands subjected to woody-plant encroachment. Eur. journal soil sci., 2013; Patent application (EP12172542.8): Apparatus for capturing a gas flow; European patent application (EP2289307): A method for measuring the dynamics of root development and apparatus for carrying out said method)



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Wellcome to all research collaboration & infrastructure sharing!



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