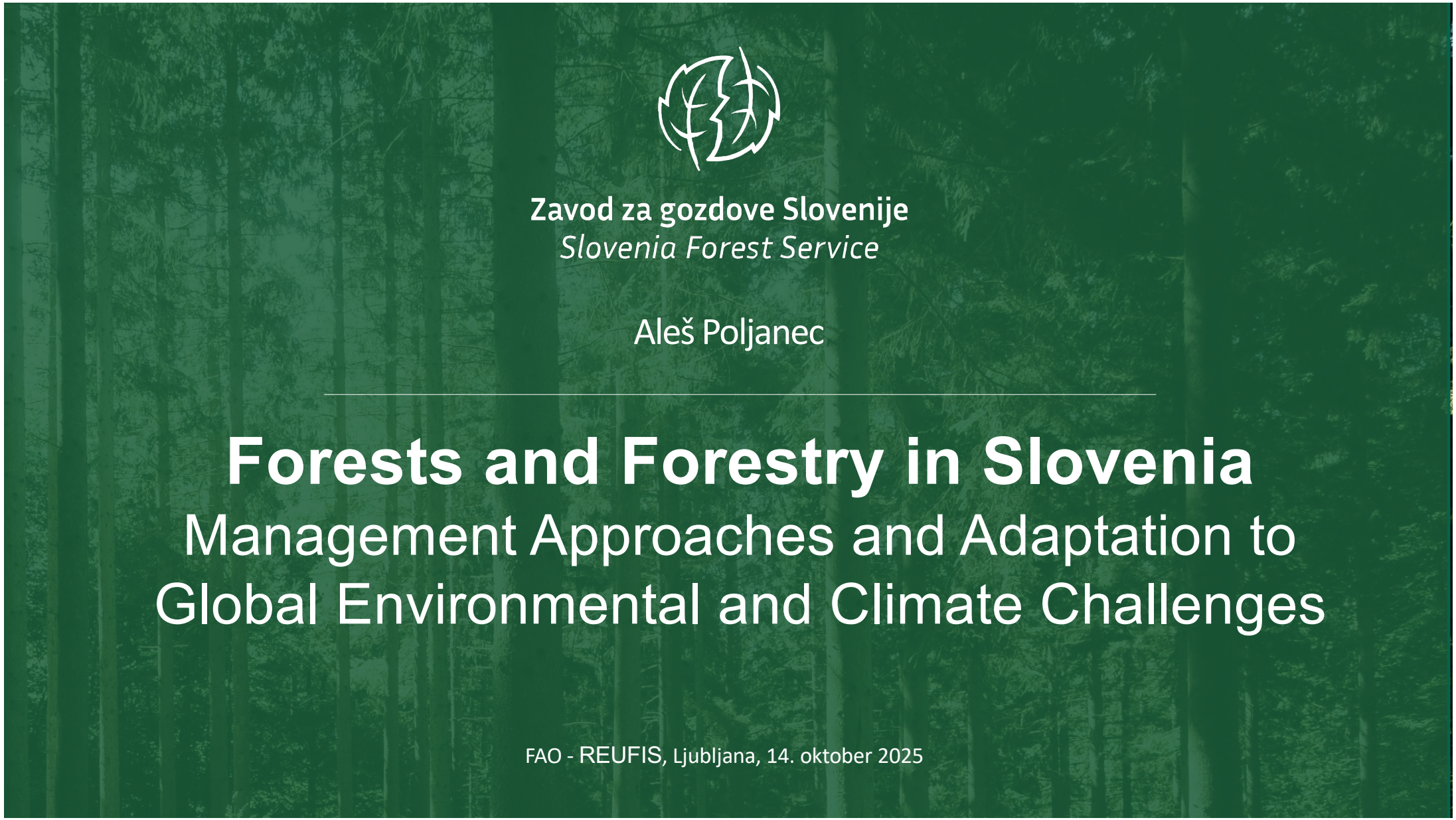


Zavod za gozdove Slovenije
Slovenia Forest Service

Aleš Poljanec

Forests and Forestry in Slovenia

Management Approaches and Adaptation to Global Environmental and Climate Challenges

FAO - REUFIS, Ljubljana, 14. oktober 2025

Forests; essential element of landscape

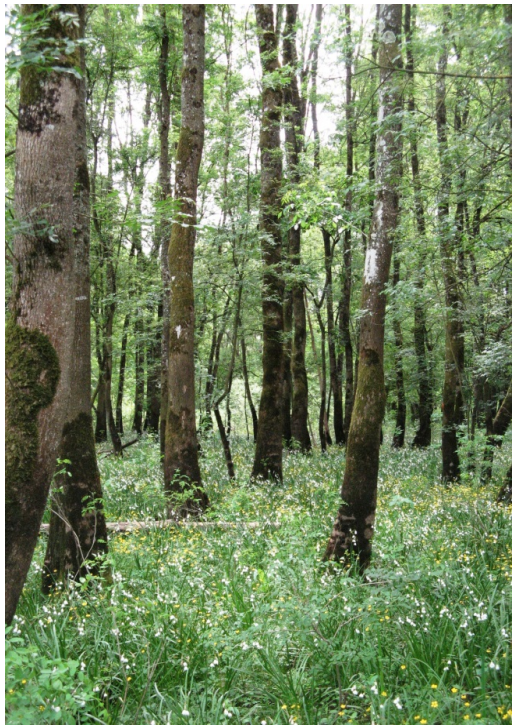
- Slovenia is 3rd of the most forested countries in Europe.
- Forests covers 1,2 mio ha, which is more than a half (58 %) of Slovenia territory.



Great variety of forest types

Most Slovenian forests are located within the area of beech, fir-beech and beech-oak sites



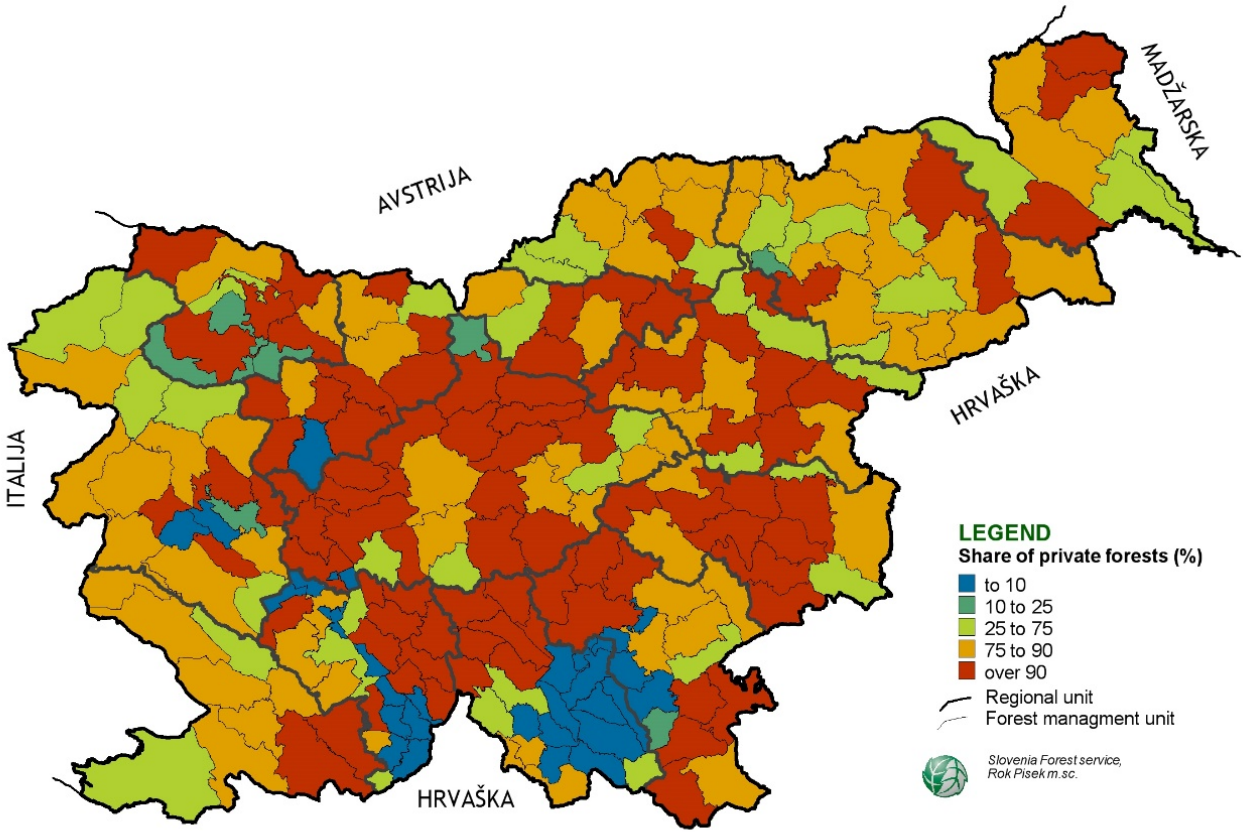


Diverse forest structure and tree species composition

- Uneven-aged, multi- layered stand structure
- High amount of large diameter trees (dbh > 50 cm)
- Mean growing stock is 304 m^3 ha^{-1}
- Mean annual increment is 7.4 m^3 ha^{-1}
- 71 tree species; European beech (32,9%) and Norway spruce (30,2%) and silver fir (7,4%) and oak (7,1%) predominate
- Annual cut is 6.1 m^3 ha^{-1} (4.3 m^3 ha^{-1})



Forests are mainly privately owned



- 77 % of forests is private owned
- 23 % is public forests
  (20 % state, 3 % communities)
- forest estates are small (2.9 ha)
- more than 400.000 forest owners in Slovenia

Global environmental and climate changes





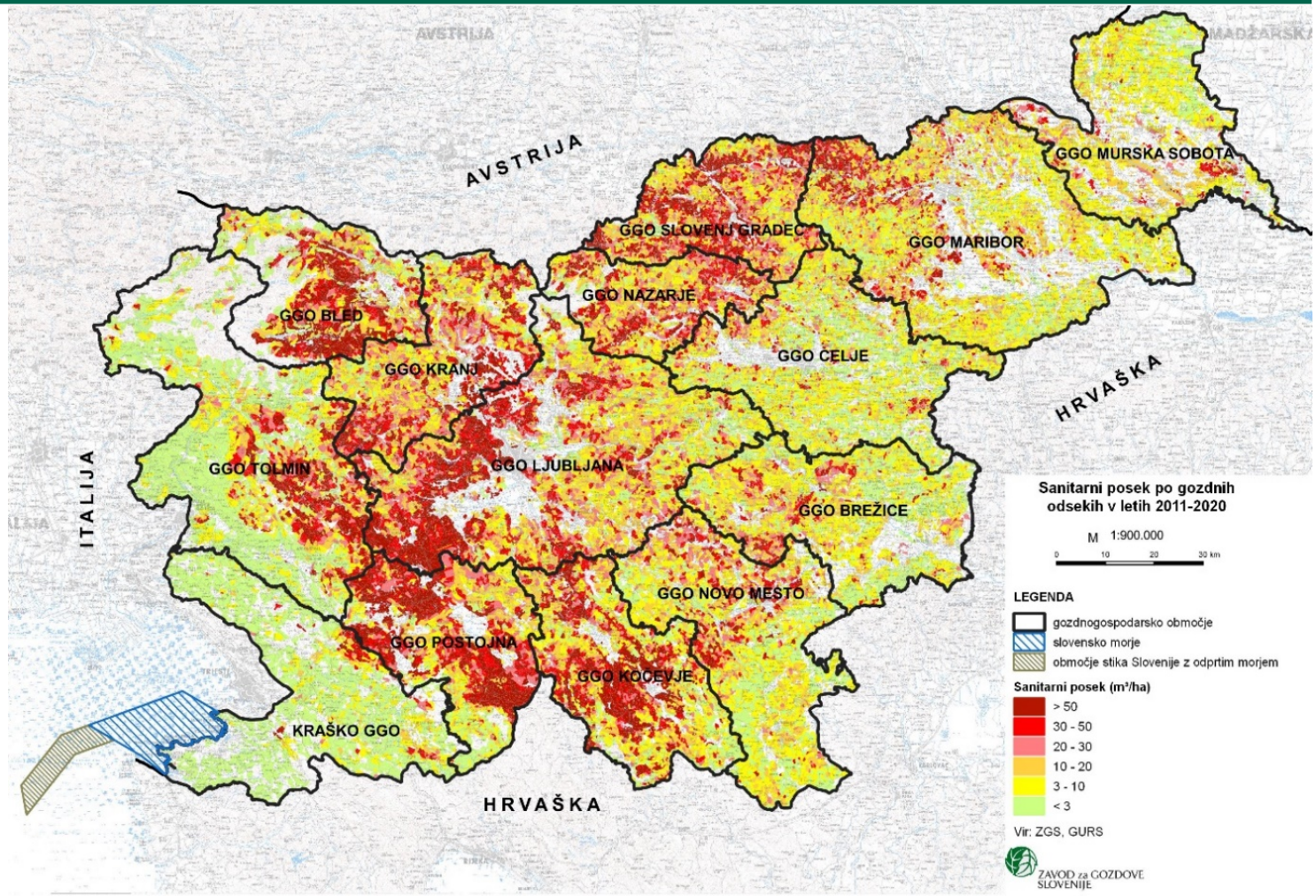






Changed magnitude, frequency and type of disturbances in last decades

- Disturbances are monitored through slvage cut
- In period 2014-2024:
  - 2,6 mio m^3 year
  - 51 %) entire cut (5,1 mio m^3)



Forests and climate change

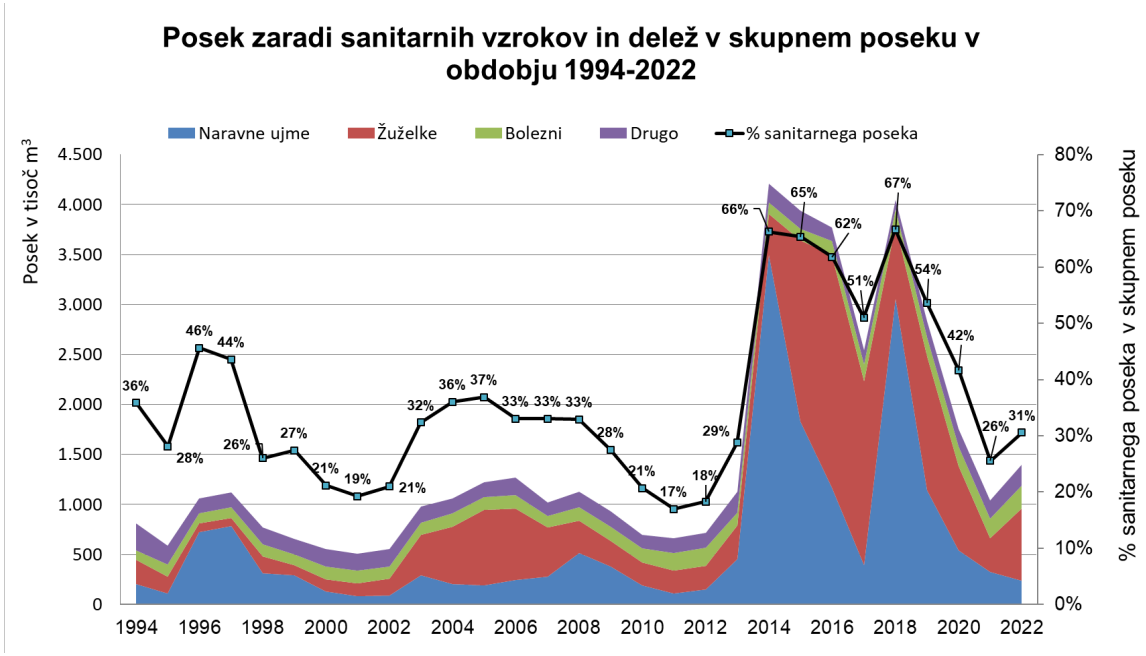
Extreme weather events:

- Ice break in February 2014
- Bark beetle outbreak from 2015 onwards
- Wind throw in 2017 and 2018
- Extreme fire event in 2022
- Extensive flooding in 2023

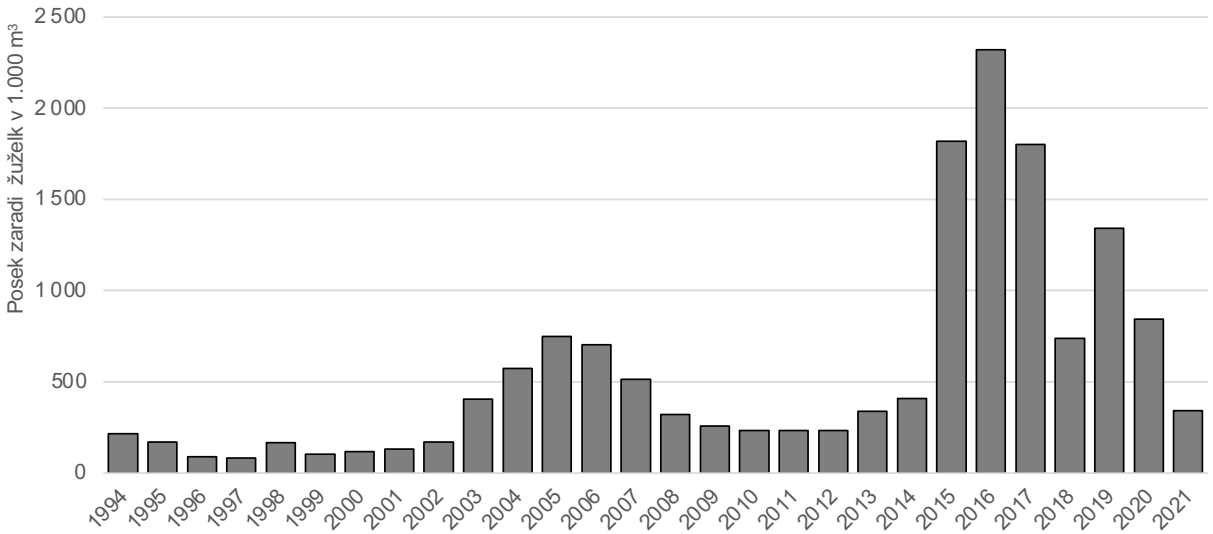








Forests and climate changes



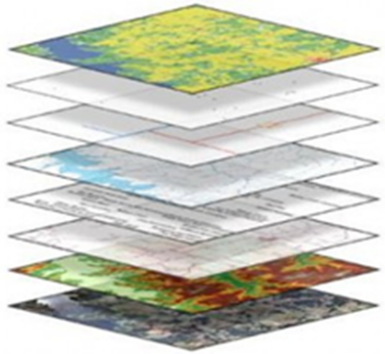
Pasts and deceases:

- 2015-16 – 4,8 mio m^3
- 2017 – 2,4 mio m^3
- 2019 – 1,3 mio m^3
- 2023 – 0,5 mio m^3



Slovenia has a long history of planned forest management.







Over 50% forests in NATURA 2000

ProSilva Europe established (international association for close-to-nature forest management)

2004

Significant headway towards **close to nature forest management**

1989

1950s

1970

1947

Obligatory regional forest management plans

1892,1906

Prohibited clear-cutting. Forest management plans for all forests

19th Century

Forest management plans for large properties**: selective cutting, no clear cuts, control method introduced**

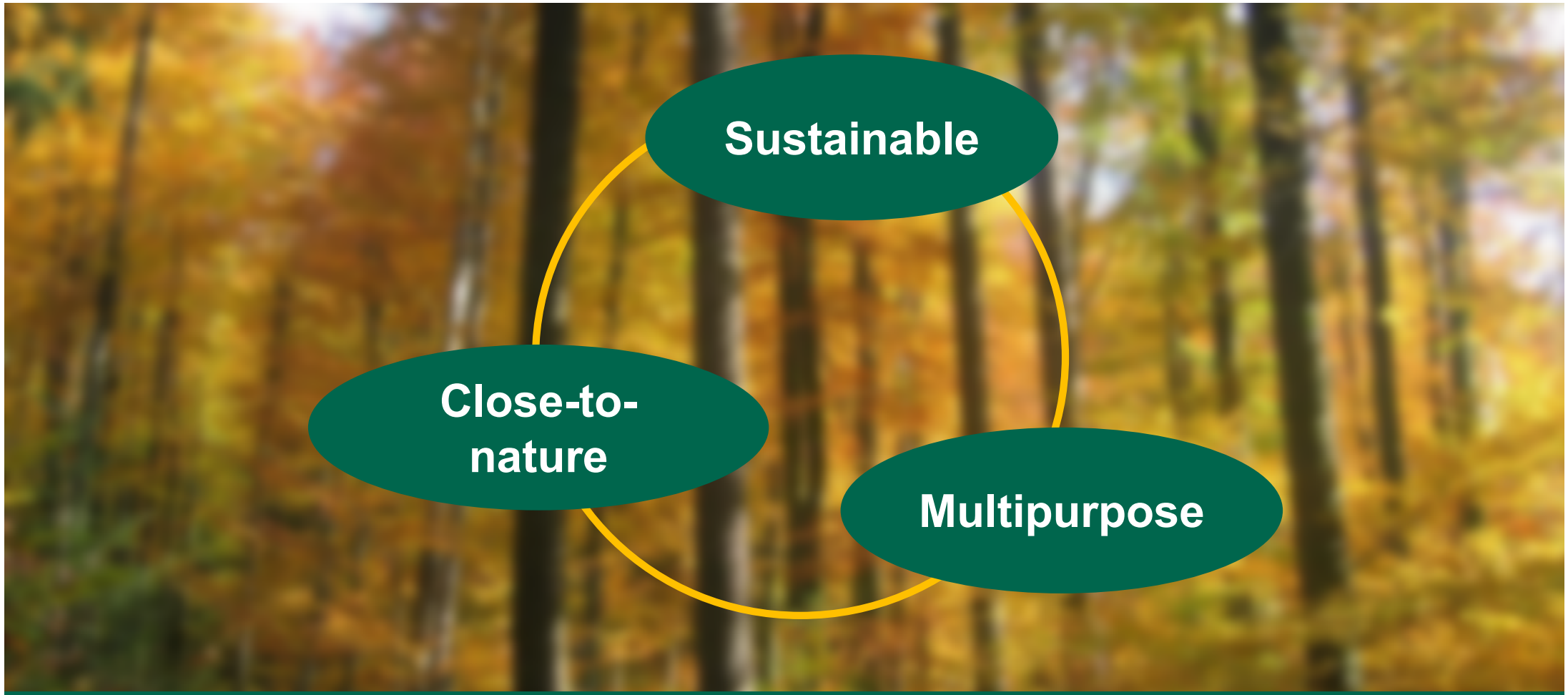
1771

Bare Karst was successfully afforested – **largest afforestation experiment in Europe**

1406

First forest management plan by Flameck **with integrated principle of sustainability**

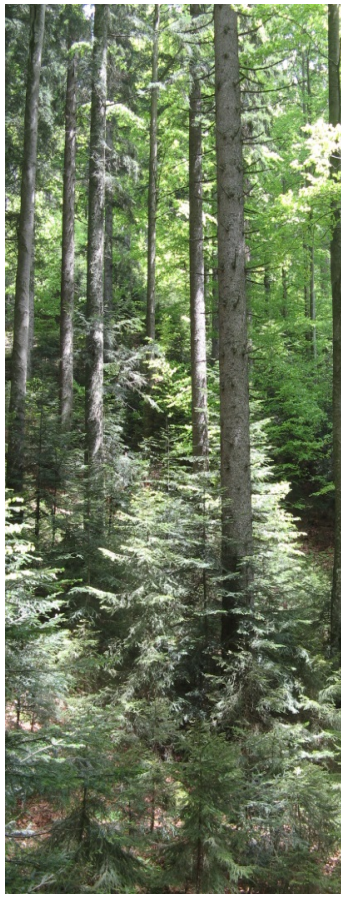
First regulation regarding forest management: Ortenburg forest code



All three main principles of forest management must be respected in all forests, irrespectively of ownership.

Close-to-nature forest management

- Forest management take into account natural processes in forest ecosystems.
- Forest structure and tree species composition are adapted to the site conditions, respecting also climate changes

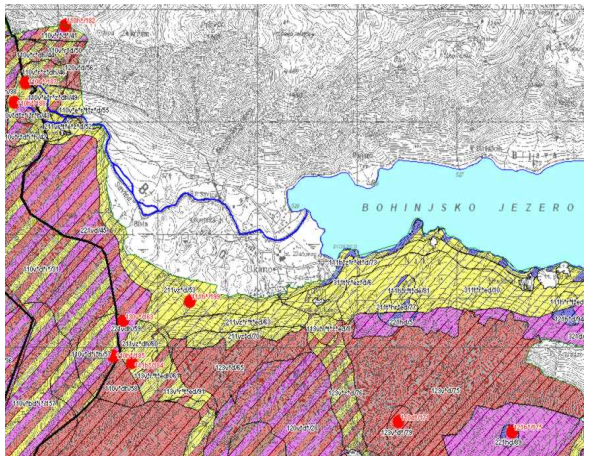




Close-to-nature forest management

- Forest restoration is based on natural regeneration (95 %)
- Supplement natural regeneration with planting/seeding in cases of:
  - insufficient natural regeneration
  - erosion risk and the need for rapid soil cover
  - increasing biodiversity and economic value with underrepresented species
  - enriching food resources for protected wildlife species



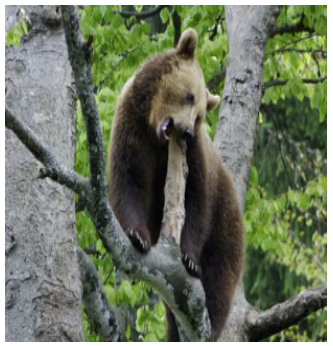
Forest management is sustainable in preserving all forest functions



- Forests provide many goods and services.
- Sustained preservation of forests
- Sustained use of their goods and services





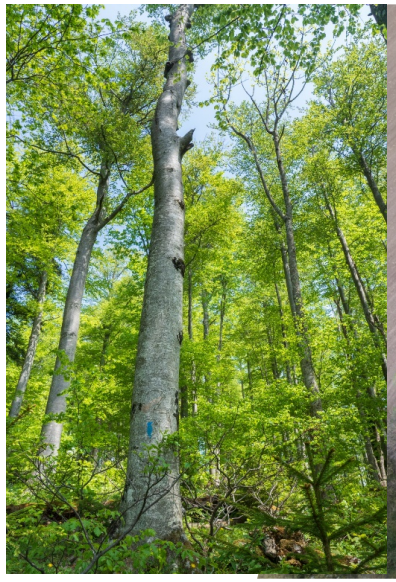



Nature conservation and biodiversity preservation





- Integral part of forest management
- 70 % of all Natura 2000 sites is in forests
- Natura 2000 is included into forest management plans

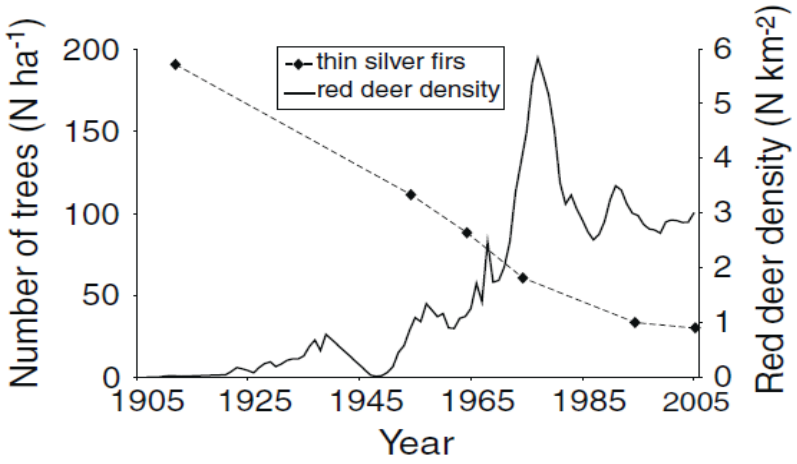




Ecosystem approach to forest management

- Wildlife is an integral part of the forest ecosystem.
- Complexity of the relationship between forest and wildlife
- the public forestry service also prepares game management plans





Who is who in Slovenian Forestry?

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA KMETIJSTVO, GOZDARSTVO IN PREHRANO

Ministry of Agriculture, Forestry and Food

Coordiating and overseeing all forestry and game management activites in Slovenia

GOZDNI SKLAD

Slovenia Forest Service	Slovenian Forestry Institute	SiDG – Slovenian State Forests	Chamber of agriculture and forestry	Forest owners association	University of Ljubljana, Biotechnical Faculty, Dept. of Forestry …	Secondary (high) schools for foresty	Forestry associations (such as Pro Silva Slovenija)	Forestry inspectorate (MKGP)
Public Forestry Service	Research organisation	State forest management company	22 % forest owners are part of the Chamber	Approx. 30 associations of forest owners	Educational and research organisation	Educational organisations	Forestry associations	Supervision of forest and forestry related activities

Public forestry service



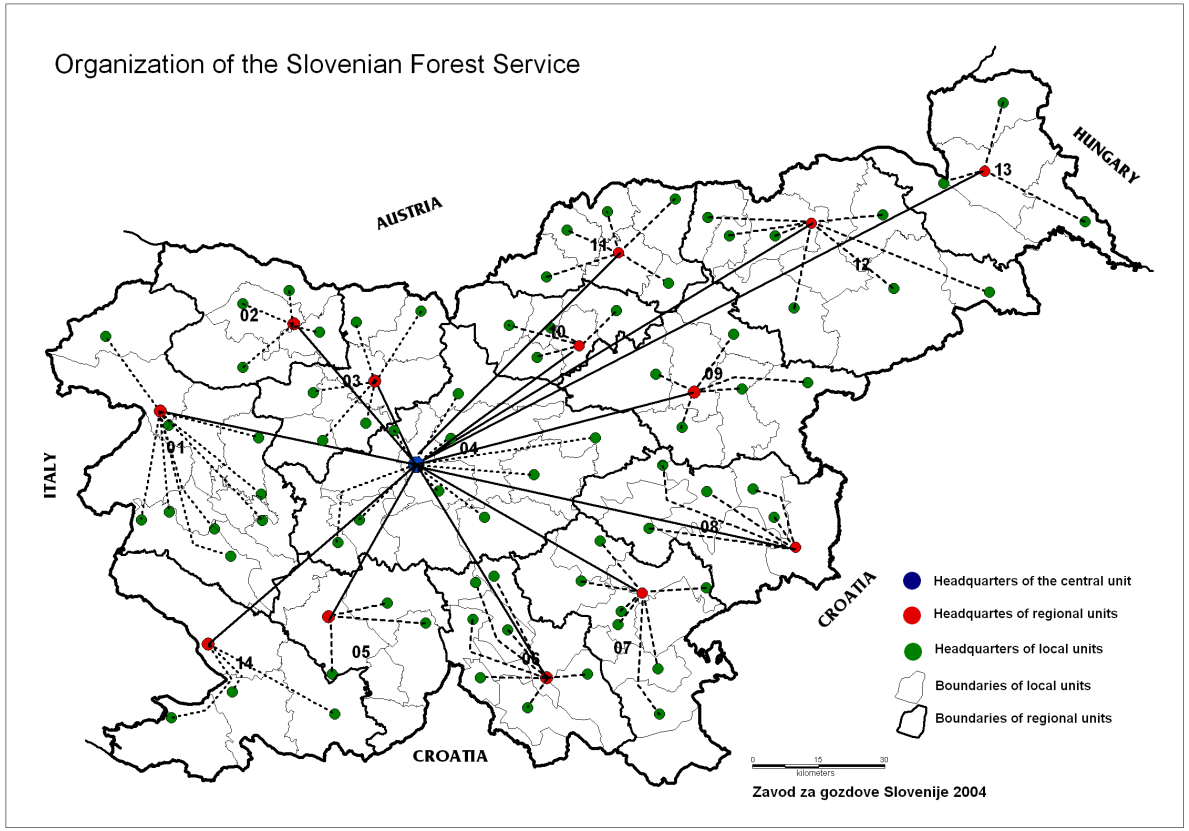
Slovenia Forest Service

Mission: *“Preservation and close-to-nature development of Slovenian forests and of all their functions for their sustainable and good management and use as well as nature conservation in forest space for the good of present and future generations.”*

- **Forest Act 1993**
- **Constituted: May 1994**
- **Financing: mainly from state budget**

Zavod za gozdove Slovenije (ZGS)
Slovenia Forest Service (SFS)

- 14 regional units
- 69 local units
- 396 forest districts
- (district foresters)
- 8 state hunting ground



The Slovenia Forest Service (SFS)

ZAVOD za GOZDOVE SLOVENIJE
Slovenia Forest Service

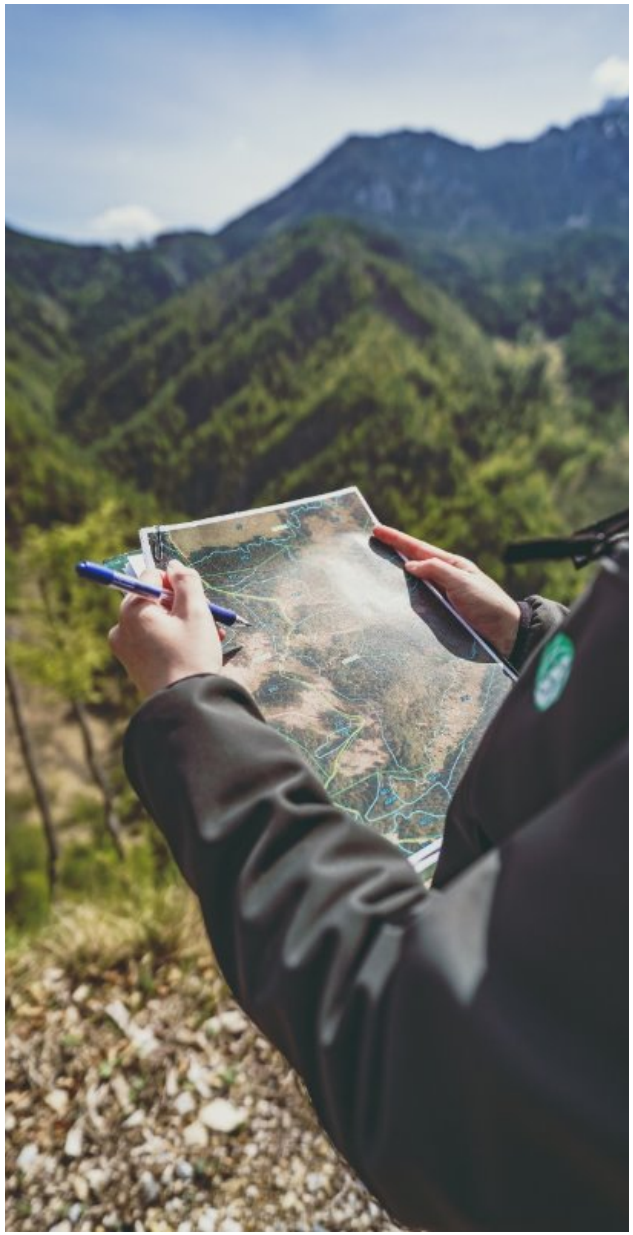
- ✓ Main professional forestry institution in Slovenia - **around 770 foresters employed (~670 public service, 20 projects, 65 LPN)**
- ✓ Among the most competent forestry institutions in Europe
- ✓ Specialised in **close to nature forest management** theory and practice
- ✓ Planning and overseeing forest and game management for all Slovenian forests



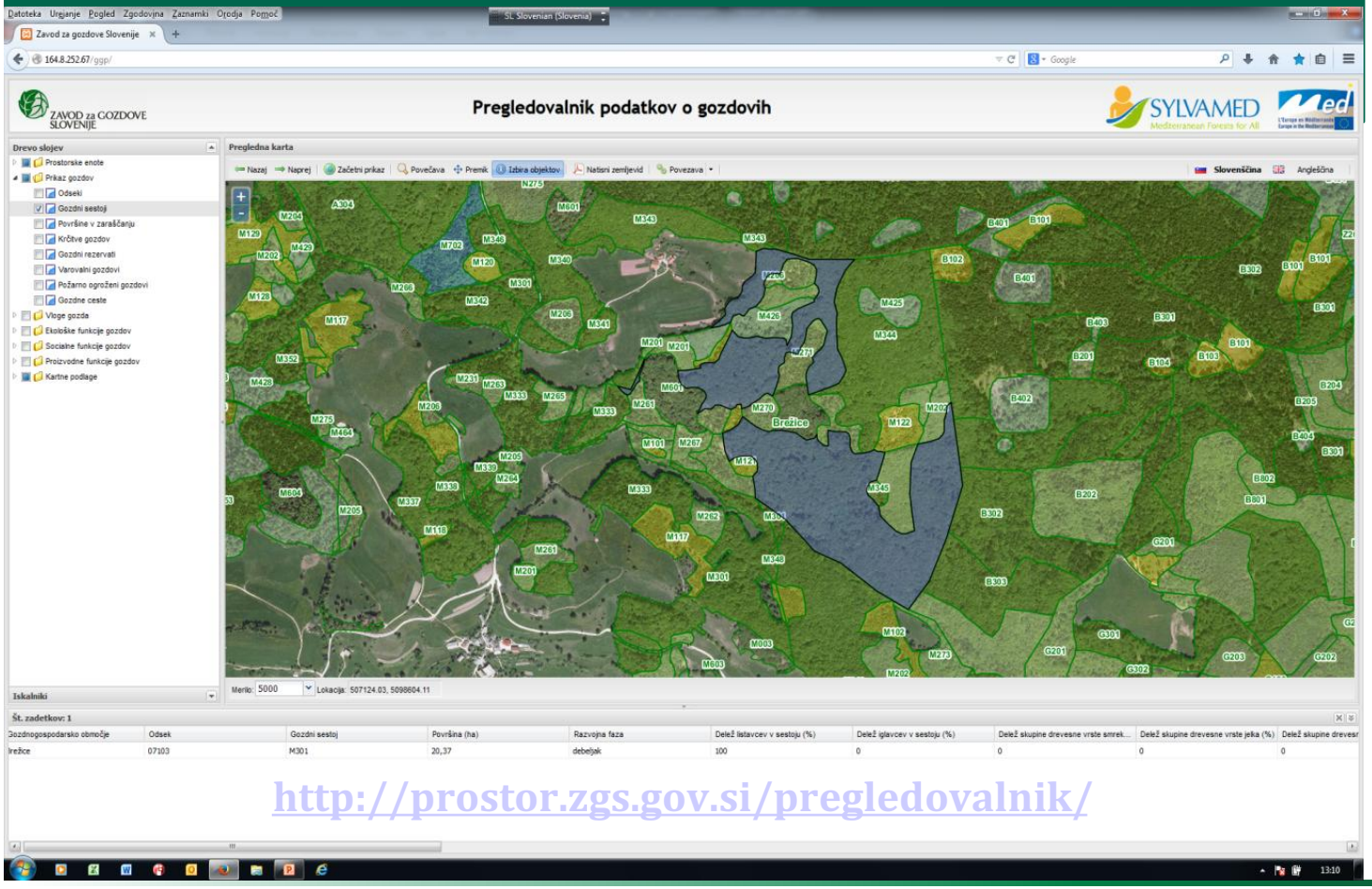
FOREST AND GAME MANAGEMENT PLANNING FOR ALL FORESTS

PUBLIC ← → PRIVATE

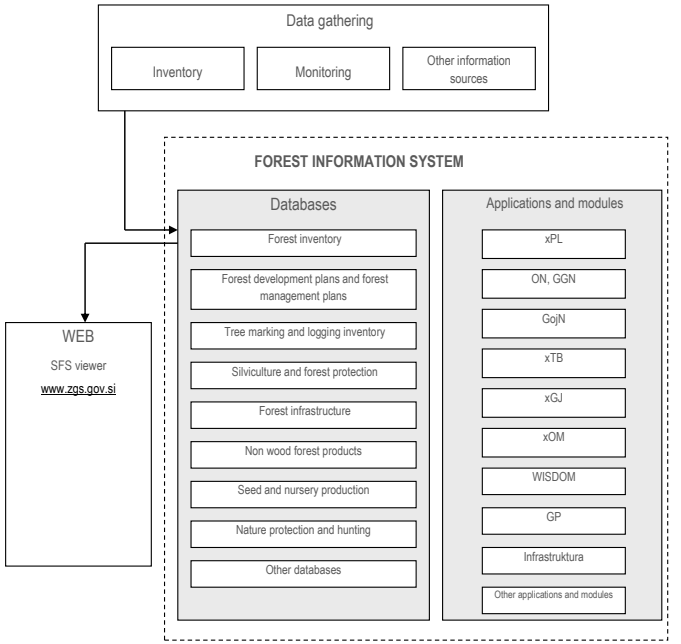
REGIONAL FOREST AND GAME PLANS 14 (15) units; 100.000 ha	FOREST MANAGEMENT PLANS (231 units; 5.000 ha) GAME MANAGEMENT PLANS (2 years; 15 HMR)	SILVICULTURAL PLANS, (compartment, 5-100 ha) HUNTING DISTRICT PLANS
• strategic level • forest and game management • solving large scale problems • forest function, multipurpose FM • management ↔policy • first RFP: 1970; renewed every 10 y.	• tactical level • inventory, monitoring • management + NATURA 2000 goals • strategies for silviculture, functions, technology… • concrete measures • renewed every 10 years	• operational level • concrete measures • detailed prescriptions for forest operations • renewed after execution of measures

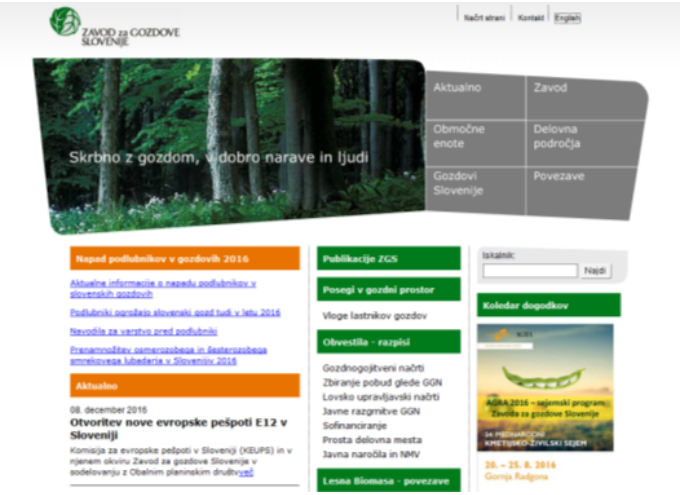


Forest information system



http://prostor.zgs.gov.si/pregledovalnik/





Implementation of measures in forestry practice

- District forester together with forest owner
- Marking trees for cutting (single tree selection)
- Decisions about silvicultural and forest protection and biodiversity conservation measures





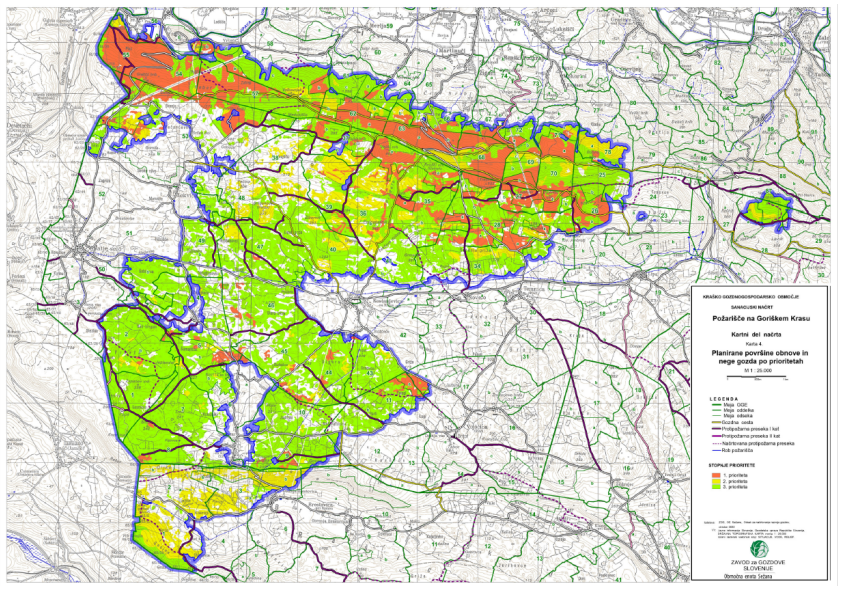
Forest protection

- Management of natural disturbances and forest restoration activities
- Ensuring sanitary felling and implementation of measures for forest protection (bark beetles)
- Monitoring the health condition of forests
- Implementation of inspection programs for detecting quarantine pests
- Ensuring protection against wildfires in the natural environment



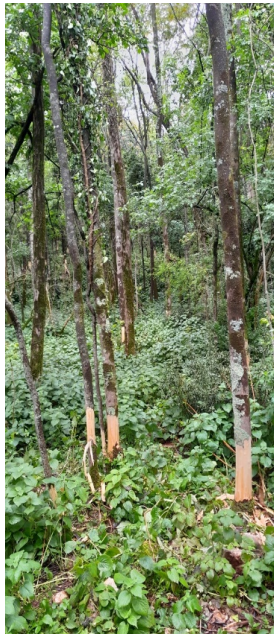





Požarišče na Goriškem Krasu
Kartni del načrta
Planirane površine obnove in nege gozda po prioritetah
LEGENDA
STOPNJE PRIORITETE
1. prioriteta
2. prioriteta
3. prioriteta
ZAVOD za GOZDOVE SLOVENIJE










8t

Invasive alien plant species









Invasive alien plant species

- No special measures for invasive alien plant species (IAPS)
- IAPS eliminations is integrated in silvicultural interventions
- Extension and knowledge transfer (forest owners, public)








PUBLIC FORESTRY SERVICE FOR ALL FORESTS ENSURES PROFESSIONAL AND SUCCESSFUL FOREST MANAGEMENT


Nasveti
lastnikom gozdov
za izvedbo poseka in spravila lesa
RAVNANJE S SEČNIMI OSTANKI
UREDITEV SEČIŠČA
USMERITVE ZA VARNO DELO V GOZDOVIH NA STRMIH POBOČJIH
Sistem potrebne skrbnosti in sledljivost prometa z gozdnimi lesnimi sortimenti
Nevarnosti
pri izdelavi poškodovanega drevja
Sečnja
zasek
podžagovanje
Spravilo lesa
tehnika dela s traktorjem
Vzdrževanje
Žagalnih delov motorne žage




triglav


mag. MATJAŽ GUČEK, vodja službe za načrtovanje razvoja gozdov
ZGS
ozdno-gospodarski načrti
PRIPOROČI

Financial mechanisms to support measures in private forests

- Measures in protective forests and torrent areas
- Silvicultural and forest protection measures
- Biodiversity conservation measures
- Fire protection
- Maintaining of forest roads
- Construction of skid trails and forest roads
- Forestry extension

Financial mechanisms

- National budget
- National forest fond
- Rural development program
- Climate change fund
- EU programs (Life, Interreg…)

Some challenges for forest science and practice

Adopting forest management to changing environmental and social conditions

Promoting science and innovations

Improving public forest service, extension and knowledge transfer

Promoting forest management planning as tool to ensure economic, ecological and social benefits from forest.

Digitalization for sustainable forest management (eForestry)








Thank you for your attention!