

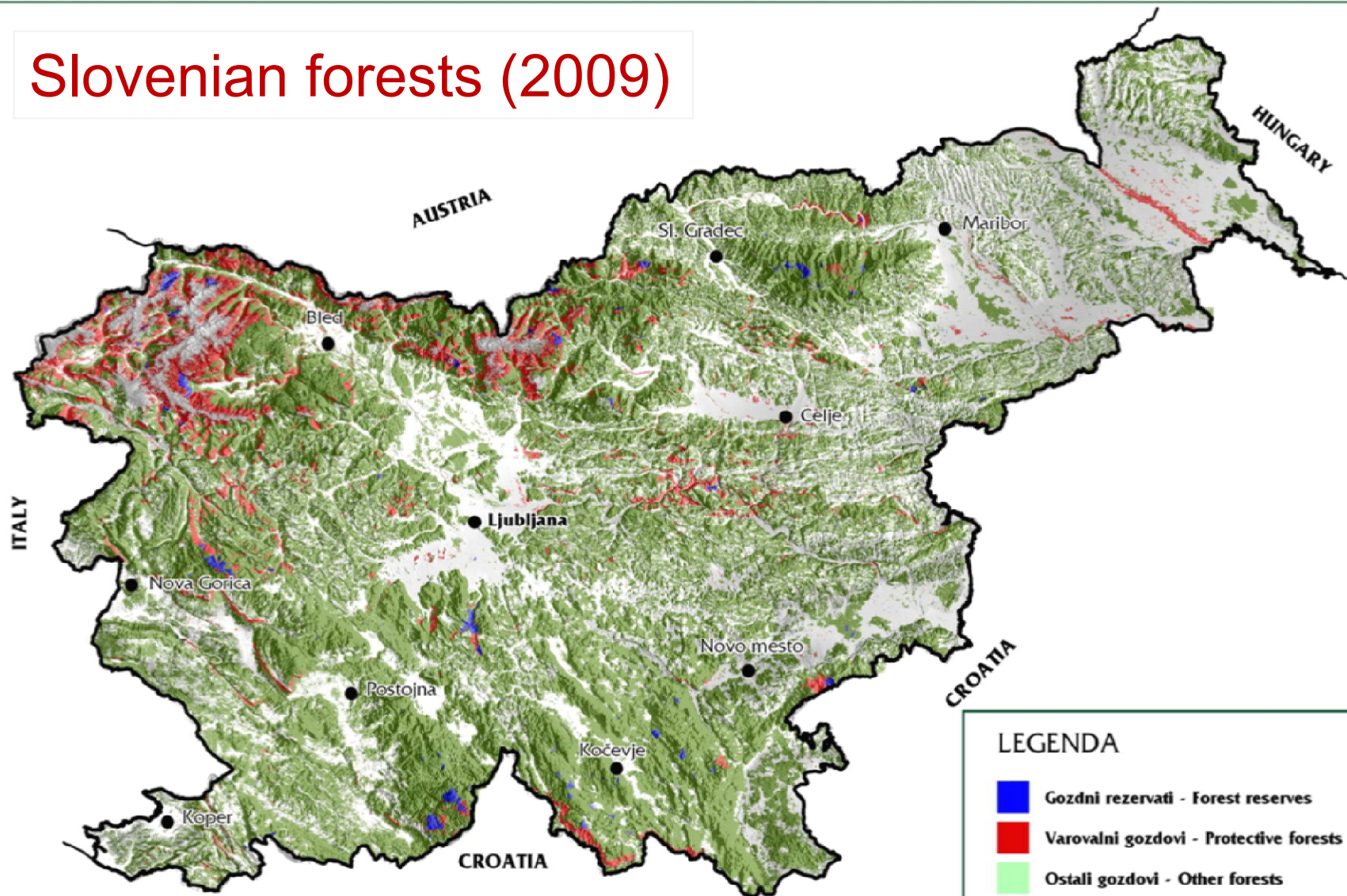
VIIth European Mountain Convention
“European Mountain Regions – A spirit of Innovation”
15th – 17th September 2010, Lillehammer, Norway

**Innovative forest management -
developing new and innovative
approaches for
sustainable forest development**




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Slovenia Forest Service



Slovenian forests (2009)



LEGENDA

-  Gozdni rezervati - Forest reserves
-  Varovalni gozdovi - Protective forests
-  Ostali gozdovi - Other forests

 Strokovne podlage 2002
Slovenia Forest Service 2005



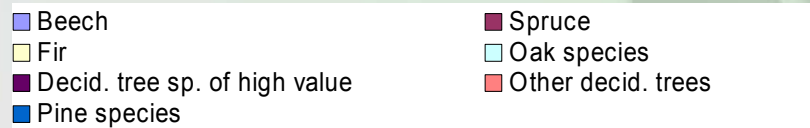
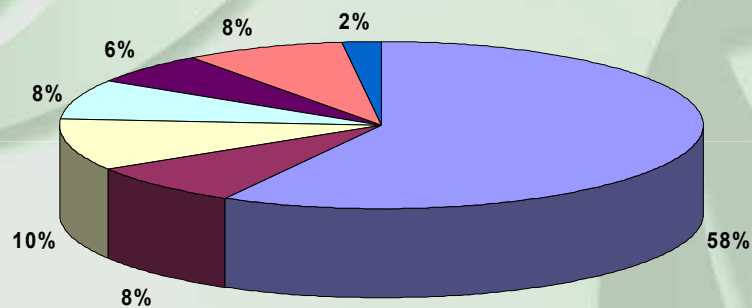
Slovenian forests basic data (2009)

- Forest area: **1.186.104** ha
- Share: **58,5** % of Slovenia (35% in 1875!)
- Total growing stock: **327,5** mio m³
- Total increment/Year: **7,99** mio m³
- Total allowable cut/Year: **5,13** mio m³
- **74** % private forest, **24** % state forest,
2 % local communities
- Number of forest owners: **327.000** (2010)

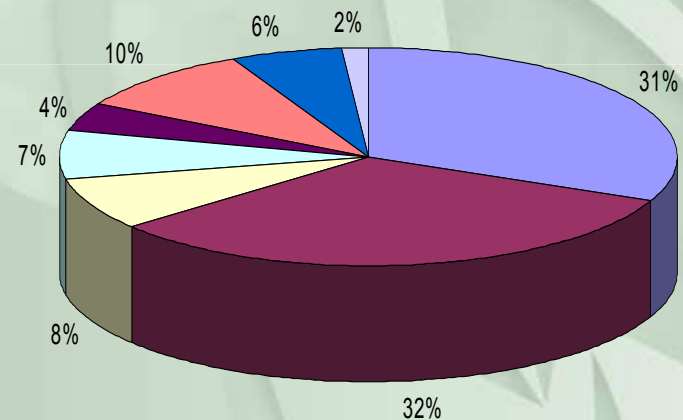


Potential and present vegetation

Potential vegetation



Present vegetation



Forest Management Planning – decision making process

- **National Level:** National Forest Programme (2007)
- **Regional Level:** 14 Regional Forest Management Plans (1971, 1981, 1991, 2001...)
- **Local Level:** 233 FMP for Forest Management Units Plans (every 10 years)
- **Forest Stand Level:** Forest Silvicultural Plans

Slovenia has a long and rich tradition of sustainable, co-natural and multifunctional forest management planning!



Forest management planning in mountain regions

- New experiences regarding forest management planning (in mountain regions) in the last decade:
 - Project SUSTMAN (2002 – 2005)
 - Project NMF – Network Mountain Forest (2004 – 2007)
 - Project NATREG (2009 – 2012) (Leading partner: *Institute of Republic of Slovenia for Nature Conservation – IRSNC*)

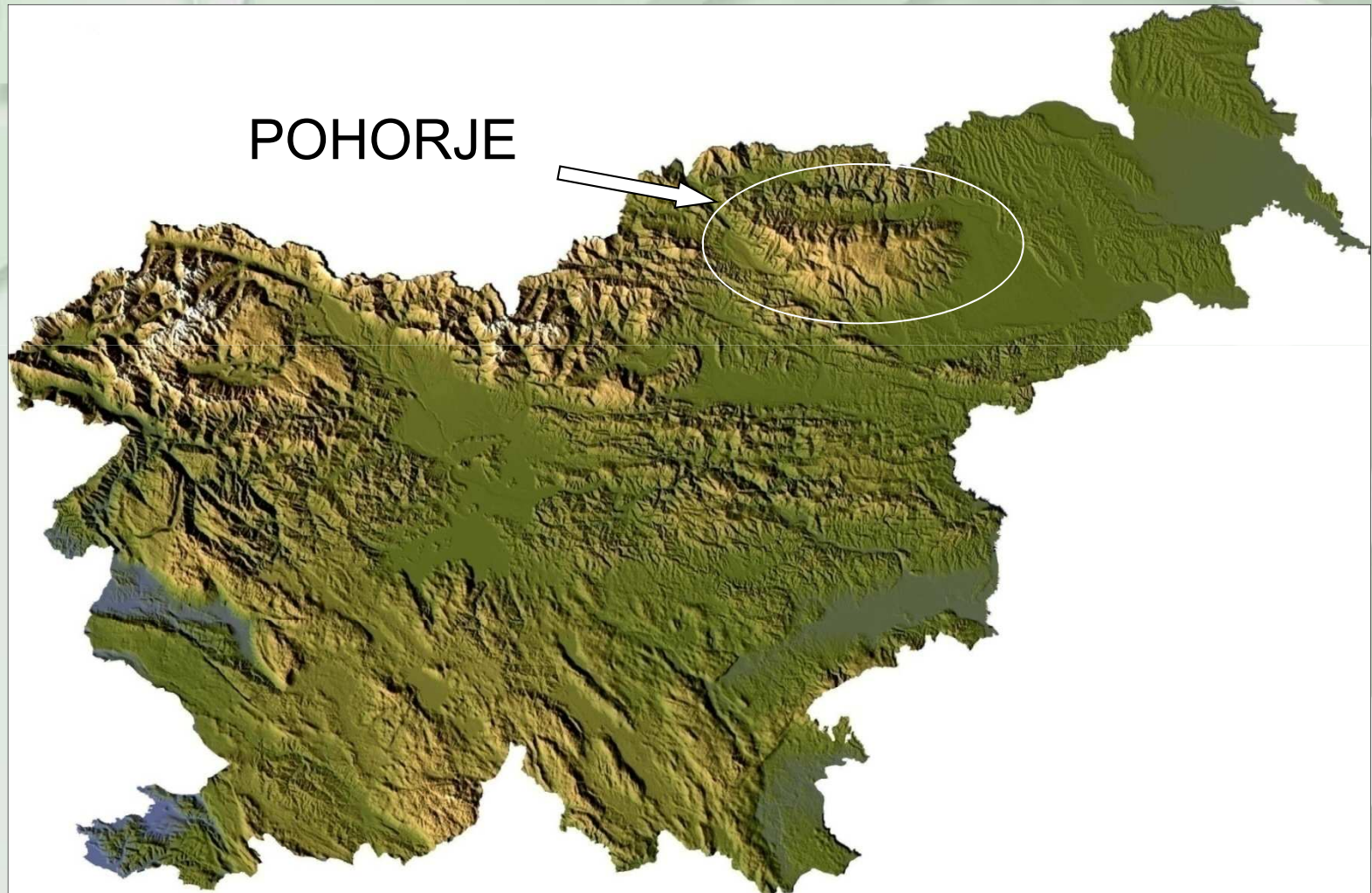


Project NMF

- An INTERREG IIIC project
- Partners from Austria (LP), Slovenia, Germany, Italy and Switzerland
- Information exchange about guidelines and Measures to improve forest function of the mountain forests
- 10 basic recommendations for management of mountain forests (presented at the final meeting in Lindau, Germany, 29th – 30th October 2007)



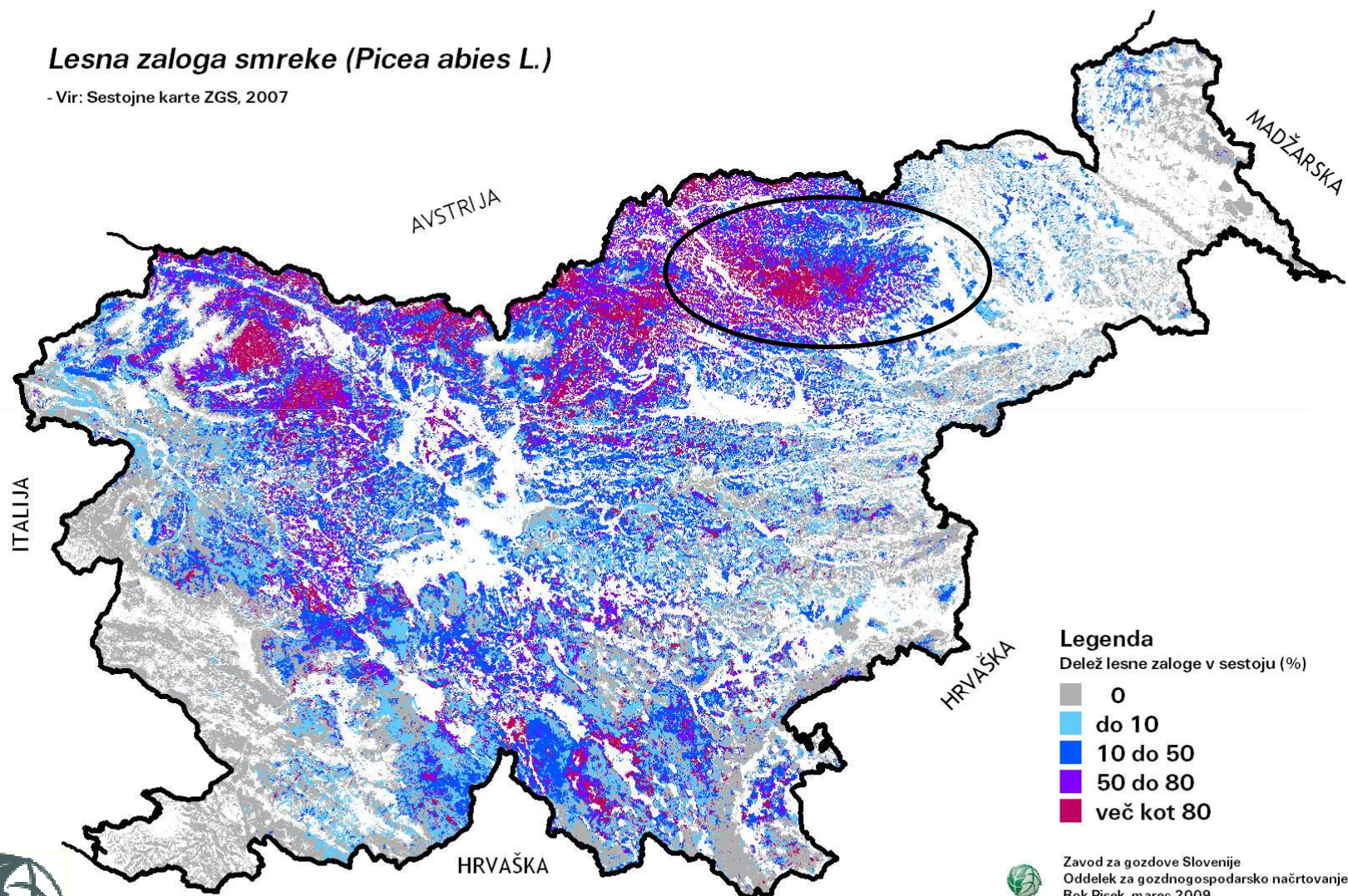
Project SUSTMAN (and NATREG) test area - Pohorje mountains



Spruce – share of growing stock (%)

Lesna zaloga smreke (*Picea abies* L.)

- Vir: Sestojne karte ZGS, 2007



Legenda

Delež lesne zaloge v sestoji (%)

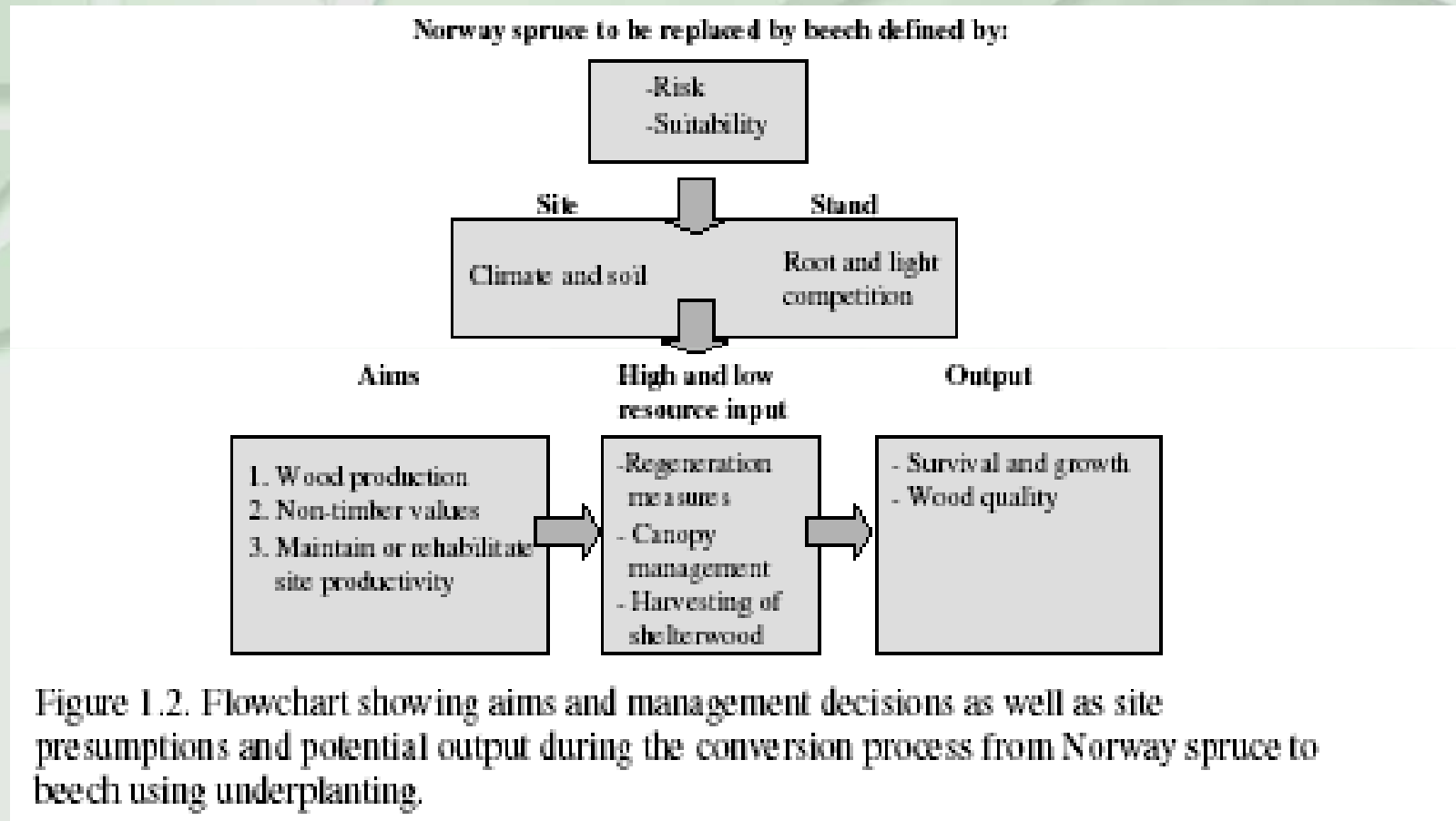
- 0
- do 10
- 10 do 50
- 50 do 80
- več kot 80



Zavod za gozdove Slovenije
Oddelek za gozdnogospodarsko načrtovanje
Rok Pisek, marec 2009



Project SUSTMAN



Project SUSTMAN – conversion goals

Goal: to establish in the area of man-made spruce forests on Pohorje a net of stands with natural tree composition, which will build a stable framework of future forest.

Grounds:

- **threatened mechanical and ecological stability of spruce forests**
- **degradation processes in forest soil**
- **problems with natural regeneration**



Project SUSTMAN – Specification of conversion priorities

TWO LEVELS:

First level is based on forest functions, that have to be fulfilled on certain area. Higher complexity and expression of demands toward forests also raises the need for improvement of stands stability.

Second level of priority definition is based on following characteristics of forest stands:

1st priority: = Mechanically or biologically damaged forests (windbreak, snowbreak, by game or by bark-beetle damaged stands) – with no regard to stand development stage.

= Old stands with destroyed internal structure, low vitality and almost no regeneration

2nd priority: = Stands with larger gaps in crown closure and with poor stand structure

3rd priority: = stands with high proportion of root rot (*Heterobasidion annosum*)

4th priority: = other forest stands in stratum



Critical inventory of ongoing conversion processes on Pohorje



Workshop about present state of conversion practice in spruce monocultures on Pohorje – results of group work:

RANK	advantages (positives)
1.	A shift toward more natural forest stands is evident
2.	Group work - project has gathered different forest management regions together around common goal
3.	Ecological biodiversity is improving
4.	Our project is an example of a good cooperation between forestry praxis and researchers
5.	A shift in peoples minds can be seen (field foresters, forest owners)
6.	We've gained new experiences
7.	International response
8.	We've produced some concrete silvicultural directions
9.	We've succeed to provide financial support



Workshop about present state of conversion practice in spruce monocultures on Pohorje – results of group work:

RANK	disadvantages, deficiencies (negatives)
1.	Natural processes are not used completely: - natural regeneration - seed years - pioneer species
2.	Different silvicultural decisions in similar regions
3.	Financial support from state is too low and uncertain
4.	Monitoring of the project is poor
5.	Forest owners and general public are not enlightened about necessity of conversions
6.	Other users are not included in the project
7.	Negative influence of game browsing
8.	Analysed period is too short
9.	Cooperation with research institutions is still too weak
10.	Our respond on natural processes is still rigid
11.	Conversion costs are very high
12.	Results are not assessed with the same criteria



Project NATREG

- Managing Natural Assets and Protected Areas as Sustainable Regional Development Opportunities
- Leading partner is Institute of RS for Nature Conservation
- Slovenian Forest Service has done an external expertise about the forest, forestry and hunting in the Pohorje Area
- The project's main aim is to acknowledge and promote the potentials of natural assets and protected areas as drivers of sustainable regional development

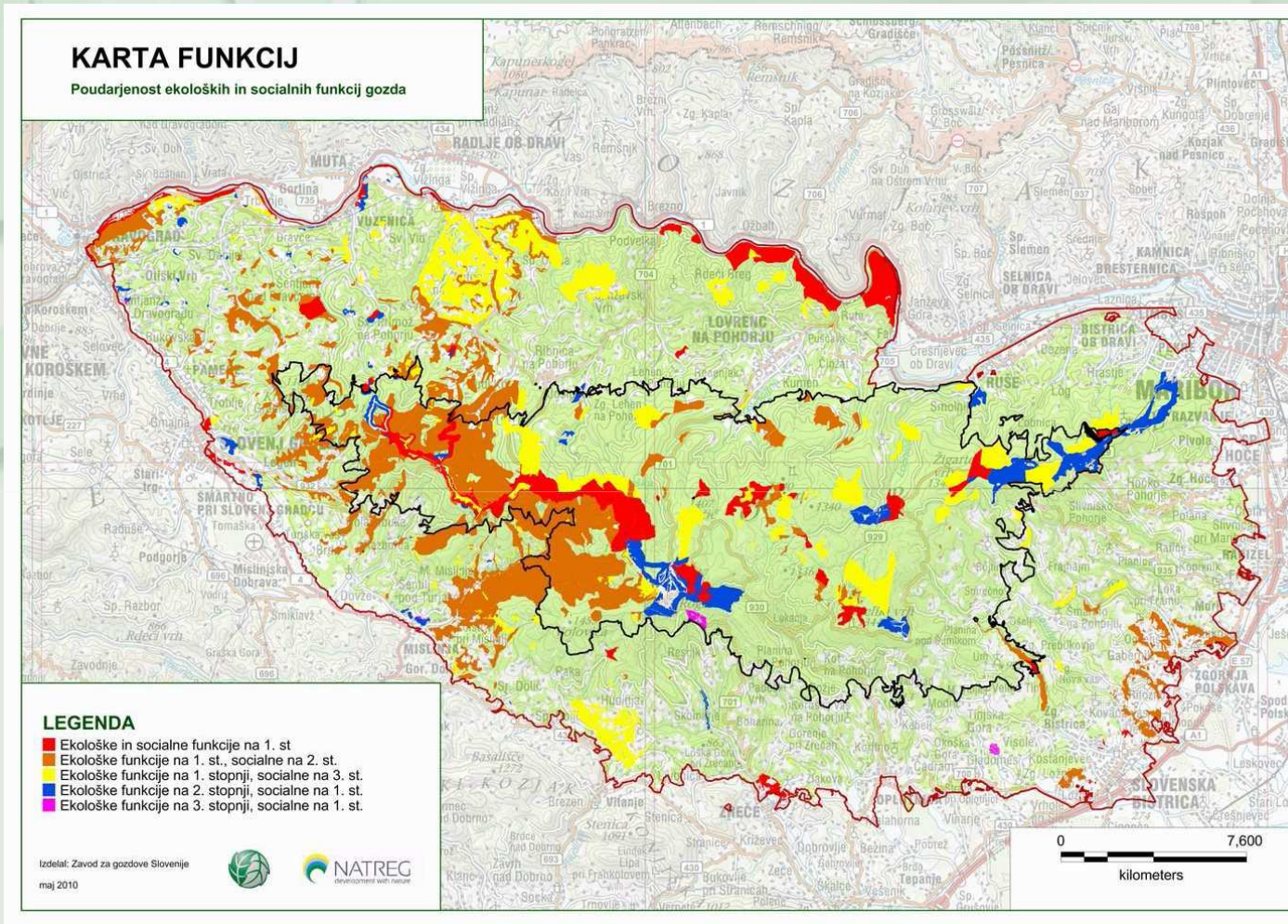


Project NATREG

- Study on Forestry and Hunting on project area Pohorje
- The database of Slovenian Forest Service was used (data from Forest management unit plans)
- The work is a complete study of natural resources (forest and wildlife) of Pohorje regions
- On the basis of the results obtained, a workshop for the stakeholders was carried out

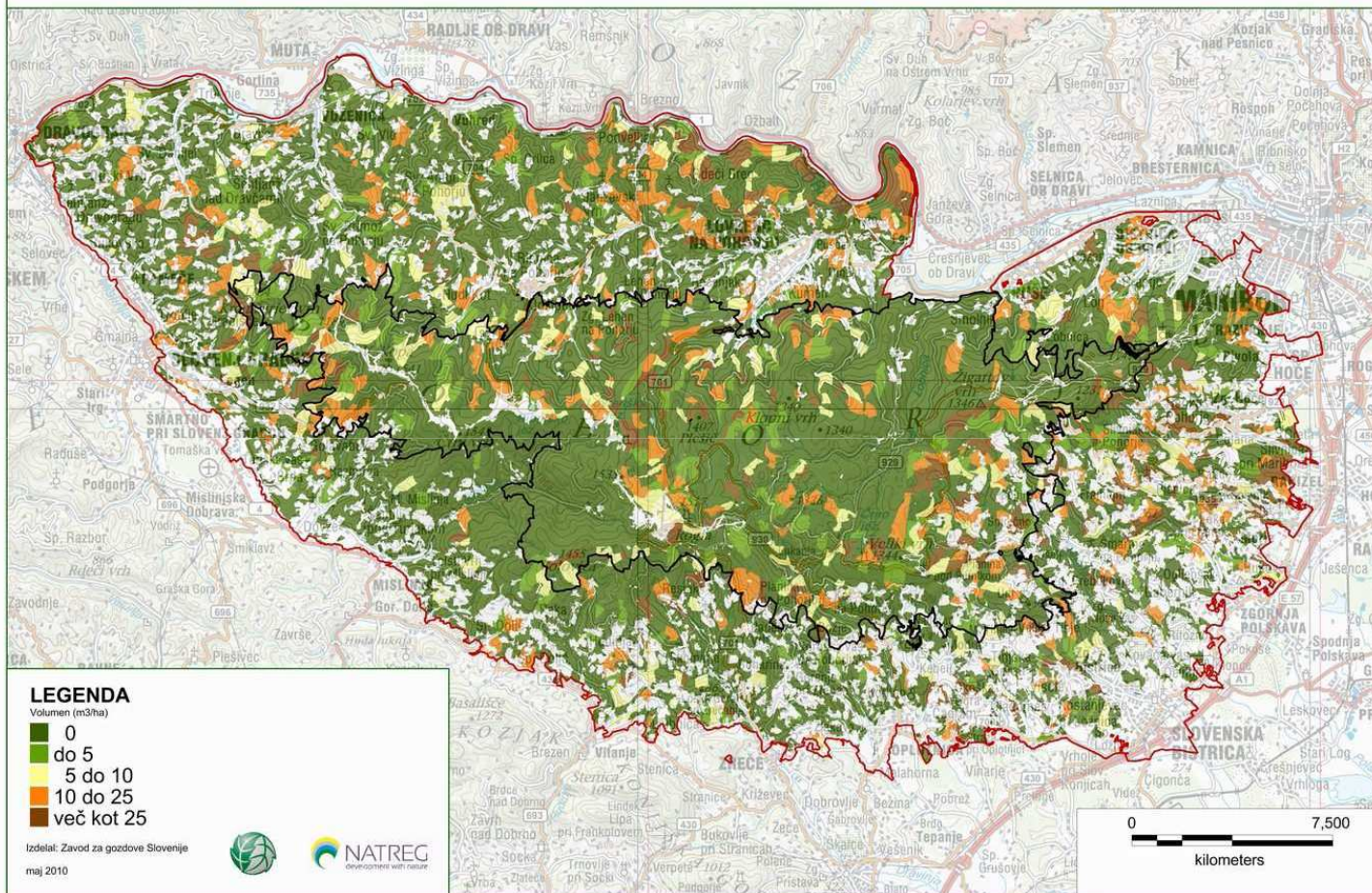


Project NATREG – forest functions



Project NATREG – dead wood

KARTA KOLIČIN VELIKIH ODMRLIH DREVESNIH OSTANKOV



Forest management planning in mountain regions – conclusions (I)

- Slovenia has a long tradition of sustainable forest management planning – also in the mountain regions
- Forest management planning is based on a stable and reliable database (numeric and graphical)
- New approaches and international exchange of experiences can improve forest management in mountain regions



Forest management planning in mountain regions – conclusions (II)

- The in-vivo, long term connections between the strategic approach (NFP), planned guidelines (Forest Management Plans) and concrete measures (e.g. spruce stands conversion) is of extreme importance
- Cooperation between foresters and services, responsible for nature conservation (and also all other stakeholders), is inevitable for a sustainable and multipurpose development of forest areas in mountain regions



Thank You for your attention!



ZAVOD za GOZDOVE
SLOVENIJE

Slovenia Forest Service